

SAFETY DATA SHEET



Design Freedom Acid Perm for N and T Hair - Activator

Section 1. Identification

Product Name	: Design Freedom Acid Perm for N and T Hair - Activator
Other means of identification	: Not available.
Recommended use	: Hair Care Product
Restrictions on use	: Use only as directed on the product label.
Manufacturer	: Zotos International, INC 100 Tokeneke Road, Darien, CT 06820 www.zotos.com
Validation date	: 5/26/2015.
In case of emergency	: (800) 584-8038 [24 Hours]
Telephone number	: (203) 656-7859 [8:30 a.m. - 5:00 p.m.]
Transportation Emergency	: Contact: CHEMTREC 1-800-424-9300 [US/Canada 24 Hours]
Product type	: Liquid.

Section 2. Hazards identification

Emergency overview

NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 79.9%

GHS label elements

Signal word : Warning

Precautionary statements

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Wear eye or face protection. Wash hands thoroughly after handling.

Response : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Storage : Not applicable.

Disposal : Not applicable.

Hazards not otherwise classified : None known.

3316A

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

United States

Name	%	CAS number
glycerol	19.98	56-81-5

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Flush with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Seek medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if you feel unwell.
- Skin contact** : Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Wash clothing before reuse.
- Ingestion** : Get medical attention immediately.

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : Use suitable protective equipment (section 8).

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
sulfur oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

3316A

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Dilute with water and mop up if water-soluble.
- Large spill** : Stop leak if without risk. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink.

Section 8. Exposure controls/personal protection

United States

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
glycerol	OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction TWA: 10 mg/m ³ 8 hours. Form: Total dust OSHA PEL (United States, 2/2013). TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction TWA: 15 mg/m ³ 8 hours. Form: Total dust

3316A

Section 8. Exposure controls/personal protection

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
- Individual protection measures**
- Hygiene measures** :
- Hygiene measures** : Avoid contact with skin and eyes. If in eyes or on skin, rinse well with water. When using do not eat, drink or smoke.
- Eye/face protection** : Wear eye/face protection.
- Skin protection**
- Hand protection** : Wear suitable gloves.
- Body protection** : Wear suitable protective clothing.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Consult local authorities for acceptable exposure limits.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid. [Viscous liquid.]
- Color** : Hazy
- Odor** : Mild. Sulfurous.
- Boiling point** : >212°C (>413.6°F)
- Flash point** : Closed cup: Not applicable.
- Relative density** : 1.2 to 1.4

Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : No specific data.
- Incompatible materials** : No specific data.

3316A

Section 10. Stability and reactivity

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

United States

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
glycerol	LD50 Oral	Rat	12600 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes eye irritation.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : May be irritating to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

3316A

Section 11. Toxicological information

- Eye contact** : Adverse symptoms may include the following:
irritation
watering
redness
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Potential chronic health effects

Not available.

- General** : No known significant effects or critical hazards.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

United States

Toxicity

Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
glycerol	-1.76	-	low

Mobility in soil

- Soil/water partition coefficient (K_{oc})** : Not available.
- Other adverse effects** : No known significant effects or critical hazards.

3316A

Section 13. Disposal considerations

Disposal methods : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Care should be taken when handling emptied containers that have not been cleaned or rinsed out.

Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-	-		-
TDG Classification	Not regulated.	-	-	-		-
Mexico Classification	Not regulated.	-	-	-		-
ADR/RID Class	Not regulated.	-	-	-		-
IMDG Class	Not regulated.	-	-	-		-
IATA-DGR Class	Not regulated.	-	-	-		-

PG* : Packing group

Section 15. Regulatory information

U.S. Federal regulations : TSCA 8(a) CDR Exempt/Partial exemption: Not determined
United States inventory (TSCA 8b): All components are listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Immediate (acute) health hazard

Composition/information on ingredients

3316A

Section 15. Regulatory information

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
glycerol	19.98	No.	No.	No.	Yes.	No.

State regulations

- Massachusetts** : The following components are listed: GLYCERINE MIST
- New York** : None of the components are listed.
- New Jersey** : The following components are listed: GLYCERIN; 1,2,3-PROPANETRIOL
- Pennsylvania** : The following components are listed: 1,2,3-PROPANETRIOL

California Prop. 65

CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986. This product is not known to the State of California to cause cancer. Not available.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Inform Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Canada

WHMIS (Canada) : Not controlled under WHMIS (Canada).

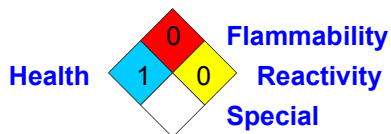
Canadian lists

- Canadian NPRI** : None of the components are listed.
- CEPA Toxic substances** : None of the components are listed.
- Canada inventory** : All components are listed or exempted.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Mexico

Classification :



3316A

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	1
Flammability	0
Physical hazards	0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

History

Date of printing	: 5/26/2015.
Date of issue/Date of revision	: 5/26/2015.
Date of previous issue	: 5/26/2015.
Version	: 17.08
References	: Not available.

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Material Safety Data Sheet



Design Freedom Acid Perm for N and T Hair - Neutralizer

1. Product and company identification

Product name	: Design Freedom Acid Perm for N and T Hair - Neutralizer
Manufacturer	: Zotos International, INC 100 Tokeneke Road, Darien, CT 06820 www.zotos.com
Validation date	: 9/12/2012.
In case of emergency	: (800) 584-8038 [24 Hours]
Telephone number	: (203) 656-7859 [8:30 a.m. - 5:00 p.m.]
Transportation Emergency	: Contact: CHEMTREC 1-800-424-9300 [US/Canada 24 Hours]
Product type	: Liquid.

2. Hazards identification

Emergency overview

NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED. Additional information on toxicological endpoints is available from the supplier upon request

Color	: Off-white.
Odor	: Fragrant.
Hazard statements	: HARMFUL IF SWALLOWED. CAUSES EYE IRRITATION.
Precautionary measures	: Do not breathe vapor or mist. Do not ingest. Do not eat, drink or smoke when using this product. Avoid contact with eyes. Wash thoroughly after handling.
OSHA/HCS status	: None.
Potential acute health effects	
Inhalation	: None known.
Ingestion	: Mild irritant
Skin	: Prolonged exposure may result in skin burns and ulcerations.
Eyes	: Prolonged or repeated contact with skin or mucous membrane may result in irritation symptoms, such as redness, blistering, dermatitis etc.
Potential chronic health effects	
Chronic effects	: Contains material that may cause target organ damage, based on animal data.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.
Over-exposure signs/symptoms	: None identified.
Medical conditions aggravated by over-exposure	: None.

See toxicological information (Section 11)

3. Composition/information on ingredients

United States

Name	CAS number	%
hydrogen peroxide	7722-84-1	2.40

Canada

Name	CAS number	%
hydrogen peroxide	7722-84-1	2.40

Mexico

Name	CAS number	UN number	%	IDLH	Classification			
					H	F	R	Special
hydrogen peroxide	7722-84-1	UN3287	2.40	75 ppm	2	0	0	-

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

- Eye contact** : Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Get medical attention if you feel unwell.
- Skin contact** : Wash the contaminated skin gently and thoroughly with running water and non-abrasive soap.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if you feel unwell.
- Ingestion** : Call physician immediately. Have conscious person drink several glasses of water or milk. Do not induce vomiting. Get medical attention.
- Protection of first-aiders** : Use suitable protective equipment (section 8). Avoid exposure.
- Notes to physician** : Treat symptomatically.

5. Fire-fighting measures

- Flammability of the product** : None. None known.
- Extinguishing media** : Extinguish fire using an agent suitable for the surrounding fire.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special fire-fighting procedures** : None.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
halogenated compounds
- Special protective equipment for fire-fighters** : In a fire, decomposition may produce toxic gases/fumes. Wear suitable protective clothing.

6. Accidental release measures

- Personal precautions** : Rubber gloves.
- Environmental precautions** : Store in a cool, well-ventilated, dry place. NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.
- Methods for cleaning up** : Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Place spilled material in an appropriate container for disposal. After contact with skin, wash immediately with plenty of water.

7. Handling and storage

- Handling** : Avoid contact with skin and eyes. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10).
- Storage** : Store in a cool, well-ventilated, dry place. Store in a dry place at low temperature away from ignition and heat sources. Avoid increased storage temperature.

8. Exposure controls/personal protection

United States

Ingredient	Exposure limits
hydrogen peroxide	<p>ACGIH TLV (United States, 3/2012). TWA: 1 ppm 8 hour(s). TWA: 1.4 mg/m³ 8 hour(s).</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 1 ppm 8 hour(s). TWA: 1.4 mg/m³ 8 hour(s).</p> <p>NIOSH REL (United States, 6/2009). TWA: 1 ppm 10 hour(s). TWA: 1.4 mg/m³ 10 hour(s).</p> <p>OSHA PEL (United States, 6/2010). TWA: 1 ppm 8 hour(s). TWA: 1.4 mg/m³ 8 hour(s).</p>

Canada

<u>Occupational exposure limits</u>		TWA (8 hours)			STEL (15 mins)			Ceiling			Notations
Ingredient	List name	ppm	mg/m ³	Other	ppm	mg/m ³	Other	ppm	mg/m ³	Other	
hydrogen peroxide	US ACGIH 3/2012	1	1.4	-	-	-	-	-	-	-	[3]
	AB 4/2009	1	1.4	-	-	-	-	-	-	-	
	BC 9/2011	1	-	-	-	-	-	-	-	-	
	ON 7/2010	1	1.4	-	-	-	-	-	-	-	
	QC 9/2011	1	1.4	-	-	-	-	-	-	-	

[3]Skin sensitization

Mexico

Occupational exposure limits

Ingredient	Exposure limits
hydrogen peroxide	<p>NOM-010-STPS (Mexico, 9/2000). LMPE-PPT: 1 ppm 8 hour(s). LMPE-PPT: 1.5 mg/m³ 8 hour(s). LMPE-CT: 3 mg/m³ 15 minute(s). LMPE-CT: 2 ppm 15 minute(s).</p>

Consult local authorities for acceptable exposure limits.

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
- Engineering measures** : In case of insufficient ventilation, wear suitable respiratory equipment.
- Hygiene measures** : When using do not eat, drink or smoke.
- Personal protection**

8. Exposure controls/personal protection

- Respiratory** : In case of insufficient ventilation, wear suitable respiratory equipment. Chemical splash goggles. Protective clothing must be worn.
- Hands** : None.
- Eyes** : None.
- Skin** : Wear suitable protective clothing.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
- Other protection** : Not available.

9. Physical and chemical properties

- Physical state** : Liquid. [Viscous liquid.]
- Flash point** : Closed cup: Not applicable.
- Color** : Off-white.
- Odor** : Fragrant.
- pH** : 3 to 4
- Boiling/condensation point** : >100°C (>212°F)
- Relative density** : 1.004 to 1.01
- Solubility** : Soluble in the following materials: cold water.

10. Stability and reactivity

- Chemical stability** : Not available.
- Conditions to avoid** : Not available.
- Incompatible materials** : Reducing agents metals
- Hazardous decomposition products** : Contaminated product generates oxygen gas pressure build-up
- Possibility of hazardous reactions** : Not available.
- Hazardous polymerization** : Not available. Will not occur.

11. Toxicological information

United States

Acute toxicity

Product/ingredient name	Result	Dose	Exposure
hydrogen peroxide	LC50 Inhalation Vapor	2 g/m ³	4 hours
	LD50 Dermal	3 g/kg	-
	LD50 Oral	376 mg/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Product/ingredient name	Result	Score	Exposure	Observation
hydrogen peroxide	Eyes - Severe irritant	-	1 milligrams	-

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : No carcinogenic effect.

11. Toxicological information

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
hydrogen peroxide	A3	3	-	-	-	-

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Canada

Acute toxicity

Product/ingredient name	Result	Dose	Exposure
hydrogen peroxide	LC50 Inhalation Vapor LD50 Dermal LD50 Oral	2 g/m3 3 g/kg 376 mg/kg	4 hours - -

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Product/ingredient name	Result	Score	Exposure	Observation
hydrogen peroxide	Eyes - Severe irritant	-	1 milligrams	-

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
hydrogen peroxide	A3	3	-	-	-	-

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Mexico

Acute toxicity

Product/ingredient name	Result	Dose	Exposure
hydrogen peroxide	LC50 Inhalation Vapor LD50 Dermal LD50 Oral	2 g/m3 3 g/kg 376 mg/kg	4 hours - -

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

11. Toxicological information

Product/ingredient name	Result	Score	Exposure	Observation
hydrogen peroxide	Eyes - Severe irritant	-	1 milligrams	-

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
hydrogen peroxide	A3	3	-	-	-	-

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

12. Ecological information

THE FOLLOWING DATA IN THIS SECTION IS SOURCED FROM PUBLICLY AVAILABLE DATABASES AND NOT THE REPRESENTATION OF ANY DATA COLLECTED BY ZOTOS INTERNATIONAL OR ITS AFFILIATES.

Ecotoxicity : No known significant effects or critical hazards.

United States

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
hydrogen peroxide	Acute EC50 1.2 mg/L Marine water	Algae - Dunaliella tertiolecta - Exponential growth phase	72 hours
	Acute EC50 5.38 mg/L Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 2320 ug/L Fresh water	Daphnia - Daphnia magna - Neonate - <24 hours	48 hours
	Acute LC50 22 ppm Fresh water	Fish - Oncorhynchus mykiss - Juvenile (Fledgling, Hatchling, Weanling)	96 hours

Conclusion/Summary : Not available.

Persistence/degradability

Conclusion/Summary : Not available.

Canada

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
hydrogen peroxide	Acute EC50 1.2 mg/L Marine water	Algae - Dunaliella tertiolecta - Exponential growth phase	72 hours
	Acute EC50 5.38 mg/L Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 2320 ug/L Fresh water	Daphnia - Daphnia magna - Neonate - <24 hours	48 hours
	Acute LC50 22 ppm Fresh water	Fish - Oncorhynchus mykiss - Juvenile (Fledgling, Hatchling, Weanling)	96 hours

Conclusion/Summary : Not available.

12. Ecological information

Persistence/degradability

Conclusion/Summary : Not available.

Mexico

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
hydrogen peroxide	Acute EC50 1.2 mg/L Marine water	Algae - Dunaliella tertiolecta - Exponential growth phase	72 hours
	Acute EC50 5.38 mg/L Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 2320 ug/L Fresh water	Daphnia - Daphnia magna - Neonate - <24 hours	48 hours
	Acute LC50 22 ppm Fresh water	Fish - Oncorhynchus mykiss - Juvenile (Fledgling, Hatchling, Weanling)	96 hours

Conclusion/Summary : Not available.

Persistence/degradability

Conclusion/Summary : Not available.

Other adverse effects : No known significant effects or critical hazards.

13. Disposal considerations

Waste disposal : Dispose of according to all federal, state and local applicable regulations.

Contaminated packaging : Waste must be disposed of according to applicable regulations. This material and its container must be disposed of as hazardous waste.

Waste residues information : Flush with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-	-		-
TDG Classification	Not regulated.	-	-	-		-
Mexico Classification	Not regulated.	-	-	-		-
ADR/RID Class	Not regulated.	-	-	-		-
IMDG Class	Not regulated.	-	-	-		-
IATA-DGR Class	Not regulated.	-	-	-		-

PG* : Packing group

15. Regulatory information

United States

HCS Classification : Toxic material
Irritating material
Target organ effects

U.S. Federal regulations : TSCA : Exempt
SARA 302/304/311/312 extremely hazardous substances: hydrogen peroxide
SARA 302/304 emergency planning and notification: hydrogen peroxide
SARA 302/304/311/312 hazardous chemicals: hydrogen peroxide
SARA 311/312 MSDS distribution - chemical inventory - hazard identification:
hydrogen peroxide: Fire hazard, reactive, Immediate (acute) health hazard, Delayed (chronic) health hazard
Clean Water Act (CWA) 311: disodium hydrogenorthophosphate; Phosphoric acid

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

State regulations

Massachusetts : The following components are listed: HYDROGEN PEROXIDE

New York : The following components are listed: Hydrogen peroxide

New Jersey : The following components are listed: HYDROGEN PEROXIDE

Pennsylvania : The following components are listed: HYDROGEN PEROXIDE (CONC > 52 PERCENT)

California Prop. 65

CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986. This product is not known to the State of California to cause cancer.

United States inventory (TSCA 8b) : Not determined.

Canada

WHMIS (Canada) : Class D-1B: Material causing immediate and serious toxic effects (Toxic).
Class E: Corrosive material

Canadian lists

Canadian NPRI : None of the components are listed.

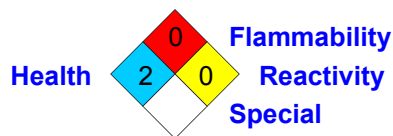
CEPA Toxic substances : None of the components are listed.

Canada inventory : All components are listed or exempted.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Mexico

Classification :



International regulations

15. Regulatory information

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

16. Other information

Hazardous Material Information System (U.S.A.) :

Health	2
Flammability	0
Physical hazards	0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

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Version : 3

Prepared by : Regulatory Affairs Group

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Material Safety Data Sheet



Design Freedom Acid Perm for N and T Hair - Waving Lotion

1. Product and company identification

Product name	: Design Freedom Acid Perm for N and T Hair - Waving Lotion
Manufacturer	: Zotos International, INC 100 Tokeneke Road, Darien, CT 06820 www.zotos.com
Validation date	: 9/12/2012.
In case of emergency	: (800) 584-8038 [24 Hours]
Telephone number	: (203) 656-7859 [8:30 a.m. - 5:00 p.m.]
Transportation Emergency	: Contact: CHEMTREC 1-800-424-9300 [US/Canada 24 Hours]
Product type	: Liquid.

2. Hazards identification

Emergency overview

NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.

Color	: Off-white.
Odor	: Characteristic.Fragrant.
Hazard statements	: HARMFUL IF SWALLOWED. CAUSES EYE IRRITATION. MAY CAUSE SKIN IRRITATION.
Precautionary measures	: Do not breathe vapor or mist. Do not ingest. Do not eat, drink or smoke when using this product. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.
OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Potential acute health effects

Inhalation	: MAY CAUSE RESPIRATORY TRACT IRRITATION.
Ingestion	: Mild irritant
Skin	: May cause sensitization by skin contact.
Eyes	: Prolonged or repeated contact with skin or mucous membrane may result in irritation symptoms, such as redness, blistering, dermatitis etc.

Potential chronic health effects

Chronic effects	: Contains material that may cause target organ damage, based on animal data.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.

Over-exposure signs/symptoms

Inhalation	: No specific data.
Ingestion	: No specific data.
Skin	: Adverse symptoms may include the following: irritation redness
Eyes	: Adverse symptoms may include the following: pain or irritation watering redness

Medical conditions aggravated by over-exposure	: Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.
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2. Hazards identification

See toxicological information (Section 11)

3. Composition/information on ingredients

United States

Name	CAS number	%
urea	57-13-6	7.77
ammonium chloride	12125-02-9	1.94
2-phenoxyethanol	122-99-6	1.29
ammonia	1336-21-6	1.09

Canada

Name	CAS number	%
urea	57-13-6	7.77
ammonium chloride	12125-02-9	1.94
2-phenoxyethanol	122-99-6	1.29
ammonia	1336-21-6	1.09

Mexico

Name	CAS number	UN number	%	IDLH	Classification			
					H	F	R	Special
ammonia	1336-21-6	UN3287	1.09	-	2	0	0	-
urea	57-13-6	Not available.	7.77	-	2	0	0	-
2-phenoxyethanol	122-99-6	Not available.	1.29	-	2	1	0	-
ammonium chloride	12125-02-9	Not available.	1.94	-	2	0	0	-

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

- Eye contact** : Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Get medical attention if you feel unwell.
- Skin contact** : Wash contaminated skin with soap and water.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if you feel unwell.
- Ingestion** : Get medical attention immediately.
- Protection of first-aiders** : Use suitable protective equipment (section 8). Avoid exposure.
- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

5. Fire-fighting measures

- Flammability of the product** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Extinguishing media** : Extinguish fire using an agent suitable for the surrounding fire.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special fire-fighting procedures** : None.

5. Fire-fighting measures

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
halogenated compounds

Special protective equipment for fire-fighters : In a fire, decomposition may produce toxic gases/fumes. Wear suitable protective clothing.

6. Accidental release measures

Personal precautions : Wear protective gloves.

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up : Use a water rinse for final clean-up.

7. Handling and storage

Handling : Avoid contact with skin and eyes. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10).

Storage : Avoid increased storage temperature.

8. Exposure controls/personal protection

United States

Ingredient	Exposure limits
urea	AIHA WEEL (United States, 10/2011). TWA: 10 mg/m ³ 8 hour(s).
ammonium chloride	ACGIH TLV (United States, 3/2012). TWA: 10 mg/m ³ 8 hour(s). Form: Fume STEL: 20 mg/m ³ 15 minute(s). Form: Fume NIOSH REL (United States, 6/2009). TWA: 10 mg/m ³ 10 hour(s). Form: Fume STEL: 20 mg/m ³ 15 minute(s). Form: Fume OSHA PEL 1989 (United States, 3/1989). TWA: 10 mg/m ³ 8 hour(s). STEL: 20 mg/m ³ 15 minute(s).

Canada

Occupational exposure limits		TWA (8 hours)			STEL (15 mins)			Ceiling			Notations
Ingredient	List name	ppm	mg/m ³	Other	ppm	mg/m ³	Other	ppm	mg/m ³	Other	
2-phenoxyethanol	ON 7/2010	25	141	-	-	-	-	-	-	-	[1]
	US ACGIH 3/2012	-	10	-	-	20	-	-	-	-	[a]
ammonium chloride	AB 4/2009	-	10	-	-	20	-	-	-	-	[3] [a]
	BC 9/2011	-	10	-	-	20	-	-	-	-	[a]
	ON 7/2010	-	10	-	-	20	-	-	-	-	[a]
urea	QC 9/2011	-	10	-	-	20	-	-	-	-	[a]
	US AIHA 10/2011	-	10	-	-	-	-	-	-	-	[b]

[1]Absorbed through skin. [3]Skin sensitization

Form: [a]Fume [b]fume

Mexico

Occupational exposure limits

Ingredient	Exposure limits
ammonium chloride	NOM-010-STPS (Mexico, 9/2000). LMPE-PPT: 10 mg/m ³ 8 hour(s). Form: smoke LMPE-CT: 20 mg/m ³ 15 minute(s). Form: smoke

Consult local authorities for acceptable exposure limits.

8. Exposure controls/personal protection

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
- Engineering measures** : In case of insufficient ventilation, wear suitable respiratory equipment.
- Hygiene measures** : When using do not eat, drink or smoke.
- Personal protection**
- Respiratory** : In case of insufficient ventilation, wear suitable respiratory equipment.
- Hands** : Wear suitable gloves.
- Eyes** : Safety glasses.
- Skin** : Wear suitable protective clothing.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
- Other protection** : Not available.

9. Physical and chemical properties

- Physical state** : Liquid. [Viscous liquid.]
- Flash point** : Closed cup: Not applicable.
- Color** : Off-white.
- Odor** : Characteristic.Fragrant.
- pH** : 9.6 to 10.2
- Boiling/condensation point** : >100°C (>212°F)
- Relative density** : 1.01 to 1.1

10. Stability and reactivity

- Chemical stability** : Stable under recommended storage and handling conditions (see section 7).
- Conditions to avoid** : No specific data.
- Incompatible materials** : Do not mix in metal bowl
- Hazardous decomposition products** : Ammonia. sulfur oxides
- Possibility of hazardous reactions** : Not available.

11. Toxicological information

United States

Acute toxicity

Product/ingredient name	Result	Dose	Exposure
ammonia	LD50 Oral	350 mg/kg	-
urea	LD50 Oral	8471 mg/kg	-
2-phenoxyethanol	LD50 Dermal	14422 mg/kg	-
ammonium chloride	LD50 Oral	1260 mg/kg	-
	LD50 Oral	1650 mg/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Product/ingredient name	Result	Score	Exposure	Observation

11. Toxicological information

ammonia	Eyes - Severe irritant	-	250	-
	Eyes - Severe irritant	-	Micrograms	-
urea	Eyes - Severe irritant	-	0.5 minutes 1	-
	Skin - Mild irritant	-	milligrams	-
2-phenoxyethanol	Skin - Moderate irritant	-	72 hours 22	-
	Eyes - Moderate irritant	-	milligrams	-
ammonium chloride	Eyes - Severe irritant	-	Intermittent	-
	Eyes - Mild irritant	-	24 hours 20	-
ammonium chloride	Eyes - Severe irritant	-	Percent	-
	Eyes - Severe irritant	-	6 milligrams	-
ammonium chloride	Skin - Mild irritant	-	24 hours 250	-
	Eyes - Mild irritant	-	Micrograms	-
ammonium chloride	Eyes - Severe irritant	-	24 hours 500	-
	Eyes - Severe irritant	-	milligrams	-
ammonium chloride	Eyes - Mild irritant	-	24 hours 500	-
	Eyes - Severe irritant	-	milligrams	-
ammonium chloride	Eyes - Mild irritant	-	100	-
	Eyes - Severe irritant	-	milligrams	-

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : No carcinogenic effect.

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Canada

Acute toxicity

Product/ingredient name	Result	Dose	Exposure
ammonia	LD50 Oral	350 mg/kg	-
2-phenoxyethanol	LD50 Dermal	14422 mg/kg	-
	LD50 Oral	1260 mg/kg	-
ammonium chloride	LD50 Oral	1650 mg/kg	-
urea	LD50 Oral	8471 mg/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Product/ingredient name	Result	Score	Exposure	Observation
ammonia	Eyes - Severe irritant	-	250	-
	Eyes - Severe irritant	-	Micrograms	-
2-phenoxyethanol	Eyes - Severe irritant	-	0.5 minutes 1	-
	Eyes - Moderate irritant	-	milligrams	-
ammonium chloride	Eyes - Severe irritant	-	6 milligrams	-
	Eyes - Severe irritant	-	24 hours 250	-
ammonium chloride	Skin - Mild irritant	-	Micrograms	-
	Eyes - Mild irritant	-	24 hours 500	-
ammonium chloride	Eyes - Severe irritant	-	milligrams	-
	Eyes - Severe irritant	-	24 hours 500	-
ammonium chloride	Eyes - Mild irritant	-	milligrams	-
	Eyes - Severe irritant	-	100	-

11. Toxicological information

urea	Skin - Mild irritant	-	milligrams 72 hours 22	-
	Skin - Moderate irritant	-	milligrams Intermittent 24 hours 20 Percent	-

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Mexico

Acute toxicity

Product/ingredient name	Result	Dose	Exposure
ammonia	LD50 Oral	350 mg/kg	-
urea	LD50 Oral	8471 mg/kg	-
2-phenoxyethanol	LD50 Dermal	14422 mg/kg	-
ammonium chloride	LD50 Oral	1260 mg/kg	-
	LD50 Oral	1650 mg/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Product/ingredient name	Result	Score	Exposure	Observation
ammonia	Eyes - Severe irritant	-	250 Micrograms	-
	Eyes - Severe irritant	-	0.5 minutes 1 milligrams	-
urea	Skin - Mild irritant	-	72 hours 22 milligrams	-
	Skin - Moderate irritant	-	Intermittent 24 hours 20 Percent	-
2-phenoxyethanol	Eyes - Moderate irritant	-	6 milligrams	-
	Eyes - Severe irritant	-	24 hours 250 Micrograms	-
ammonium chloride	Skin - Mild irritant	-	24 hours 500 milligrams	-
	Eyes - Mild irritant	-	24 hours 500 milligrams	-
	Eyes - Severe irritant	-	100 milligrams	-

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

11. Toxicological information

Carcinogenicity

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

12. Ecological information

THE FOLLOWING DATA IN THIS SECTION IS SOURCED FROM PUBLICLY AVAILABLE DATABASES AND NOT THE REPRESENTATION OF ANY DATA COLLECTED BY ZOTOS INTERNATIONAL OR ITS AFFILIATES.

Ecotoxicity : No known significant effects or critical hazards.

United States

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
ammonia urea	Acute LC50 15000 ug/L Fresh water	Fish - Gambusia affinis - Adult	96 hours
	Acute EC50 6573.1 mg/L Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate - <24 hours	48 hours
2-phenoxyethanol	Acute EC50 3910000 ug/L Fresh water	Daphnia - Daphnia magna - Neonate - <24 hours	48 hours
	Acute LC50 5000 ug/L Fresh water	Fish - Colisa fasciata - Fingerling	96 hours
ammonium chloride	Acute LC50 344000 ug/L Fresh water	Fish - Pimephales promelas - 32 days - 18.3 mm - 0.107 g	96 hours
	Acute EC50 0.07 mg/L Marine water	Algae - Hormosira banksii - Gamete	72 hours
	Acute LC50 20 ug/L Fresh water	Crustaceans - Macrobrachium rosenbergii - Post-larvae - 9.6 mm - 12.9 mg	48 hours
	Acute LC50 390 ug/L Fresh water	Daphnia - Daphnia magna - Young	48 hours
	Acute LC50 80 ug/L Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Chronic NOEC 330 ug/L Fresh water	Crustaceans - Crangonyx sp. - Juvenile (Fledgling, Hatchling, Weanling) - 8 to 42 days	21 days
	Chronic NOEC 19.66 mg/L Fresh water	Daphnia - Daphnia magna - <24 hours	21 days
	Chronic NOEC 0.006 mg/L Fresh water	Fish - Ictalurus punctatus - Fry - 10 weeks	30 days

Conclusion/Summary : Not available.

Persistence/degradability

Conclusion/Summary : Not available.

Canada

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
ammonia 2-phenoxyethanol	Acute LC50 15000 ug/L Fresh water	Fish - Gambusia affinis - Adult	96 hours
	Acute LC50 344000 ug/L Fresh water	Fish - Pimephales promelas - 32 days - 18.3 mm - 0.107 g	96 hours
ammonium chloride	Acute EC50 0.07 mg/L Marine water	Algae - Hormosira banksii - Gamete	72 hours
	Acute LC50 20 ug/L Fresh water	Crustaceans - Macrobrachium rosenbergii - Post-larvae - 9.6 mm - 12.9 mg	48 hours
	Acute LC50 390 ug/L Fresh water	Daphnia - Daphnia magna -	48 hours

12. Ecological information

urea	Acute LC50 80 ug/L Fresh water Chronic NOEC 330 ug/L Fresh water	Young Fish - Oncorhynchus mykiss Crustaceans - Crangonyx sp. - Juvenile (Fledgling, Hatchling, Weanling) - 8 to 42 days	96 hours 21 days
	Chronic NOEC 19.66 mg/L Fresh water	Daphnia - Daphnia magna - <24 hours	21 days
	Chronic NOEC 0.006 mg/L Fresh water	Fish - Ictalurus punctatus - Fry - 10 weeks	30 days
	Acute EC50 6573.1 mg/L Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate - <24 hours	48 hours
	Acute EC50 3910000 ug/L Fresh water	Daphnia - Daphnia magna - Neonate - <24 hours	48 hours
	Acute LC50 5000 ug/L Fresh water	Fish - Colisa fasciata - Fingerling	96 hours

Conclusion/Summary : Not available.

Persistence/degradability

Conclusion/Summary : Not available.

Mexico

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
ammonia urea	Acute LC50 15000 ug/L Fresh water Acute EC50 6573.1 mg/L Fresh water	Fish - Gambusia affinis - Adult Crustaceans - Ceriodaphnia dubia - Neonate - <24 hours	96 hours 48 hours
	Acute EC50 3910000 ug/L Fresh water	Daphnia - Daphnia magna - Neonate - <24 hours	48 hours
2-phenoxyethanol	Acute LC50 5000 ug/L Fresh water Acute LC50 344000 ug/L Fresh water	Fish - Colisa fasciata - Fingerling Fish - Pimephales promelas - 32 days - 18.3 mm - 0.107 g	96 hours 96 hours
	ammonium chloride	Acute EC50 0.07 mg/L Marine water	Algae - Hormosira banksii - Gamete
Acute LC50 20 ug/L Fresh water		Crustaceans - Macrobrachium rosenbergii - Post-larvae - 9.6 mm - 12.9 mg	48 hours
Acute LC50 390 ug/L Fresh water		Daphnia - Daphnia magna - Young	48 hours
	Acute LC50 80 ug/L Fresh water Chronic NOEC 330 ug/L Fresh water	Fish - Oncorhynchus mykiss Crustaceans - Crangonyx sp. - Juvenile (Fledgling, Hatchling, Weanling) - 8 to 42 days	96 hours 21 days
	Chronic NOEC 19.66 mg/L Fresh water	Daphnia - Daphnia magna - <24 hours	21 days
	Chronic NOEC 0.006 mg/L Fresh water	Fish - Ictalurus punctatus - Fry - 10 weeks	30 days

Conclusion/Summary : Not available.

Persistence/degradability

Conclusion/Summary : Not available.

Other adverse effects : No known significant effects or critical hazards.

13. Disposal considerations

Waste disposal : Dispose of according to all federal, state and local applicable regulations.

Contaminated packaging : Waste must be disposed of according to applicable regulations. This material and its container must be disposed of as hazardous waste.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-	-		-
TDG Classification	Not regulated.	-	-	-		-
Mexico Classification	Not regulated.	-	-	-		-
ADR/RID Class	Not regulated.	-	-	-		-
IMDG Class	Not regulated.	-	-	-		-
IATA-DGR Class	Not regulated.	-	-	-		-

PG* : Packing group

15. Regulatory information

United States

HCS Classification : Toxic material
Irritating material
Target organ effects

U.S. Federal regulations : TSCA : Exempt

SARA 302/304/311/312 extremely hazardous substances: ammonia, anhydrous

SARA 302/304 emergency planning and notification: ammonia, anhydrous

SARA 302/304/311/312 hazardous chemicals: ammonium chloride; 2-phenoxyethanol; ammonia, anhydrous

SARA 311/312 MSDS distribution - chemical inventory - hazard identification:
ammonium chloride: Immediate (acute) health hazard, Delayed (chronic) health hazard;
2-phenoxyethanol: Immediate (acute) health hazard, Delayed (chronic) health hazard;
ammonia, anhydrous: Sudden release of pressure, Immediate (acute) health hazard

Clean Water Act (CWA) 311: ammonia, anhydrous; ammonium chloride

Clean Air Act (CAA) 112 regulated toxic substances: ammonia, anhydrous

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 313

	Product name	CAS number	Concentration
Form R - Reporting requirements	ammonium chloride	12125-02-9	1.94
	2-phenoxyethanol	122-99-6	1.29
	ammonia	1336-21-6	1.09

15. Regulatory information

Supplier notification	ammonium chloride	12125-02-9	1.94
	2-phenoxyethanol	122-99-6	1.29
	ammonia	1336-21-6	1.09

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

State regulations

- Massachusetts** : The following components are listed: AMMONIA; AMMONIUM CHLORIDE
- New York** : The following components are listed: Ammonia; Ammonium chloride
- New Jersey** : The following components are listed: AMMONIA; GLYCOL ETHERS; AMMONIUM CHLORIDE
- Pennsylvania** : The following components are listed: AMMONIA; GLYCOL ETHERS; AMMONIUM CHLORIDE ((NH₄)CL)

California Prop. 65

CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986. This product is not known to the State of California to cause cancer.

United States inventory (TSCA 8b) : Not determined.

Canada

WHMIS (Canada) : Class E: Corrosive material

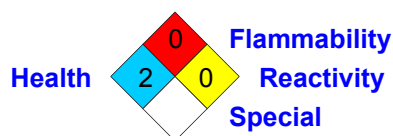
Canadian lists

- Canadian NPRI** : The following components are listed: Ammonia (total); Ammonia (total)
- CEPA Toxic substances** : None of the components are listed.
- Canada inventory** : Not determined.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Mexico

Classification :



International regulations

- Chemical Weapons Convention List Schedule I Chemicals** : Not listed
- Chemical Weapons Convention List Schedule II Chemicals** : Not listed
- Chemical Weapons Convention List Schedule III Chemicals** : Not listed

16. Other information

Hazardous Material Information System (U.S.A.) :

Health	2
Flammability	0
Physical hazards	0

16. Other information

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

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Prepared by : Regulatory Affairs Group

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Material Safety Data Sheet



Design Freedom Alkaline Perm for Tinted Hair - Neutralizer

1. Product and company identification

Product name	: Design Freedom Alkaline Perm for Tinted Hair - Neutralizer
Manufacturer	: Zotos International, INC. 100 Tokeneke Road, Darien, CT 06820 www.zotos.com
Validation date	: 7/26/2012.
In case of emergency	(800) 584-8038 [24 Hours]
Telephone number	(203) 656-7859 [8:30 a.m. - 5:00 p.m.]
Transportation Emergency	Contact: CHEMTREC 1-800-424-9300 [US/Canada 24 Hours]
Product type	: Liquid.

2. Hazards identification

Emergency overview

NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED. Additional information on toxicological endpoints is available from the supplier upon request

Color	: Off-white.
Odor	: Fragrant.
Hazard statements	: CAUSES EYE IRRITATION.
Precautionary measures	: Do not breathe vapor or mist. Do not eat, drink or smoke when using this product. Avoid contact with eyes. Wash thoroughly after handling.
OSHA/HCS status	: None.
Potential acute health effects	
Inhalation	: None known.
Ingestion	: Mild irritant
Skin	: Prolonged exposure may result in skin burns and ulcerations.
Eyes	: Prolonged or repeated contact with skin or mucous membrane may result in irritation symptoms, such as redness, blistering, dermatitis etc.
Potential chronic health effects	
Chronic effects	: Contains material that may cause target organ damage, based on animal data.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.
Over-exposure signs/symptoms	: None identified.
Medical conditions aggravated by over-exposure	: None.

See toxicological information (Section 11)

3. Composition/information on ingredients

Name	CAS number	%
hydrogen peroxide	7722-84-1	2.4

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

- Eye contact** : Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Get medical attention if you feel unwell.
- Skin contact** : Wash the contaminated skin gently and thoroughly with running water and non-abrasive soap.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if you feel unwell.
- Ingestion** : Call physician immediately. Have conscious person drink several glasses of water or milk. Do not induce vomiting. Get medical attention.
- Protection of first-aiders** : Use suitable protective equipment (section 8). Avoid exposure.
- Notes to physician** : Treat symptomatically.

5. Fire-fighting measures

- Flammability of the product** : None. None known.
- Extinguishing media** : Extinguish fire using an agent suitable for the surrounding fire.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special fire-fighting procedures** : None.
- Hazardous thermal decomposition products** : No specific data.
- Special protective equipment for fire-fighters** : In a fire, decomposition may produce toxic gases/fumes. Wear suitable protective clothing.

6. Accidental release measures

- Personal precautions** : Rubber gloves.
- Environmental precautions** : Store in a cool, well-ventilated, dry place. NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.
- Methods for cleaning up** : Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Place spilled material in an appropriate container for disposal. After contact with skin, wash immediately with plenty of water.

7. Handling and storage

- Handling** : Avoid contact with skin and eyes. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10).
- Storage** : Store in a cool, well-ventilated, dry place. Store in a dry place at low temperature away from ignition and heat sources. Avoid increased storage temperature.

8. Exposure controls/personal protection

Ingredient	Exposure limits
hydrogen peroxide	<p>ACGIH TLV (United States, 2/2010). TWA: 1 ppm 8 hour(s). TWA: 1.4 mg/m³ 8 hour(s).</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 1 ppm 8 hour(s). TWA: 1.4 mg/m³ 8 hour(s).</p> <p>NIOSH REL (United States, 6/2009). TWA: 1 ppm 10 hour(s). TWA: 1.4 mg/m³ 10 hour(s).</p> <p>OSHA PEL (United States, 6/2010). TWA: 1 ppm 8 hour(s). TWA: 1.4 mg/m³ 8 hour(s).</p>

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : In case of insufficient ventilation, wear suitable respiratory equipment.

Hygiene measures : When using do not eat, drink or smoke.

Personal protection

Respiratory : In case of insufficient ventilation, wear suitable respiratory equipment. Chemical splash goggles. Protective clothing must be worn.

Hands : None.

Eyes : None.

Skin : Wear suitable protective clothing.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Other protection : Not available.

9. Physical and chemical properties

Physical state : Liquid. [Viscous liquid.]

Flash point : Closed cup: Not applicable.

Color : Off-white.

Odor : Fragrant.

pH : 3 to 4

Boiling/condensation point : >100°C (>212°F)

Relative density : 1.004 to 1.01

Solubility : Soluble in the following materials: cold water.

10. Stability and reactivity

Chemical stability : Not available.

Conditions to avoid : Not available.

Incompatible materials : Reducing agents metals

Hazardous decomposition products : Contaminated product generates oxygen gas pressure build-up

Possibility of hazardous reactions : Not available.

Hazardous polymerization : Not available. Will not occur.

11. Toxicological information

Acute toxicity

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Product/ingredient name	Result	Score	Exposure	Observation
hydrogen peroxide	Eyes - Severe irritant	-	1 milligrams	-

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : No carcinogenic effect.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
hydrogen peroxide	A3	3	-	-	-	-

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

12. Ecological information

Ecotoxicity : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
hydrogen peroxide	Acute EC50 1.2 mg/L Marine water	Algae - Dunaliella tertiolecta - Exponential growth phase	72 hours
	Acute EC50 5.38 mg/L Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 2320 ug/L Fresh water	Daphnia - Daphnia magna - Neonate - <24 hours	48 hours
	Acute LC50 22 ppm Fresh water	Fish - Oncorhynchus mykiss - Juvenile (Fledgling, Hatchling, Weanling)	96 hours

Conclusion/Summary : Not available.

Persistence/degradability

Conclusion/Summary : Not available.

Other adverse effects : No known significant effects or critical hazards.

13. Disposal considerations

Waste disposal : Dispose of according to all federal, state and local applicable regulations.

Contaminated packaging : Waste must be disposed of according to applicable regulations. This material and its container must be disposed of as hazardous waste.

Waste residues information : Flush with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

13. Disposal considerations

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-	-		-
TDG Classification	Not regulated.	-	-	-		-
Mexico Classification	Not regulated.	-	-	-		-
ADR/RID Class	Not regulated.	-	-	-		-
IMDG Class	Not regulated.	-	-	-		-
IATA-DGR Class	Not regulated.	-	-	-		-

PG* : Packing group

15. Regulatory information

HCS Classification : Irritating material
Target organ effects

U.S. Federal regulations : TSCA : Exempt

SARA 302/304/311/312 extremely hazardous substances: Hydrogen Peroxide, aqueous solution

SARA 302/304 emergency planning and notification: Hydrogen Peroxide, aqueous solution

SARA 302/304/311/312 hazardous chemicals: Hydrogen Peroxide, aqueous solution

SARA 311/312 MSDS distribution - chemical inventory - hazard identification:
Hydrogen Peroxide, aqueous solution: Fire hazard, reactive, Immediate (acute) health hazard, Delayed (chronic) health hazard

Clean Water Act (CWA) 311: Phosphoric Acid

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

State regulations

Massachusetts : The following components are listed: HYDROGEN PEROXIDE

New York : The following components are listed: Hydrogen peroxide

New Jersey : The following components are listed: HYDROGEN PEROXIDE

15. Regulatory information

Pennsylvania : The following components are listed: HYDROGEN PEROXIDE (CONC > 52 PERCENT)

California Prop. 65

CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986. This product is not known to the State of California to cause cancer.

Canada inventory : Not determined.

International regulations

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

16. Other information

Hazardous Material Information System (U.S.A.) :

Health	2
Flammability	0
Physical hazards	0

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The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

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- Prepared by** : Regulatory Affairs Group

Indicates information that has changed from previously issued version.

Notice to reader

16. Other information

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Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Material Safety Data Sheet



Design Freedom Alkaline Perm for Tinted Hair - Waving Lotion

1. Product and company identification

Product name	: Design Freedom Alkaline Perm for Tinted Hair - Waving Lotion
Manufacturer	: Zotos International, INC 100 Tokeneke Road, Darien, CT 06820 www.zotos.com
Validation date	: 9/12/2012.
In case of emergency	: (800) 584-8038 [24 Hours]
Telephone number	: (203) 656-7859 [8:30 a.m. - 5:00 p.m.]
Transportation Emergency	: Contact: CHEMTREC 1-800-424-9300 [US/Canada 24 Hours]
Product type	: Liquid.

2. Hazards identification

Emergency overview

NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.

Color	: Off-white.
Odor	: Characteristic.Fragrant.
Hazard statements	: CAUSES EYE IRRITATION. MAY BE HARMFUL IF SWALLOWED. MAY CAUSE SKIN IRRITATION.
Precautionary measures	: Do not breathe vapor or mist. Do not ingest. Do not eat, drink or smoke when using this product. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.
OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Potential acute health effects

Inhalation	: MAY CAUSE RESPIRATORY TRACT IRRITATION.
Ingestion	: Mild irritant
Skin	: May cause sensitization by skin contact.
Eyes	: Prolonged or repeated contact with skin or mucous membrane may result in irritation symptoms, such as redness, blistering, dermatitis etc.

Potential chronic health effects

Chronic effects	: Contains material that may cause target organ damage, based on animal data.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.

Over-exposure signs/symptoms

Inhalation	: No specific data.
Ingestion	: No specific data.
Skin	: Adverse symptoms may include the following: irritation redness
Eyes	: Adverse symptoms may include the following: pain or irritation watering redness

Medical conditions aggravated by over-exposure	: Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.
---	--

2. Hazards identification

See toxicological information (Section 11)

3. Composition/information on ingredients

United States

Name	CAS number	%
Dodecan-1-ol, ethoxylated	9002-92-0	1.66

Canada

Name	CAS number	%
ammonium mercaptoacetate	5421-46-5	6.16
Dodecan-1-ol, ethoxylated	9002-92-0	1.66

Mexico

Name	CAS number	UN number	%	IDLH	Classification			
					H	F	R	Special
Dodecan-1-ol, ethoxylated	9002-92-0	Not available.	1.66	-	2	1	0	-

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

- Eye contact** : Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Get medical attention if you feel unwell.
- Skin contact** : Wash contaminated skin with soap and water.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if you feel unwell.
- Ingestion** : Get medical attention immediately.
- Protection of first-aiders** : Use suitable protective equipment (section 8). Avoid exposure.
- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

5. Fire-fighting measures

- Flammability of the product** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Extinguishing media** : Extinguish fire using an agent suitable for the surrounding fire.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special fire-fighting procedures** : None.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
- Special protective equipment for fire-fighters** : In a fire, decomposition may produce toxic gases/fumes. Wear suitable protective clothing.

6. Accidental release measures

- Personal precautions** : Wear protective gloves.
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Methods for cleaning up** : Use a water rinse for final clean-up.

7. Handling and storage

- Handling** : Avoid contact with skin and eyes. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10).
- Storage** : Avoid increased storage temperature.

8. Exposure controls/personal protection

Canada

Occupational exposure limits

No exposure limit value known.

Mexico

Occupational exposure limits

No exposure limit value known.

Consult local authorities for acceptable exposure limits.

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
- Engineering measures** : In case of insufficient ventilation, wear suitable respiratory equipment.
- Hygiene measures** : When using do not eat, drink or smoke.
- Personal protection**
- Respiratory** : In case of insufficient ventilation, wear suitable respiratory equipment.
 - Hands** : Wear suitable gloves.
 - Eyes** : Safety glasses.
 - Skin** : Wear suitable protective clothing.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
- Other protection** : Not available.

9. Physical and chemical properties

- Physical state** : Liquid. [Viscous liquid.]
- Flash point** : Closed cup: Not applicable.
- Color** : Off-white.
- Odor** : Characteristic.Fragrant.
- pH** : 9.6 to 10.2
- Boiling/condensation point** : >100°C (>212°F)
- Relative density** : 1.01 to 1.1

10. Stability and reactivity

- Chemical stability** : Stable under recommended storage and handling conditions (see section 7).
- Conditions to avoid** : No specific data.
- Incompatible materials** : Do not mix in metal bowl
- Hazardous decomposition products** : Ammonia. sulfur oxides
- Possibility of hazardous reactions** : Not available.

11. Toxicological information

United States

Acute toxicity

Product/ingredient name	Result	Dose	Exposure
Dodecan-1-ol, ethoxylated	LD50 Oral	1 g/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Product/ingredient name	Result	Score	Exposure	Observation
Dodecan-1-ol, ethoxylated	Eyes - Severe irritant	-	24 hours 750 Micrograms	-
	Skin - Moderate irritant	-	72 hours 6 milligrams Intermittent	-
	Skin - Mild irritant	-	24 hours 500 milligrams	-
	Skin - Moderate irritant	-	24 hours 500 milligrams	-

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : No carcinogenic effect.

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Canada

Acute toxicity

Product/ingredient name	Result	Dose	Exposure
Dodecan-1-ol, ethoxylated	LD50 Oral	1 g/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

11. Toxicological information

Product/ingredient name	Result	Score	Exposure	Observation
Dodecan-1-ol, ethoxylated	Eyes - Severe irritant	-	24 hours 750 Micrograms	-
	Skin - Moderate irritant	-	72 hours 6 milligrams	-
	Skin - Mild irritant	-	Intermittent 24 hours 500 milligrams	-
	Skin - Moderate irritant	-	24 hours 500 milligrams	-

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Mexico

Acute toxicity

Product/ingredient name	Result	Dose	Exposure
Dodecan-1-ol, ethoxylated	LD50 Oral	1 g/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Product/ingredient name	Result	Score	Exposure	Observation
Dodecan-1-ol, ethoxylated	Eyes - Severe irritant	-	24 hours 750 Micrograms	-
	Skin - Moderate irritant	-	72 hours 6 milligrams	-
	Skin - Mild irritant	-	Intermittent 24 hours 500 milligrams	-
	Skin - Moderate irritant	-	24 hours 500 milligrams	-

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

12. Ecological information

THE FOLLOWING DATA IN THIS SECTION IS SOURCED FROM PUBLICLY AVAILABLE DATABASES AND NOT THE REPRESENTATION OF ANY DATA COLLECTED BY ZOTOS INTERNATIONAL OR ITS AFFILIATES.

Ecotoxicity : No known significant effects or critical hazards.

United States

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
Dodecan-1-ol, ethoxylated	Acute LC50 1000 to 2500 ug/L Acute LC50 6460 ug/L Fresh water Acute LC50 1500 ug/L Fresh water	Crustaceans - Idotea balthica Daphnia - Daphnia magna Fish - Salmo salar - Parr - 8.2 to 11.7 cm - 5.1 to 14.1 g	48 hours 48 hours 96 hours

Conclusion/Summary : Not available.

Persistence/degradability

Conclusion/Summary : Not available.

Canada

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
Dodecan-1-ol, ethoxylated	Acute LC50 1000 to 2500 ug/L Acute LC50 6460 ug/L Fresh water Acute LC50 1500 ug/L Fresh water	Crustaceans - Idotea balthica Daphnia - Daphnia magna Fish - Salmo salar - Parr - 8.2 to 11.7 cm - 5.1 to 14.1 g	48 hours 48 hours 96 hours

Conclusion/Summary : Not available.

Persistence/degradability

Conclusion/Summary : Not available.

Mexico

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
Dodecan-1-ol, ethoxylated	Acute LC50 1000 to 2500 ug/L Acute LC50 6460 ug/L Fresh water Acute LC50 1500 ug/L Fresh water	Crustaceans - Idotea balthica Daphnia - Daphnia magna Fish - Salmo salar - Parr - 8.2 to 11.7 cm - 5.1 to 14.1 g	48 hours 48 hours 96 hours

Conclusion/Summary : Not available.

Persistence/degradability

Conclusion/Summary : Not available.

Other adverse effects : No known significant effects or critical hazards.

13. Disposal considerations

Waste disposal : Dispose of according to all federal, state and local applicable regulations.

Contaminated packaging : Waste must be disposed of according to applicable regulations. This material and its container must be disposed of as hazardous waste.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-	-		-
TDG Classification	Not regulated.	-	-	-		-
Mexico Classification	Not regulated.	-	-	-		-
ADR/RID Class	Not regulated.	-	-	-		-
IMDG Class	Not regulated.	-	-	-		-
IATA-DGR Class	Not regulated.	-	-	-		-

PG* : Packing group

15. Regulatory information**United States**

HCS Classification : Irritating material
Target organ effects

U.S. Federal regulations : TSCA : Exempt

SARA 302/304/311/312 extremely hazardous substances: ammonia, anhydrous

SARA 302/304 emergency planning and notification: ammonia, anhydrous

SARA 302/304/311/312 hazardous chemicals: ammonia, anhydrous; Dodecan-1-ol, ethoxylated

SARA 311/312 MSDS distribution - chemical inventory - hazard identification:
ammonia, anhydrous: Sudden release of pressure, Immediate (acute) health hazard;
Dodecan-1-ol, ethoxylated: Immediate (acute) health hazard, Delayed (chronic) health hazard

Clean Water Act (CWA) 311: ammonia, anhydrous

Clean Air Act (CAA) 112 regulated toxic substances: ammonia, anhydrous

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

State regulations

Massachusetts : The following components are listed: AMMONIA

New York : The following components are listed: Ammonia

New Jersey : The following components are listed: AMMONIA

Pennsylvania : The following components are listed: AMMONIA

California Prop. 65

15. Regulatory information

CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986. This product is not known to the State of California to cause cancer.

United States inventory (TSCA 8b) : Not determined.

Canada

WHMIS (Canada) : Class D-2B: Material causing other toxic effects (Toxic).

Canadian lists

Canadian NPRI : The following components are listed: Ammonia (total); Ammonia (total)

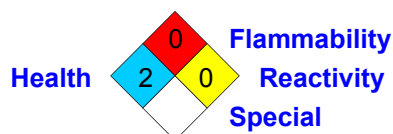
CEPA Toxic substances : None of the components are listed.

Canada inventory : Not determined.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Mexico

Classification :



International regulations

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

16. Other information

Hazardous Material Information System (U.S.A.) :

Health	2
Flammability	0
Physical hazards	0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :



16. Other information

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

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✔ Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Material Safety Data Sheet



Quantum Classic Body Perm - Activator

1. Product and company identification

Product name	: Quantum Classic Body Perm - Activator
Manufacturer	: Zotos International, INC 100 Tokeneke Road, Darien, CT 06820 www.zotos.com
Validation date	: 7/25/2012.
In case of emergency	: (800) 584-8038 [24 Hours]
Telephone number	: (203) 656-7859 [8:30 a.m. - 5:00 p.m.]
Transportation Emergency	: Contact: CHEMTREC 1-800-424-9300 [US/Canada 24 Hours]
Product type	: Liquid.

2. Hazards identification

Emergency overview

NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.

Color	: Clear. Hazy
Odor	: Mild. Sulfurous.
Hazard statements	: MAY CAUSE EYE AND SKIN IRRITATION.
Precautionary measures	: Do not breathe vapor or mist. Do not eat, drink or smoke when using this product. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.
OSHA/HCS status	: None.
Potential acute health effects	
Inhalation	: MAY CAUSE RESPIRATORY TRACT IRRITATION.
Ingestion	: Mild irritant
Skin	: May cause skin irritation.
Eyes	: Prolonged or repeated contact with skin or mucous membrane may result in irritation symptoms, such as redness, blistering, dermatitis etc.
Potential chronic health effects	
Chronic effects	: Contains material that may cause target organ damage, based on animal data.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.
Over-exposure signs/symptoms	: None identified.
Medical conditions aggravated by over-exposure	: None.

See toxicological information (Section 11)

3. Composition/information on ingredients

United States

Name	CAS number	%
glycerol	56-81-5	19.98

Canada

Name	CAS number	%
glycerol	56-81-5	19.98

Mexico

Name	CAS number	UN number	%	IDLH	Classification			
					H	F	R	Special
glycerol	56-81-5	Not available.	19.98	-	1	1	0	-

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

- Eye contact** : Flush with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Seek medical attention.
- Skin contact** : Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Wash clothing before reuse.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if you feel unwell.
- Ingestion** : Get medical attention immediately.
- Protection of first-aiders** : Use suitable protective equipment (section 8).
- Notes to physician** : Treat symptomatically.

5. Fire-fighting measures

- Flammability of the product** : None.
- Extinguishing media** : Extinguish fire using an agent suitable for the surrounding fire.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special fire-fighting procedures** : None.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
sulfur oxides
- Special protective equipment for fire-fighters** : None known.

6. Accidental release measures

- Personal precautions** : Wear suitable protective clothing, gloves and eye/face protection.
- Environmental precautions** : If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.
- Methods for cleaning up** : Wear alkali-resistant protective clothing. Hazard of slipping on spilled product. Use absorbent chemicals or dry sand. Use a tool to scoop up solid or absorbed material and place into appropriate labeled waste container. Wash with plenty of soap and water.

7. Handling and storage

- Handling** : Keep container closed. Avoid contact with skin and eyes. Do not breathe dust.
- Storage** : Store in a cool, well-ventilated, dry place. Store in a dry place at low temperature away from ignition and heat sources. Avoid increased storage temperature.

8. Exposure controls/personal protection

United States

Ingredient	Exposure limits
glycerol	<p>ACGIH TLV (United States, 3/2012). TWA: 10 mg/m³ 8 hour(s). Form: Inhalable fraction</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m³ 8 hour(s). Form: Respirable fraction TWA: 10 mg/m³ 8 hour(s). Form: Total dust</p> <p>OSHA PEL (United States, 6/2010). TWA: 5 mg/m³ 8 hour(s). Form: Respirable fraction TWA: 15 mg/m³ 8 hour(s). Form: Total dust</p>

Canada

Occupational exposure limits		TWA (8 hours)			STEL (15 mins)			Ceiling			
Ingredient	List name	ppm	mg/m ³	Other	ppm	mg/m ³	Other	ppm	mg/m ³	Other	Notations
glycerol	US ACGIH 3/2012	-	10	-	-	-	-	-	-	-	[a]
	AB 4/2009	-	10	-	-	-	-	-	-	-	[3] [b]
	BC 9/2011	-	10	-	-	-	-	-	-	-	[b]
		-	3	-	-	-	-	-	-	-	[c]
	ON 7/2010	-	10	-	-	-	-	-	-	-	[a]
	QC 9/2011	-	10	-	-	-	-	-	-	-	[d]

[3]Skin sensitization

Form: [a]Inhalable fraction [b]Mist [c]Respirable mist [d]mist

Mexico

Occupational exposure limits

Ingredient	Exposure limits
glycerol	<p>NOM-010-STPS (Mexico, 9/2000). LMPE-PPT: 10 mg/m³ 8 hour(s). Form: mist</p>

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : In case of insufficient ventilation, wear suitable respiratory equipment.

Hygiene measures : Avoid contact with skin and eyes. If in eyes or on skin, rinse well with water. When using do not eat, drink or smoke.

Personal protection

Respiratory : In case of insufficient ventilation, wear suitable respiratory equipment.

Hands : Wear suitable gloves.

Eyes : Wear eye/face protection.

Skin : Wear suitable protective clothing.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Other protection : Not available.

9. Physical and chemical properties

Physical state	: Liquid. [Viscous liquid.]
Flash point	: Closed cup: Not applicable.
Color	: Clear. Hazy
Odor	: Mild. Sulfurous.
Boiling/condensation point	: >212°C (>413.6°F)
Relative density	: 1.2 to 1.4

10. Stability and reactivity

Chemical stability	: Stable under recommended storage and handling conditions (see section 7).
Conditions to avoid	: Not available.
Incompatible materials	: No specific data.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Possibility of hazardous reactions	: Not available.
Hazardous polymerization	: Not available.

11. Toxicological information

United States

Acute toxicity

Product/ingredient name	Result	Dose	Exposure
glycerol	LD50 Oral	12600 mg/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Product/ingredient name	Result	Score	Exposure	Observation
glycerol	Eyes - Mild irritant	-	24 hours 500 milligrams	-
	Skin - Mild irritant	-	24 hours 500 milligrams	-

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : No carcinogenic effect.

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Canada

Acute toxicity

Product/ingredient name	Result	Dose	Exposure
glycerol	LD50 Oral	12600 mg/kg	-

Conclusion/Summary : Not available.

11. Toxicological information

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Product/ingredient name	Result	Score	Exposure	Observation
glycerol	Eyes - Mild irritant	-	24 hours 500 milligrams	-
	Skin - Mild irritant	-	24 hours 500 milligrams	-

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Mexico

Acute toxicity

Product/ingredient name	Result	Dose	Exposure
glycerol	LD50 Oral	12600 mg/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Product/ingredient name	Result	Score	Exposure	Observation
glycerol	Eyes - Mild irritant	-	24 hours 500 milligrams	-
	Skin - Mild irritant	-	24 hours 500 milligrams	-

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

12. Ecological information

THE FOLLOWING DATA IN THIS SECTION IS SOURCED FROM PUBLICLY AVAILABLE DATABASES AND NOT THE REPRESENTATION OF ANY DATA COLLECTED BY ZOTOS INTERNATIONAL OR ITS AFFILIATES.

Ecotoxicity : No known significant effects or critical hazards.

United States

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
glycerol	Acute LC50 54 ml/L Fresh water	Fish - Oncorhynchus mykiss - 0.9 g	96 hours

Conclusion/Summary : Not available.

Persistence/degradability

Conclusion/Summary : Not available.

Canada

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
glycerol	Acute LC50 54 ml/L Fresh water	Fish - Oncorhynchus mykiss - 0.9 g	96 hours

Conclusion/Summary : Not available.

Persistence/degradability

Conclusion/Summary : Not available.

Mexico

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
glycerol	Acute LC50 54 ml/L Fresh water	Fish - Oncorhynchus mykiss - 0.9 g	96 hours

Conclusion/Summary : Not available.

Persistence/degradability

Conclusion/Summary : Not available.

Other adverse effects : No known significant effects or critical hazards.

13. Disposal considerations

Waste disposal : Dispose of according to all federal, state and local applicable regulations.

Contaminated packaging : Waste must be disposed of according to applicable regulations. This material and its container must be disposed of as hazardous waste.

Waste residues information : Flush with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-	-		-
TDG Classification	Not regulated.	-	-	-		-
Mexico Classification	Not regulated.	-	-	-		-

14. Transport information

ADR/RID Class	Not regulated.	-	-	-	-
IMDG Class	Not regulated.	-	-	-	-
IATA-DGR Class	Not regulated.	-	-	-	-

PG* : Packing group

15. Regulatory information

United States

HCS Classification : Target organ effects

U.S. Federal regulations : TSCA : Exempt

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: glycerol

SARA 311/312 MSDS distribution - chemical inventory - hazard identification:
glycerol: Immediate (acute) health hazard, Delayed (chronic) health hazard

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

State regulations

Massachusetts : The following components are listed: GLYCERINE MIST

New York : None of the components are listed.

New Jersey : The following components are listed: GLYCERIN; 1,2,3-PROPANETRIOL

Pennsylvania : The following components are listed: 1,2,3-PROPANETRIOL

California Prop. 65

CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986. This product is not known to the State of California to cause cancer.

United States inventory (TSCA 8b) : All components are listed or exempted.

Canada

WHMIS (Canada) : Not controlled under WHMIS (Canada).

Canadian lists

Canadian NPRI : None of the components are listed.

CEPA Toxic substances : None of the components are listed.

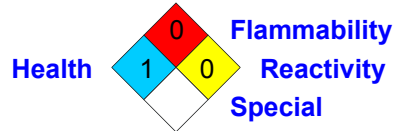
Canada inventory : All components are listed or exempted.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Mexico

Classification :

15. Regulatory information



International regulations

- Chemical Weapons Convention List Schedule I Chemicals : Not listed
- Chemical Weapons Convention List Schedule II Chemicals : Not listed
- Chemical Weapons Convention List Schedule III Chemicals : Not listed

16. Other information

Hazardous Material Information System (U.S.A.) :

Health			1
Flammability			0
Physical hazards			0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

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Indicates information that has changed from previously issued version.

Notice to reader

16. Other information

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Material Safety Data Sheet



Quantum Classic Body Acid Perm - Neutralizer

1. Product and company identification

Product name	: Quantum Classic Body Acid Perm - Neutralizer
Manufacturer	: Zotos International, INC 100 Tokeneke Road, Darien, CT 06820 www.zotos.com
Validation date	: 7/25/2012.
In case of emergency	: (800) 584-8038 [24 Hours]
Telephone number	: (203) 656-7859 [8:30 a.m. - 5:00 p.m.]
Transportation Emergency	: Contact: CHEMTREC 1-800-424-9300 [US/Canada 24 Hours]
Product type	: Liquid.

2. Hazards identification

Emergency overview

NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.

Color	: Off-white.
Odor	: Fragrant.
Hazard statements	: HARMFUL IF SWALLOWED. CAUSES EYE IRRITATION.
Precautionary measures	: Do not breathe vapor or mist. Do not ingest. Do not eat, drink or smoke when using this product. Avoid contact with eyes. Wash thoroughly after handling.

OSHA/HCS status : None.

Potential acute health effects

Inhalation	: None known.
Ingestion	: Mild irritant
Skin	: Prolonged exposure may result in skin burns and ulcerations.
Eyes	: Prolonged or repeated contact with skin or mucous membrane may result in irritation symptoms, such as redness, blistering, dermatitis etc.

Potential chronic health effects

Chronic effects	: Contains material that may cause target organ damage, based on animal data.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.
Over-exposure signs/symptoms	: None identified.

Medical conditions aggravated by over-exposure : None.

See toxicological information (Section 11)

3. Composition/information on ingredients

United States

Name	CAS number	%
hydrogen peroxide	7722-84-1	2.18

Canada

Name	CAS number	%
hydrogen peroxide	7722-84-1	2.18

Mexico

Name	CAS number	UN number	%	IDLH	Classification			
					H	F	R	Special
hydrogen peroxide	7722-84-1	UN3287	2.18	75 ppm	2	0	0	-

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

- Eye contact** : Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Get medical attention if you feel unwell.
- Skin contact** : Wash the contaminated skin gently and thoroughly with running water and non-abrasive soap.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if you feel unwell.
- Ingestion** : Call physician immediately.
- Protection of first-aiders** : Use suitable protective equipment (section 8).
- Notes to physician** : Treat symptomatically.

5. Fire-fighting measures

- Flammability of the product** : None.
- Extinguishing media** : Extinguish fire using an agent suitable for the surrounding fire.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
halogenated compounds
- Special protective equipment for fire-fighters** : In a fire, decomposition may produce toxic gases/fumes. Wear suitable protective clothing.

6. Accidental release measures

- Personal precautions** : Rubber gloves.
- Environmental precautions** : Store in a cool, well-ventilated, dry place. NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.
- Methods for cleaning up** : Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Place spilled material in an appropriate container for disposal. After contact with skin, wash immediately with plenty of water.

7. Handling and storage

- Handling** : Avoid contact with skin and eyes. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10).
- Storage** : Store in a cool, well-ventilated, dry place. Store in a dry place at low temperature away from ignition and heat sources. Avoid increased storage temperature.

8. Exposure controls/personal protection

United States

Ingredient	Exposure limits
hydrogen peroxide	<p>ACGIH TLV (United States, 3/2012). TWA: 1 ppm 8 hour(s). TWA: 1.4 mg/m³ 8 hour(s).</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 1 ppm 8 hour(s). TWA: 1.4 mg/m³ 8 hour(s).</p> <p>NIOSH REL (United States, 6/2009). TWA: 1 ppm 10 hour(s). TWA: 1.4 mg/m³ 10 hour(s).</p> <p>OSHA PEL (United States, 6/2010). TWA: 1 ppm 8 hour(s). TWA: 1.4 mg/m³ 8 hour(s).</p>

Canada

Occupational exposure limits		TWA (8 hours)			STEL (15 mins)			Ceiling			Notations
Ingredient	List name	ppm	mg/m ³	Other	ppm	mg/m ³	Other	ppm	mg/m ³	Other	
hydrogen peroxide	US ACGIH 3/2012	1	1.4	-	-	-	-	-	-	-	[3]
	AB 4/2009	1	1.4	-	-	-	-	-	-	-	
	BC 9/2011	1	-	-	-	-	-	-	-	-	
	ON 7/2010	1	1.4	-	-	-	-	-	-	-	
	QC 9/2011	1	1.4	-	-	-	-	-	-	-	

[3]Skin sensitization

Mexico

Occupational exposure limits

Ingredient	Exposure limits
hydrogen peroxide	<p>NOM-010-STPS (Mexico, 9/2000). LMPE-PPT: 1 ppm 8 hour(s). LMPE-PPT: 1.5 mg/m³ 8 hour(s). LMPE-CT: 3 mg/m³ 15 minute(s). LMPE-CT: 2 ppm 15 minute(s).</p>

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : In case of insufficient ventilation, wear suitable respiratory equipment.

Hygiene measures : When using do not eat, drink or smoke.

Personal protection

Respiratory : In case of insufficient ventilation, wear suitable respiratory equipment.

Hands : None.

Eyes : None.

Skin : Wear suitable protective clothing.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Other protection : Not available.

8. Exposure controls/personal protection

9. Physical and chemical properties

Physical state	: Liquid. [Viscous liquid.]
Flash point	: Closed cup: Not applicable.
Color	: Off-white.
Odor	: Fragrant.
pH	: 3 to 4
Boiling/condensation point	: >100°C (>212°F)
Relative density	: 1.004 to 1.01

10. Stability and reactivity

Chemical stability	: Not available.
Conditions to avoid	: Not available.
Incompatible materials	: Reducing agents metals
Hazardous decomposition products	: Contaminated product generates oxygen gas pressure build-up
Possibility of hazardous reactions	: Not available.
Hazardous polymerization	: Not available.

11. Toxicological information

United States

Acute toxicity

Product/ingredient name	Result	Dose	Exposure
hydrogen peroxide	LC50 Inhalation Vapor	2 g/m3	4 hours
	LD50 Dermal	3 g/kg	-
	LD50 Oral	376 mg/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Product/ingredient name	Result	Score	Exposure	Observation
hydrogen peroxide	Eyes - Severe irritant	-	1 milligrams	-

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : No carcinogenic effect.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
hydrogen peroxide	A3	3	-	-	-	-

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

11. Toxicological information

Canada

Acute toxicity

Product/ingredient name	Result	Dose	Exposure
hydrogen peroxide	LC50 Inhalation Vapor LD50 Dermal LD50 Oral	2 g/m3 3 g/kg 376 mg/kg	4 hours - -

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Product/ingredient name	Result	Score	Exposure	Observation
hydrogen peroxide	Eyes - Severe irritant	-	1 milligrams	-

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
hydrogen peroxide	A3	3	-	-	-	-

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Mexico

Acute toxicity

Product/ingredient name	Result	Dose	Exposure
hydrogen peroxide	LC50 Inhalation Vapor LD50 Dermal LD50 Oral	2 g/m3 3 g/kg 376 mg/kg	4 hours - -

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Product/ingredient name	Result	Score	Exposure	Observation
hydrogen peroxide	Eyes - Severe irritant	-	1 milligrams	-

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
hydrogen peroxide	A3	3	-	-	-	-

11. Toxicological information

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

12. Ecological information

THE FOLLOWING DATA IN THIS SECTION IS SOURCED FROM PUBLICLY AVAILABLE DATABASES AND NOT THE REPRESENTATION OF ANY DATA COLLECTED BY ZOTOS INTERNATIONAL OR ITS AFFILIATES.

Ecotoxicity : No known significant effects or critical hazards.

United States

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
hydrogen peroxide	Acute EC50 1.2 mg/L Marine water	Algae - Dunaliella tertiolecta - Exponential growth phase	72 hours
	Acute EC50 5.38 mg/L Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 2320 ug/L Fresh water	Daphnia - Daphnia magna - Neonate - <24 hours	48 hours
	Acute LC50 22 ppm Fresh water	Fish - Oncorhynchus mykiss - Juvenile (Fledgling, Hatchling, Weanling)	96 hours

Conclusion/Summary : Not available.

Persistence/degradability

Conclusion/Summary : Not available.

Canada

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
hydrogen peroxide	Acute EC50 1.2 mg/L Marine water	Algae - Dunaliella tertiolecta - Exponential growth phase	72 hours
	Acute EC50 5.38 mg/L Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 2320 ug/L Fresh water	Daphnia - Daphnia magna - Neonate - <24 hours	48 hours
	Acute LC50 22 ppm Fresh water	Fish - Oncorhynchus mykiss - Juvenile (Fledgling, Hatchling, Weanling)	96 hours

Conclusion/Summary : Not available.

Persistence/degradability

Conclusion/Summary : Not available.

Mexico

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
hydrogen peroxide	Acute EC50 1.2 mg/L Marine water	Algae - Dunaliella tertiolecta - Exponential growth phase	72 hours
	Acute EC50 5.38 mg/L Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 2320 ug/L Fresh water	Daphnia - Daphnia magna - Neonate - <24 hours	48 hours
	Acute LC50 22 ppm Fresh water	Fish - Oncorhynchus mykiss - Juvenile (Fledgling, Hatchling,	96 hours

12. Ecological information

		Weanling)	
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- Conclusion/Summary** : Not available.
Persistence/degradability
Conclusion/Summary : Not available.
Other adverse effects : No known significant effects or critical hazards.

13. Disposal considerations

- Waste disposal** : Dispose of according to all federal, state and local applicable regulations.
Contaminated packaging : Waste must be disposed of according to applicable regulations. This material and its container must be disposed of as hazardous waste.
Waste residues information : Flush with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-	-		-
TDG Classification	Not regulated.	-	-	-		-
Mexico Classification	Not regulated.	-	-	-		-
ADR/RID Class	Not regulated.	-	-	-		-
IMDG Class	Not regulated.	-	-	-		-
IATA-DGR Class	Not regulated.	-	-	-		-

PG* : Packing group

15. Regulatory information

United States

- HCS Classification** : Toxic material
 Irritating material
 Target organ effects

- U.S. Federal regulations** : TSCA : Exempt

SARA 302/304/311/312 extremely hazardous substances: hydrogen peroxide
SARA 302/304 emergency planning and notification: hydrogen peroxide
SARA 302/304/311/312 hazardous chemicals: hydrogen peroxide
SARA 311/312 MSDS distribution - chemical inventory - hazard identification:
 hydrogen peroxide: Fire hazard, reactive, Immediate (acute) health hazard, Delayed (chronic) health hazard
Clean Water Act (CWA) 311: Phosphoric acid

- Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)** : Not listed

15. Regulatory information

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

State regulations

Massachusetts : The following components are listed: HYDROGEN PEROXIDE

New York : The following components are listed: Hydrogen peroxide

New Jersey : The following components are listed: HYDROGEN PEROXIDE

Pennsylvania : The following components are listed: HYDROGEN PEROXIDE (CONC > 52 PERCENT)

California Prop. 65

CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986. This product is not known to the State of California to cause cancer.

United States inventory (TSCA 8b) : Not determined.

Canada

WHMIS (Canada) : Class D-1B: Material causing immediate and serious toxic effects (Toxic).
Class E: Corrosive material

Canadian lists

Canadian NPRI : None of the components are listed.

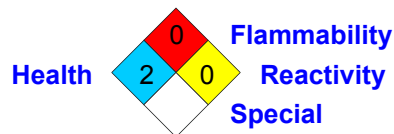
CEPA Toxic substances : None of the components are listed.

Canada inventory : Not determined.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Mexico

Classification :



International regulations

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

16. Other information

Hazardous Material Information System (U.S.A.) :

Health	2
Flammability	0
Physical hazards	0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

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Version : 2
Prepared by : Regulatory Affairs Group

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Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Material Safety Data Sheet



Quantum Extra Body Acid Perm for Normal or Tinted Hair - Activator

1. Product and company identification

Product name	: Quantum Extra Body Acid Perm for Normal or Tinted Hair - Activator
Manufacturer	: Zotos International, INC. 100 Tokeneke Road, Darien, CT 06820 www.zotos.com
Validation date	: 7/26/2012.
In case of emergency	: (800) 584-8038 [24 Hours]
Telephone number	: (203) 656-7859 [8:30 a.m. - 5:00 p.m.]
Transportation Emergency	: Contact: CHEMTREC 1-800-424-9300 [US/Canada 24 Hours]
Product type	: Liquid.

2. Hazards identification

Emergency overview

NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.

Color	: Clear. Hazy
Odor	: Mild. Sulfurous.
Hazard statements	: MAY CAUSE EYE AND SKIN IRRITATION.
Precautionary measures	: Do not breathe vapor or mist. Do not eat, drink or smoke when using this product. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.
OSHA/HCS status	: None.
<u>Potential acute health effects</u>	
Inhalation	: MAY CAUSE RESPIRATORY TRACT IRRITATION.
Ingestion	: Mild irritant
Skin	: May cause skin irritation.
Eyes	: Prolonged or repeated contact with skin or mucous membrane may result in irritation symptoms, such as redness, blistering, dermatitis etc.
<u>Potential chronic health effects</u>	
Chronic effects	: Contains material that may cause target organ damage, based on animal data.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.
Over-exposure signs/symptoms	: None identified.
Medical conditions aggravated by over-exposure	: None.

See toxicological information (Section 11)

3. Composition/information on ingredients

Name	CAS number	%
glycerol	56-81-5	19.98

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

- Eye contact** : Flush with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Seek medical attention.
- Skin contact** : Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Wash clothing before reuse.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if you feel unwell.
- Ingestion** : Get medical attention immediately.
- Protection of first-aiders** : Use suitable protective equipment (section 8).
- Notes to physician** : Treat symptomatically.

5. Fire-fighting measures

- Flammability of the product** : None.
- Extinguishing media** : Extinguish fire using an agent suitable for the surrounding fire.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special fire-fighting procedures** : None.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
sulfur oxides
- Special protective equipment for fire-fighters** : None known.

6. Accidental release measures

- Personal precautions** : Wear suitable protective clothing, gloves and eye/face protection.
- Environmental precautions** : If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.
- Methods for cleaning up** : Wear alkali-resistant protective clothing. Hazard of slipping on spilled product. Use absorbent chemicals or dry sand. Use a tool to scoop up solid or absorbed material and place into appropriate labeled waste container. Wash with plenty of soap and water.

7. Handling and storage

- Handling** : Keep container closed. Avoid contact with skin and eyes. Do not breathe dust.
- Storage** : Store in a cool, well-ventilated, dry place. Store in a dry place at low temperature away from ignition and heat sources. Avoid increased storage temperature.

8. Exposure controls/personal protection

Ingredient	Exposure limits
glycerol	ACGIH TLV (United States, 2/2010). TWA: 10 mg/m ³ 8 hour(s). Form: Inhalable fraction OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m ³ 8 hour(s). Form: Respirable fraction TWA: 10 mg/m ³ 8 hour(s). Form: Total dust OSHA PEL (United States, 6/2010). TWA: 5 mg/m ³ 8 hour(s). Form: Respirable fraction TWA: 15 mg/m ³ 8 hour(s). Form: Total dust

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : In case of insufficient ventilation, wear suitable respiratory equipment.

Hygiene measures : Avoid contact with skin and eyes. If in eyes or on skin, rinse well with water. When using do not eat, drink or smoke.

Personal protection

Respiratory : In case of insufficient ventilation, wear suitable respiratory equipment.

Hands : Wear suitable gloves.

Eyes : Wear eye/face protection.

Skin : Wear suitable protective clothing.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Other protection : Not available.

9. Physical and chemical properties

Physical state	: Liquid. [Viscous liquid.]
Flash point	: Closed cup: Not applicable.
Color	: Clear. Hazy
Odor	: Mild. Sulfurous.
Boiling/condensation point	: >212°C (>413.6°F)
Relative density	: 1.2 to 1.4

10. Stability and reactivity

Chemical stability : Stable under recommended storage and handling conditions (see section 7).

Conditions to avoid : Not available.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Possibility of hazardous reactions : Not available.

Hazardous polymerization : Not available.

11. Toxicological information

Acute toxicity

Product/ingredient name	Result	Dose	Exposure
glycerol	LD50 Oral	12600 mg/kg	-

Conclusion/Summary : Not available.

11. Toxicological information

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Product/ingredient name	Result	Score	Exposure	Observation
glycerol	Eyes - Mild irritant	-	24 hours 500 milligrams	-
	Skin - Mild irritant	-	24 hours 500 milligrams	-

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : No carcinogenic effect.

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

12. Ecological information

Ecotoxicity : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
glycerol	Acute LC50 54 ml/L Fresh water	Fish - Oncorhynchus mykiss - 0.9 g	96 hours

Conclusion/Summary : Not available.

Persistence/degradability

Conclusion/Summary : Not available.

Other adverse effects : No known significant effects or critical hazards.

13. Disposal considerations

Waste disposal : Dispose of according to all federal, state and local applicable regulations.

Contaminated packaging : Waste must be disposed of according to applicable regulations. This material and its container must be disposed of as hazardous waste.

Waste residues information : Flush with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-	-		-
TDG Classification	Not regulated.	-	-	-		-
Mexico Classification	Not regulated.	-	-	-		-
ADR/RID Class	Not regulated.	-	-	-		-
IMDG Class	Not regulated.	-	-	-		-
IATA-DGR Class	Not regulated.	-	-	-		-

PG* : Packing group

15. Regulatory information

HCS Classification : Target organ effects

U.S. Federal regulations : TSCA : Exempt

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: glycerol

SARA 311/312 MSDS distribution - chemical inventory - hazard identification:
glycerol: Immediate (acute) health hazard, Delayed (chronic) health hazard

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

State regulations

Massachusetts : The following components are listed: GLYCERINE MIST

New York : None of the components are listed.

New Jersey : The following components are listed: GLYCERIN; 1,2,3-PROPANETRIOL

Pennsylvania : The following components are listed: 1,2,3-PROPANETRIOL

California Prop. 65

CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986. This product is not known to the State of California to cause cancer.

Canada inventory : All components are listed or exempted.

International regulations

15. Regulatory information

Chemical Weapons : Not listed
 Convention List Schedule I
 Chemicals

Chemical Weapons : Not listed
 Convention List Schedule
 II Chemicals

Chemical Weapons : Not listed
 Convention List Schedule
 III Chemicals

16. Other information

Hazardous Material :
 Information System (U.S.A.)

Health	1
Flammability	0
Physical hazards	0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection :
 Association (U.S.A.)



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Date of printing : 7/26/2012.
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 Prepared by : Regulatory Affairs Group

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Material Safety Data Sheet



Quantum Extra Body Acid Perm for Normal or Tinted Hair - Neutralizer

1. Product and company identification

Product name	: Quantum Extra Body Acid Perm for Normal or Tinted Hair - Neutralizer
Manufacturer	: Zotos International, INC. 100 Tokeneke Road, Darien, CT 06820 www.zotos.com
Validation date	: 7/21/2012.
In case of emergency	: (800) 584-8038 [24 Hours]
Telephone number	: (203) 656-7859 [8:30 a.m. - 5:00 p.m.]
Transportation Emergency	: Contact: CHEMTREC 1-800-424-9300 [US/Canada 24 Hours]
Product type	: Liquid.

2. Hazards identification

Emergency overview

NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.

Color : Off-white.

Odor : Fragrant.

Hazard statements : CAUSES EYE IRRITATION.

Precautionary measures : Do not breathe vapor or mist. Do not eat, drink or smoke when using this product. Avoid contact with eyes. Wash thoroughly after handling.

OSHA/HCS status : None.

Potential acute health effects

Inhalation : None known.

Ingestion : Mild irritant

Skin : Prolonged exposure may result in skin burns and ulcerations.

Eyes : Prolonged or repeated contact with skin or mucous membrane may result in irritation symptoms, such as redness, blistering, dermatitis etc.

Potential chronic health effects

Chronic effects : Contains material that may cause target organ damage, based on animal data.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Over-exposure signs/symptoms : None identified.

Medical conditions aggravated by over-exposure : None.

See toxicological information (Section 11)

3. Composition/information on ingredients

Name	CAS number	%
hydrogen peroxide	7722-84-1	2.1805

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

- Eye contact** : Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Get medical attention if you feel unwell.
- Skin contact** : Wash the contaminated skin gently and thoroughly with running water and non-abrasive soap.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if you feel unwell.
- Ingestion** : Call physician immediately.
- Protection of first-aiders** : Use suitable protective equipment (section 8).
- Notes to physician** : Treat symptomatically.

5. Fire-fighting measures

- Flammability of the product** : None.
- Extinguishing media** : Extinguish fire using an agent suitable for the surrounding fire.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
halogenated compounds
- Special protective equipment for fire-fighters** : In a fire, decomposition may produce toxic gases/fumes. Wear suitable protective clothing.

6. Accidental release measures

- Personal precautions** : Rubber gloves.
- Environmental precautions** : Store in a cool, well-ventilated, dry place. NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.
- Methods for cleaning up** : Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Place spilled material in an appropriate container for disposal. After contact with skin, wash immediately with plenty of water.

7. Handling and storage

- Handling** : Avoid contact with skin and eyes. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10).
- Storage** : Store in a cool, well-ventilated, dry place. Store in a dry place at low temperature away from ignition and heat sources. Avoid increased storage temperature.

8. Exposure controls/personal protection

Ingredient	Exposure limits
hydrogen peroxide	<p>ACGIH TLV (United States, 2/2010). TWA: 1 ppm 8 hour(s). TWA: 1.4 mg/m³ 8 hour(s).</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 1 ppm 8 hour(s). TWA: 1.4 mg/m³ 8 hour(s).</p> <p>NIOSH REL (United States, 6/2009). TWA: 1 ppm 10 hour(s). TWA: 1.4 mg/m³ 10 hour(s).</p> <p>OSHA PEL (United States, 6/2010). TWA: 1 ppm 8 hour(s). TWA: 1.4 mg/m³ 8 hour(s).</p>

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : In case of insufficient ventilation, wear suitable respiratory equipment.

Hygiene measures : When using do not eat, drink or smoke.

Personal protection

Respiratory : In case of insufficient ventilation, wear suitable respiratory equipment.

Hands : None.

Eyes : None.

Skin : Wear suitable protective clothing.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Other protection : Not available.

9. Physical and chemical properties

Physical state : Liquid. [Viscous liquid.]

Flash point : Closed cup: Not applicable.

Color : Off-white.

Odor : Fragrant.

pH : 3 to 4

Boiling/condensation point : >100°C (>212°F)

Relative density : 1.004 to 1.01

10. Stability and reactivity

Chemical stability : Not available.

Conditions to avoid : Not available.

Incompatible materials : Reducing agents metals

Hazardous decomposition products : Contaminated product generates oxygen gas pressure build-up

Possibility of hazardous reactions : Not available.

Hazardous polymerization : Not available.

11. Toxicological information

Acute toxicity

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Product/ingredient name	Result	Score	Exposure	Observation
hydrogen peroxide	Eyes - Severe irritant	-	1 milligrams	-

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : No carcinogenic effect.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
hydrogen peroxide	A3	3	-	-	-	-

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

12. Ecological information

Ecotoxicity : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
hydrogen peroxide	Acute EC50 1.2 mg/L Marine water	Algae - Dunaliella tertiolecta - Exponential growth phase	72 hours
	Acute EC50 5.38 mg/L Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 2320 ug/L Fresh water	Daphnia - Daphnia magna - Neonate - <24 hours	48 hours
	Acute LC50 22 ppm Fresh water	Fish - Oncorhynchus mykiss - Juvenile (Fledgling, Hatchling, Weanling)	96 hours

Conclusion/Summary : Not available.

Persistence/degradability

Conclusion/Summary : Not available.

Other adverse effects : No known significant effects or critical hazards.

13. Disposal considerations

Waste disposal : Dispose of according to all federal, state and local applicable regulations.

Contaminated packaging : Waste must be disposed of according to applicable regulations. This material and its container must be disposed of as hazardous waste.

Waste residues information : Flush with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

13. Disposal considerations

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-	-		-
TDG Classification	Not regulated.	-	-	-		-
Mexico Classification	Not regulated.	-	-	-		-
ADR/RID Class	Not regulated.	-	-	-		-
IMDG Class	Not regulated.	-	-	-		-
IATA-DGR Class	Not regulated.	-	-	-		-

PG* : Packing group

15. Regulatory information

HCS Classification : Irritating material
Target organ effects

U.S. Federal regulations : TSCA : Exempt
SARA 302/304/311/312 extremely hazardous substances: Hydrogen Peroxide, aqueous solution
SARA 302/304 emergency planning and notification: Hydrogen Peroxide, aqueous solution
SARA 302/304/311/312 hazardous chemicals: Hydrogen Peroxide, aqueous solution
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Hydrogen Peroxide, aqueous solution: Fire hazard, reactive, Immediate (acute) health hazard, Delayed (chronic) health hazard
Clean Water Act (CWA) 311: Phosphoric Acid

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

State regulations

- Massachusetts** : The following components are listed: HYDROGEN PEROXIDE
- New York** : The following components are listed: Hydrogen peroxide
- New Jersey** : The following components are listed: HYDROGEN PEROXIDE

15. Regulatory information

Pennsylvania : The following components are listed: HYDROGEN PEROXIDE (CONC > 52 PERCENT)

California Prop. 65

CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986. This product is not known to the State of California to cause cancer.

Canada inventory : Not determined.

International regulations

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

16. Other information

Hazardous Material Information System (U.S.A.) :

Health	2
Flammability	0
Physical hazards	0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

- Date of printing** : 7/22/2012.
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- Prepared by** : Regulatory Affairs Group

Indicates information that has changed from previously issued version.

Notice to reader

16. Other information

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Material Safety Data Sheet



Quantum Extra Body Acid Perm for Normal or Tinted Hair - Waving Lotion

1. Product and company identification

Product name	: Quantum Extra Body Acid Perm for Normal or Tinted Hair - Waving Lotion
Manufacturer	: Zotos International, INC. 100 Tokeneke Road, Darien, CT 06820 www.zotos.com
Validation date	: 7/21/2012.
In case of emergency	(800) 584-8038 [24 Hours]
Telephone number	(203) 656-7859 [8:30 a.m. - 5:00 p.m.]
Transportation Emergency	Contact: CHEMTREC 1-800-424-9300 [US/Canada 24 Hours]
Product type	: Liquid.

2. Hazards identification

Emergency overview

NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.

Color	: Off-white.
Odor	: Characteristic.Fragrant.
Hazard statements	: HARMFUL IF SWALLOWED. CAUSES EYE IRRITATION.
Precautionary measures	: Do not breathe vapor or mist. Do not ingest. Do not eat, drink or smoke when using this product. Avoid contact with eyes. Wash thoroughly after handling.
OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Potential acute health effects

Inhalation	: MAY CAUSE RESPIRATORY TRACT IRRITATION.
Ingestion	: Mild irritant
Skin	: May cause sensitization by skin contact.
Eyes	: Prolonged or repeated contact with skin or mucous membrane may result in irritation symptoms, such as redness, blistering, dermatitis etc.

Potential chronic health effects

Chronic effects	: Contains material that may cause target organ damage, based on animal data.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.

Over-exposure signs/symptoms

Inhalation	: No specific data.
Ingestion	: No specific data.
Skin	: No specific data.
Eyes	: Adverse symptoms may include the following: pain or irritation watering redness

Medical conditions aggravated by over-exposure	: Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.
---	--

See toxicological information (Section 11)

3. Composition/information on ingredients

Name	CAS number	%
ammonia	1336-21-6	1.26

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

- Eye contact** : Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Get medical attention if you feel unwell.
- Skin contact** : Wash contaminated skin with soap and water.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if you feel unwell.
- Ingestion** : Get medical attention immediately.
- Protection of first-aiders** : Use suitable protective equipment (section 8). Avoid exposure.
- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

5. Fire-fighting measures

- Flammability of the product** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Extinguishing media** : Extinguish fire using an agent suitable for the surrounding fire.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special fire-fighting procedures** : None.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
nitrogen oxides
- Special protective equipment for fire-fighters** : In a fire, decomposition may produce toxic gases/fumes. Wear suitable protective clothing.

6. Accidental release measures

- Personal precautions** : Wear protective gloves.
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Methods for cleaning up** : Use a water rinse for final clean-up.

7. Handling and storage

- Handling** : Avoid contact with skin and eyes. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10).
- Storage** : Avoid increased storage temperature.

8. Exposure controls/personal protection

Consult local authorities for acceptable exposure limits.

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
- Engineering measures** : In case of insufficient ventilation, wear suitable respiratory equipment.
- Hygiene measures** : When using do not eat, drink or smoke.
- Personal protection**
- Respiratory** : In case of insufficient ventilation, wear suitable respiratory equipment.

8. Exposure controls/personal protection

- Hands** : Wear suitable gloves.
- Eyes** : Safety glasses.
- Skin** : Wear suitable protective clothing.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
- Other protection** : Not available.

9. Physical and chemical properties

- Physical state** : Liquid. [Viscous liquid.]
- Flash point** : Closed cup: Not applicable.
- Color** : Off-white.
- Odor** : Characteristic.Fragrant.
- pH** : 9.6 to 10.2
- Boiling/condensation point** : >100°C (>212°F)
- Relative density** : 1.01 to 1.1

10. Stability and reactivity

- Chemical stability** : Stable under recommended storage and handling conditions (see section 7).
- Conditions to avoid** : No specific data.
- Incompatible materials** : Do not mix in metal bowl
- Hazardous decomposition products** : Ammonia. sulfur oxides
- Possibility of hazardous reactions** : Not available.

11. Toxicological information

Acute toxicity

Product/ingredient name	Result	Dose	Exposure
ammonia	LD50 Oral	350 mg/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Product/ingredient name	Result	Score	Exposure	Observation
ammonia	Eyes - Severe irritant	-	250 Micrograms	-
	Eyes - Severe irritant	-	0.5 minutes 1 milligrams	-

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : No carcinogenic effect.

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

11. Toxicological information

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

12. Ecological information

Ecotoxicity : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
ammonia	Acute LC50 15000 ug/L Fresh water	Fish - Gambusia affinis - Adult	96 hours

Conclusion/Summary : Not available.

Persistence/degradability

Conclusion/Summary : Not available.

Other adverse effects : No known significant effects or critical hazards.

13. Disposal considerations

Waste disposal : Dispose of according to all federal, state and local applicable regulations.

Contaminated packaging : Waste must be disposed of according to applicable regulations. This material and its container must be disposed of as hazardous waste.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-	-		-
TDG Classification	Not regulated.	-	-	-		-
Mexico Classification	Not regulated.	-	-	-		-
ADR/RID Class	Not regulated.	-	-	-		-
IMDG Class	Not regulated.	-	-	-		-
IATA-DGR Class	Not regulated.	-	-	-		-

PG* : Packing group

15. Regulatory information

HCS Classification : Toxic material
Irritating material
Target organ effects

U.S. Federal regulations : TSCA : Exempt

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: ammonia

SARA 311/312 MSDS distribution - chemical inventory - hazard identification:

ammonia: Immediate (acute) health hazard, Delayed (chronic) health hazard

15. Regulatory information

Clean Water Act (CWA) 311: ammonia

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 313

	Product name	CAS number	Concentration
Form R - Reporting requirements	ammonia	1336-21-6	1.26
Supplier notification	ammonia	1336-21-6	1.26

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

State regulations

Massachusetts : The following components are listed: AMMONIUM HYDROXIDE

New York : The following components are listed: Ammonium hydroxide

New Jersey : The following components are listed: AMMONIUM HYDROXIDE

Pennsylvania : The following components are listed: AMMONIUM HYDROXIDE ((NH4)(OH))

California Prop. 65

CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986. This product is not known to the State of California to cause cancer.

Canada inventory : Not determined.

International regulations

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

16. Other information

Hazardous Material Information System (U.S.A.) :

Health	2
Flammability	0
Physical hazards	0

16. Other information

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

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Notice to reader

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Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Material Safety Data Sheet



Quantum Ultra Firm Exothermic Perm - Neutralizer

1. Product and company identification

Product name	: Quantum Ultra Firm Exothermic Perm - Neutralizer
Manufacturer	: Zotos International, INC 100 Tokeneke Road, Darien, CT 06820 www.zotos.com
Validation date	: 7/25/2012.
In case of emergency	(800) 584-8038 [24 Hours]
Telephone number	(203) 656-7859 [8:30 a.m. - 5:00 p.m.]
Transportation Emergency	Contact: CHEMTREC 1-800-424-9300 [US/Canada 24 Hours]
Product type	: Liquid.

2. Hazards identification

Emergency overview

NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.

Color	: Off-white.
Odor	: Fragrant.
Hazard statements	: CAUSES EYE IRRITATION.
Precautionary measures	: Do not breathe vapor or mist. Do not eat, drink or smoke when using this product. Avoid contact with eyes. Wash thoroughly after handling.
OSHA/HCS status	: None.
<u>Potential acute health effects</u>	
Inhalation	: None known.
Ingestion	: Mild irritant
Skin	: Prolonged exposure may result in skin burns and ulcerations.
Eyes	: Prolonged or repeated contact with skin or mucous membrane may result in irritation symptoms, such as redness, blistering, dermatitis etc.
<u>Potential chronic health effects</u>	
Chronic effects	: Contains material that may cause target organ damage, based on animal data.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.
Over-exposure signs/symptoms	: None identified.
Medical conditions aggravated by over-exposure	: None.

See toxicological information (Section 11)

3. Composition/information on ingredients

United States

Name	CAS number	%
hydrogen peroxide	7722-84-1	2.1805

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

- Eye contact** : Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Get medical attention if you feel unwell.
- Skin contact** : Wash the contaminated skin gently and thoroughly with running water and non-abrasive soap.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if you feel unwell.
- Ingestion** : Call physician immediately.
- Protection of first-aiders** : Use suitable protective equipment (section 8).
- Notes to physician** : Treat symptomatically.

5. Fire-fighting measures

- Flammability of the product** : None.
- Extinguishing media** : Extinguish fire using an agent suitable for the surrounding fire.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Hazardous thermal decomposition products** : No specific data.
- Special protective equipment for fire-fighters** : In a fire, decomposition may produce toxic gases/fumes. Wear suitable protective clothing.

6. Accidental release measures

- Personal precautions** : Rubber gloves.
- Environmental precautions** : Store in a cool, well-ventilated, dry place. NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.
- Methods for cleaning up** : Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Place spilled material in an appropriate container for disposal. After contact with skin, wash immediately with plenty of water.

7. Handling and storage

- Handling** : Avoid contact with skin and eyes. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10).
- Storage** : Store in a cool, well-ventilated, dry place. Store in a dry place at low temperature away from ignition and heat sources. Avoid increased storage temperature.

8. Exposure controls/personal protection

United States

Ingredient	Exposure limits

8. Exposure controls/personal protection

hydrogen peroxide	<p>ACGIH TLV (United States, 2/2010). TWA: 1 ppm 8 hour(s). TWA: 1.4 mg/m³ 8 hour(s).</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 1 ppm 8 hour(s). TWA: 1.4 mg/m³ 8 hour(s).</p> <p>NIOSH REL (United States, 6/2009). TWA: 1 ppm 10 hour(s). TWA: 1.4 mg/m³ 10 hour(s).</p> <p>OSHA PEL (United States, 6/2010). TWA: 1 ppm 8 hour(s). TWA: 1.4 mg/m³ 8 hour(s).</p>
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Canada

Occupational exposure limits

No exposure limit value known.

Mexico

Occupational exposure limits

No exposure limit value known.

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : In case of insufficient ventilation, wear suitable respiratory equipment.

Hygiene measures : When using do not eat, drink or smoke.

Personal protection

Respiratory : In case of insufficient ventilation, wear suitable respiratory equipment.

Hands : None.

Eyes : None.

Skin : Wear suitable protective clothing.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Other protection : Not available.

9. Physical and chemical properties

Physical state	: Liquid. [Viscous liquid.]
Flash point	: Closed cup: Not applicable.
Color	: Off-white.
Odor	: Fragrant.
pH	: 3 to 4
Boiling/condensation point	: >100°C (>212°F)
Relative density	: 1.004 to 1.01

10. Stability and reactivity

- Chemical stability** : Not available.
Conditions to avoid : Not available.
Incompatible materials : Reducing agents metals
Hazardous decomposition products : Contaminated product generates oxygen gas pressure build-up
Possibility of hazardous reactions : Not available.
Hazardous polymerization : Not available.

11. Toxicological information

United States

Acute toxicity

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Product/ingredient name	Result	Score	Exposure	Observation
hydrogen peroxide	Eyes - Severe irritant	-	1 milligrams	-

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : No carcinogenic effect.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
hydrogen peroxide	A3	3	-	-	-	-

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Canada

Acute toxicity

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
hydrogen peroxide	A3	3	-	-	-	-

11. Toxicological information

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Mexico

Acute toxicity

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
hydrogen peroxide	A3	3	-	-	-	-

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

12. Ecological information

THE FOLLOWING DATA IN THIS SECTION IS SOURCED FROM PUBLICLY AVAILABLE DATABASES AND NOT THE REPRESENTATION OF ANY DATA COLLECTED BY ZOTOS INTERNATIONAL OR ITS AFFILIATES.

Ecotoxicity : No known significant effects or critical hazards.

United States

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
hydrogen peroxide	Acute EC50 1.2 mg/L Marine water	Algae - Dunaliella tertiolecta - Exponential growth phase	72 hours
	Acute EC50 5.38 mg/L Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 2320 ug/L Fresh water	Daphnia - Daphnia magna - Neonate - <24 hours	48 hours
	Acute LC50 22 ppm Fresh water	Fish - Oncorhynchus mykiss - Juvenile (Fledgling, Hatchling, Weanling)	96 hours

Conclusion/Summary : Not available.

Persistence/degradability

Conclusion/Summary : Not available.

Canada

Aquatic ecotoxicity

Conclusion/Summary : Not available.

12. Ecological information

Persistence/degradability

Conclusion/Summary : Not available.

Mexico

Aquatic ecotoxicity

Conclusion/Summary : Not available.

Persistence/degradability

Conclusion/Summary : Not available.

Other adverse effects : No known significant effects or critical hazards.

13. Disposal considerations

Waste disposal : Dispose of according to all federal, state and local applicable regulations.

Contaminated packaging : Waste must be disposed of according to applicable regulations. This material and its container must be disposed of as hazardous waste.

Waste residues information : Flush with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-	-		-
TDG Classification	Not regulated.	-	-	-		-
Mexico Classification	Not regulated.	-	-	-		-
ADR/RID Class	Not regulated.	-	-	-		-
IMDG Class	Not regulated.	-	-	-		-
IATA-DGR Class	Not regulated.	-	-	-		-

PG* : Packing group

15. Regulatory information

United States

HCS Classification : Irritating material
Target organ effects

U.S. Federal regulations : TSCA : Exempt
SARA 302/304/311/312 extremely hazardous substances: Hydrogen Peroxide, aqueous solution
SARA 302/304 emergency planning and notification: Hydrogen Peroxide, aqueous solution
SARA 302/304/311/312 hazardous chemicals: Hydrogen Peroxide, aqueous solution
SARA 311/312 MSDS distribution - chemical inventory - hazard identification:
 Hydrogen Peroxide, aqueous solution: Fire hazard, reactive, Immediate (acute) health hazard, Delayed (chronic) health hazard
Clean Water Act (CWA) 311: Phosphoric Acid

15. Regulatory information

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

State regulations

Massachusetts : The following components are listed: HYDROGEN PEROXIDE

New York : The following components are listed: Hydrogen peroxide

New Jersey : The following components are listed: HYDROGEN PEROXIDE

Pennsylvania : The following components are listed: HYDROGEN PEROXIDE (CONC > 52 PERCENT)

California Prop. 65

CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986. This product is not known to the State of California to cause cancer.

Canada

Canadian lists

Canada inventory : Not determined.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Mexico

Classification :



International regulations

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

16. Other information

Hazardous Material Information System (U.S.A.) :

Health	2
Flammability	0
Physical hazards	0

16. Other information

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :



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Date of previous issue : No previous validation.
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Prepared by : Regulatory Affairs Group

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Material Safety Data Sheet



Quantum Ultra Firm Exothermic Perm - Thermolizer

1. Product and company identification

Product name	: Quantum Ultra Firm Exothermic Perm - Thermolizer
Manufacturer	: Zotos International, INC 100 Tokeneke Road, Darien, CT 06820 www.zotos.com
Validation date	: 7/25/2012.
In case of emergency	(800) 584-8038 [24 Hours]
Telephone number	(203) 656-7859 [8:30 a.m. - 5:00 p.m.]
Transportation Emergency	Contact: CHEMTREC 1-800-424-9300 [US/Canada 24 Hours]
Product type	: Liquid.

2. Hazards identification

Emergency overview

NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.

Color : Off-white.

Odor : Fragrant.

Hazard statements : HARMFUL IF SWALLOWED. CAUSES EYE IRRITATION. MAY CAUSE SKIN IRRITATION.

Precautionary measures : Do not breathe vapor or mist. Do not ingest. Do not eat, drink or smoke when using this product. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

OSHA/HCS status : None.

Potential acute health effects

Inhalation : None known.

Ingestion : Mild irritant

Skin : Prolonged exposure may result in skin burns and ulcerations.

Eyes : Prolonged or repeated contact with skin or mucous membrane may result in irritation symptoms, such as redness, blistering, dermatitis etc.

Potential chronic health effects

Chronic effects : Contains material that may cause target organ damage, based on animal data.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Over-exposure signs/symptoms : None identified.

Medical conditions aggravated by over-exposure : None.

See toxicological information (Section 11)

3. Composition/information on ingredients

United States

Name	CAS number	%
hydrogen peroxide	7722-84-1	3.65
propane-1,2-diol	57-55-6	1.75

Canada

Name	CAS number	%
hydrogen peroxide	7722-84-1	3.65
propane-1,2-diol	57-55-6	1.75

Mexico

Name	CAS number	UN number	%	IDLH	Classification			
					H	F	R	Special
hydrogen peroxide	7722-84-1	UN3287	3.65	75 ppm	2	0	0	-
propane-1,2-diol	57-55-6	Not available.	1.75	-	2	1	0	-

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

- Eye contact** : Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Get medical attention if you feel unwell.
- Skin contact** : Wash the contaminated skin gently and thoroughly with running water and non-abrasive soap.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if you feel unwell.
- Ingestion** : Call physician immediately.
- Protection of first-aiders** : Use suitable protective equipment (section 8).
- Notes to physician** : Treat symptomatically.

5. Fire-fighting measures

- Flammability of the product** : None.
- Extinguishing media** : Extinguish fire using an agent suitable for the surrounding fire.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
halogenated compounds
- Special protective equipment for fire-fighters** : In a fire, decomposition may produce toxic gases/fumes. Wear suitable protective clothing.

6. Accidental release measures

- Personal precautions** : Rubber gloves.
- Environmental precautions** : Store in a cool, well-ventilated, dry place. NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.
- Methods for cleaning up** : Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Place spilled material in an appropriate container for disposal. After contact with skin, wash immediately with plenty of water.

7. Handling and storage

- Handling** : Avoid contact with skin and eyes. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10).
- Storage** : Store in a cool, well-ventilated, dry place. Store in a dry place at low temperature away from ignition and heat sources. Avoid increased storage temperature.

8. Exposure controls/personal protection

United States

Ingredient	Exposure limits
hydrogen peroxide	<p>ACGIH TLV (United States, 3/2012). TWA: 1 ppm 8 hour(s). TWA: 1.4 mg/m³ 8 hour(s).</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 1 ppm 8 hour(s). TWA: 1.4 mg/m³ 8 hour(s).</p> <p>NIOSH REL (United States, 6/2009). TWA: 1 ppm 10 hour(s). TWA: 1.4 mg/m³ 10 hour(s).</p> <p>OSHA PEL (United States, 6/2010). TWA: 1 ppm 8 hour(s). TWA: 1.4 mg/m³ 8 hour(s).</p>
propane-1,2-diol	<p>AIHA WEEL (United States, 10/2011). TWA: 10 mg/m³ 8 hour(s).</p>

Canada

Occupational exposure limits		TWA (8 hours)			STEL (15 mins)			Ceiling			Notations
Ingredient	List name	ppm	mg/m ³	Other	ppm	mg/m ³	Other	ppm	mg/m ³	Other	
hydrogen peroxide	US ACGIH 3/2012	1	1.4	-	-	-	-	-	-	-	[3]
	AB 4/2009	1	1.4	-	-	-	-	-	-	-	
	BC 9/2011	1	-	-	-	-	-	-	-	-	
	ON 7/2010	1	1.4	-	-	-	-	-	-	-	
propane-1,2-diol	QC 9/2011	1	1.4	-	-	-	-	-	-	-	[a] [b]
	ON 7/2010	-	10	-	-	-	-	-	-	-	
	US AIHA 10/2011	50	155	-	-	-	-	-	-	-	

[3]Skin sensitization

Form: [a]Aerosol only. [b]Vapour and aerosol.

Mexico

Occupational exposure limits

Ingredient	Exposure limits
hydrogen peroxide	<p>NOM-010-STPS (Mexico, 9/2000). LMPE-PPT: 1 ppm 8 hour(s). LMPE-PPT: 1.5 mg/m³ 8 hour(s). LMPE-CT: 3 mg/m³ 15 minute(s). LMPE-CT: 2 ppm 15 minute(s).</p>

Consult local authorities for acceptable exposure limits.

8. Exposure controls/personal protection

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
- Engineering measures** : In case of insufficient ventilation, wear suitable respiratory equipment.
- Hygiene measures** : When using do not eat, drink or smoke.
- Personal protection**
- Respiratory** : In case of insufficient ventilation, wear suitable respiratory equipment.
- Hands** : None.
- Eyes** : None.
- Skin** : Wear suitable protective clothing.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
- Other protection** : Not available.

9. Physical and chemical properties

- Physical state** : Liquid. [Viscous liquid.]
- Flash point** : Closed cup: Not applicable.
- Color** : Off-white.
- Odor** : Fragrant.
- pH** : 3 to 4
- Boiling/condensation point** : >100°C (>212°F)
- Relative density** : 1.004 to 1.01

10. Stability and reactivity

- Chemical stability** : Not available.
- Conditions to avoid** : Not available.
- Incompatible materials** : Reducing agents metals
- Hazardous decomposition products** : Contaminated product generates oxygen gas pressure build-up
- Possibility of hazardous reactions** : Not available.
- Hazardous polymerization** : Not available.

11. Toxicological information

United States

Acute toxicity

Product/ingredient name	Result	Dose	Exposure
hydrogen peroxide	LC50 Inhalation Vapor	2 g/m3	4 hours
	LD50 Dermal	3 g/kg	-
	LD50 Oral	376 mg/kg	-
propane-1,2-diol	LD50 Dermal	20800 mg/kg	-
	LD50 Oral	20 g/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

11. Toxicological information

Product/ingredient name	Result	Score	Exposure	Observation
hydrogen peroxide propane-1,2-diol	Eyes - Severe irritant	-	1 milligrams	-
	Eyes - Mild irritant	-	24 hours 500 milligrams	-
	Eyes - Mild irritant	-	100 milligrams	-
	Skin - Moderate irritant	-	96 hours 30 Percent continuous	-
	Skin - Mild irritant	-	168 hours 500 milligrams	-
	Skin - Moderate irritant	-	72 hours 104 milligrams Intermittent	-
	Skin - Mild irritant	-	96 hours 30 Percent	-

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : No carcinogenic effect.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
hydrogen peroxide	A3	3	-	-	-	-

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Canada

Acute toxicity

Product/ingredient name	Result	Dose	Exposure
hydrogen peroxide	LC50 Inhalation Vapor	2 g/m3	4 hours
	LD50 Dermal	3 g/kg	-
	LD50 Oral	376 mg/kg	-
propane-1,2-diol	LD50 Dermal	20800 mg/kg	-
	LD50 Oral	20 g/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Product/ingredient name	Result	Score	Exposure	Observation
hydrogen peroxide propane-1,2-diol	Eyes - Severe irritant	-	1 milligrams	-
	Eyes - Mild irritant	-	24 hours 500 milligrams	-
	Eyes - Mild irritant	-	100 milligrams	-
	Skin - Moderate irritant	-	96 hours 30 Percent	-

11. Toxicological information

	Skin - Mild irritant	-	continuous 168 hours 500 milligrams	-
	Skin - Moderate irritant	-	72 hours 104 milligrams	-
	Skin - Mild irritant	-	Intermittent 96 hours 30 Percent	-

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
hydrogen peroxide	A3	3	-	-	-	-

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Mexico

Acute toxicity

Product/ingredient name	Result	Dose	Exposure
hydrogen peroxide	LC50 Inhalation Vapor	2 g/m3	4 hours
	LD50 Dermal	3 g/kg	-
propane-1,2-diol	LD50 Oral	376 mg/kg	-
	LD50 Dermal	20800 mg/kg	-
	LD50 Oral	20 g/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Product/ingredient name	Result	Score	Exposure	Observation
hydrogen peroxide	Eyes - Severe irritant	-	1 milligrams	-
	Eyes - Mild irritant	-	24 hours 500 milligrams	-
propane-1,2-diol	Eyes - Mild irritant	-	100 milligrams	-
	Skin - Moderate irritant	-	96 hours 30 Percent	-
	Skin - Mild irritant	-	continuous 168 hours 500 milligrams	-
	Skin - Moderate irritant	-	72 hours 104 milligrams	-
	Skin - Mild irritant	-	Intermittent 96 hours 30 Percent	-

Conclusion/Summary : Not available.

11. Toxicological information

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
hydrogen peroxide	A3	3	-	-	-	-

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

12. Ecological information

THE FOLLOWING DATA IN THIS SECTION IS SOURCED FROM PUBLICLY AVAILABLE DATABASES AND NOT THE REPRESENTATION OF ANY DATA COLLECTED BY ZOTOS INTERNATIONAL OR ITS AFFILIATES.

Ecotoxicity : No known significant effects or critical hazards.

United States

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
hydrogen peroxide	Acute EC50 1.2 mg/L Marine water	Algae - Dunaliella tertiolecta - Exponential growth phase	72 hours
	Acute EC50 5.38 mg/L Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 2320 ug/L Fresh water	Daphnia - Daphnia magna - Neonate - <24 hours	48 hours
	Acute LC50 22 ppm Fresh water	Fish - Oncorhynchus mykiss - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
propane-1,2-diol	Acute EC50 >1000 mg/L Fresh water	Daphnia - Daphnia magna - <24 hours	48 hours
	Acute LC50 1020000 ug/L Fresh water	Crustaceans - Ceriodaphnia dubia - <24 hours	48 hours
	Acute LC50 710000 ug/L Fresh water	Fish - Pimephales promelas - <=7 days	96 hours

Conclusion/Summary : Not available.

Persistence/degradability

Conclusion/Summary : Not available.

Canada

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
hydrogen peroxide	Acute EC50 1.2 mg/L Marine water	Algae - Dunaliella tertiolecta - Exponential growth phase	72 hours
	Acute EC50 5.38 mg/L Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 2320 ug/L Fresh water	Daphnia - Daphnia magna - Neonate - <24 hours	48 hours
	Acute LC50 22 ppm Fresh water	Fish - Oncorhynchus mykiss - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
propane-1,2-diol	Acute EC50 >1000 mg/L Fresh water	Daphnia - Daphnia magna - <24	48 hours

12. Ecological information

	Acute LC50 1020000 ug/L Fresh water	hours Crustaceans - Ceriodaphnia dubia - <24 hours	48 hours
	Acute LC50 710000 ug/L Fresh water	Fish - Pimephales promelas - <=7 days	96 hours

Conclusion/Summary : Not available.

Persistence/degradability

Conclusion/Summary : Not available.

Mexico

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
hydrogen peroxide	Acute EC50 1.2 mg/L Marine water	Algae - Dunaliella tertiolecta - Exponential growth phase	72 hours
	Acute EC50 5.38 mg/L Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 2320 ug/L Fresh water	Daphnia - Daphnia magna - Neonate - <24 hours	48 hours
	Acute LC50 22 ppm Fresh water	Fish - Oncorhynchus mykiss - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
propane-1,2-diol	Acute EC50 >1000 mg/L Fresh water	Daphnia - Daphnia magna - <24 hours	48 hours
	Acute LC50 1020000 ug/L Fresh water	Crustaceans - Ceriodaphnia dubia - <24 hours	48 hours
	Acute LC50 710000 ug/L Fresh water	Fish - Pimephales promelas - <=7 days	96 hours

Conclusion/Summary : Not available.

Persistence/degradability

Conclusion/Summary : Not available.

Other adverse effects : No known significant effects or critical hazards.

13. Disposal considerations

Waste disposal : Dispose of according to all federal, state and local applicable regulations.

Contaminated packaging : Waste must be disposed of according to applicable regulations. This material and its container must be disposed of as hazardous waste.

Waste residues information : Flush with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-	-	-	-
TDG Classification	Not regulated.	-	-	-	-	-
Mexico Classification	Not regulated.	-	-	-	-	-
ADR/RID Class	Not regulated.	-	-	-	-	-

14. Transport information

IMDG Class	Not regulated.	-	-	-	-
IATA-DGR Class	Not regulated.	-	-	-	-

PG* : Packing group

15. Regulatory information

United States

HCS Classification : Toxic material
Irritating material
Target organ effects

U.S. Federal regulations : TSCA : Exempt

SARA 302/304/311/312 extremely hazardous substances: hydrogen peroxide

SARA 302/304 emergency planning and notification: hydrogen peroxide

SARA 302/304/311/312 hazardous chemicals: propane-1,2-diol; hydrogen peroxide

SARA 311/312 MSDS distribution - chemical inventory - hazard identification:

propane-1,2-diol: Immediate (acute) health hazard, Delayed (chronic) health hazard;
hydrogen peroxide: Fire hazard, reactive, Immediate (acute) health hazard, Delayed (chronic) health hazard

Clean Water Act (CWA) 311: Phosphoric acid

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

State regulations

Massachusetts : The following components are listed: HYDROGEN PEROXIDE

New York : The following components are listed: Hydrogen peroxide

New Jersey : The following components are listed: HYDROGEN PEROXIDE; PROPYLENE GLYCOL; 1,2-PROPANEDIOL

Pennsylvania : The following components are listed: HYDROGEN PEROXIDE (CONC > 52 PERCENT); 1,2-PROPANEDIOL

California Prop. 65

CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986. This product is not known to the State of California to cause cancer.

United States inventory (TSCA 8b) : Not determined.

Canada

WHMIS (Canada) : Class D-1B: Material causing immediate and serious toxic effects (Toxic).
Class E: Corrosive material

Canadian lists

Canadian NPRI : None of the components are listed.

CEPA Toxic substances : None of the components are listed.

Canada inventory : All components are listed or exempted.

15. Regulatory information

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Mexico

Classification :



International regulations

Chemical Weapons : Not listed

Convention List Schedule I
Chemicals

Chemical Weapons : Not listed

Convention List Schedule
II Chemicals

Chemical Weapons : Not listed

Convention List Schedule
III Chemicals

16. Other information

Hazardous Material :
Information System (U.S.A.)

Health	2
Flammability	0
Physical hazards	0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection :
Association (U.S.A.)



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Date of printing : 10/22/2013.

Date of issue : 7/25/2012.

Date of previous issue : No previous validation.

16. Other information

Version : 3
Prepared by : Regulatory Affairs Group

✔ Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Material Safety Data Sheet

Quantum Ultra Firm Exothermic Perm - Waving Lotion



1. Product and company identification

Product name	: Quantum Ultra Firm Exothermic Perm - Waving Lotion
Manufacturer	: Zotos International, INC 100 Tokeneke Road, Darien, CT 06820 www.zotos.com
Validation date	: 5/16/2014.
In case of emergency	(800) 584-8038 [24 Hours]
Telephone number	(203) 656-7859 [8:30 a.m. - 5:00 p.m.]
Transportation Emergency	Contact: CHEMTREC 1-800-424-9300 [US/Canada 24 Hours]
Product type	: Liquid.

2. Hazards identification

Emergency overview

NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.

Color	: Clear.
Odor	: Fragrant.
Hazard statements	: CAUSES EYE IRRITATION. MAY BE HARMFUL IF SWALLOWED. MAY CAUSE SKIN IRRITATION.
Precautionary measures	: Do not breathe vapor or mist. Do not ingest. Do not eat, drink or smoke when using this product. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.
OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Potential acute health effects

Inhalation	: MAY CAUSE RESPIRATORY TRACT IRRITATION.
Ingestion	: Mild irritant
Skin	: May cause sensitization by skin contact.
Eyes	: Prolonged or repeated contact with skin or mucous membrane may result in irritation symptoms, such as redness, blistering, dermatitis etc.

Potential chronic health effects

Chronic effects	: Contains material that may cause target organ damage, based on animal data.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.

Over-exposure signs/symptoms

Inhalation	: No specific data.
Ingestion	: No specific data.
Skin	: Adverse symptoms may include the following: irritation redness

2. Hazards identification

- Eyes** : Adverse symptoms may include the following:
 pain or irritation
 watering
 redness
- Medical conditions aggravated by over-exposure** : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

See toxicological information (Section 11)

3. Composition/information on ingredients

United States

Name	CAS number	%
ammonium hydrogencarbonate	1066-33-7	2.50

Canada

Name	CAS number	%
ammonium mercaptoacetate	5421-46-5	20.16

Mexico

Name	CAS number	UN number	%	IDLH	Classification			
					H	F	R	Special
ammonium hydrogencarbonate	1066-33-7	Not available.	2.50	-	1	0	0	-

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

- Eye contact** : Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Get medical attention if you feel unwell.
- Skin contact** : Wash contaminated skin with soap and water.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if you feel unwell.
- Ingestion** : Get medical attention immediately.
- Protection of first-aiders** : Use suitable protective equipment (section 8). Avoid exposure.
- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

5. Fire-fighting measures

- Flammability of the product** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Extinguishing media** : Extinguish fire using an agent suitable for the surrounding fire.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special fire-fighting procedures** : None.

5. Fire-fighting measures

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
- Special protective equipment for fire-fighters** : In a fire, decomposition may produce toxic gases/fumes. Wear suitable protective clothing.

6. Accidental release measures

- Personal precautions** : Wear protective gloves.
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Methods for cleaning up** : Use a water rinse for final clean-up.

7. Handling and storage

- Handling** : Avoid contact with skin and eyes. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10).
- Storage** : Avoid increased storage temperature.

8. Exposure controls/personal protection

Canada

Occupational exposure limits

No exposure limit value known.

Mexico

Occupational exposure limits

No exposure limit value known.

Consult local authorities for acceptable exposure limits.

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
- Engineering measures** : In case of insufficient ventilation, wear suitable respiratory equipment.
- Hygiene measures** : When using do not eat, drink or smoke.
- Personal protection**
- Respiratory** : In case of insufficient ventilation, wear suitable respiratory equipment.
 - Hands** : Wear suitable gloves.
 - Eyes** : Safety glasses.
 - Skin** : Wear suitable protective clothing.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
- Other protection** : Not available.

9. Physical and chemical properties

Physical state	: Liquid. [Viscous liquid.]
Flash point	: Closed cup: Not applicable.
Color	: Clear.
Odor	: Fragrant.
pH	: 8.4 to 9.3
Boiling/condensation point	: >100°C (>212°F)
Relative density	: 1.06 to 1.07

10. Stability and reactivity

Chemical stability	: Stable under recommended storage and handling conditions (see Section 7).
Conditions to avoid	: No specific data.
Incompatible materials	: No specific data.
Hazardous decomposition products	: Ammonia. sulfur oxides
Possibility of hazardous reactions	: Not available.

11. Toxicological information

United States

Acute toxicity

Product/ingredient name	Result	Dose	Exposure
ammonium hydrogencarbonate	LD50 Oral	1576 mg/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : No carcinogenic effect.

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Canada

Acute toxicity

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Conclusion/Summary : Not available.

Sensitizer

11. Toxicological information

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Mexico

Acute toxicity

Product/ingredient name	Result	Dose	Exposure
ammonium hydrogencarbonate	LD50 Oral	1576 mg/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

12. Ecological information

THE FOLLOWING DATA IN THIS SECTION IS SOURCED FROM PUBLICLY AVAILABLE DATABASES AND NOT THE REPRESENTATION OF ANY DATA COLLECTED BY ZOTOS INTERNATIONAL OR ITS AFFILIATES.

Ecotoxicity : No known significant effects or critical hazards.

United States

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
ammonium hydrogencarbonate	Acute LC50 17300 ug/L Fresh water	Fish - Oncorhynchus mykiss - 5. 8 cm - 1.8 g	96 hours

Conclusion/Summary : Not available.

Persistence/degradability

Conclusion/Summary : Not available.

Canada

Aquatic ecotoxicity

Conclusion/Summary : Not available.

Persistence/degradability

12. Ecological information

Conclusion/Summary : Not available.

Mexico

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
ammonium hydrogencarbonate	Acute LC50 17300 ug/L Fresh water	Fish - Oncorhynchus mykiss - 5. 8 cm - 1.8 g	96 hours

Conclusion/Summary : Not available.

Persistence/degradability

Conclusion/Summary : Not available.

Other adverse effects : No known significant effects or critical hazards.

13. Disposal considerations

Waste disposal : Dispose of according to all federal, state and local applicable regulations.

Contaminated packaging : Waste must be disposed of according to applicable regulations. This material and its container must be disposed of as hazardous waste.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-	-		-
TDG Classification	Not regulated.	-	-	-		-
Mexico Classification	Not regulated.		-	-		-
ADR/RID Class	Not regulated.	-	-	-		-
IMDG Class	Not regulated.	-	-	-		-
IATA-DGR Class	Not regulated.	-	-	-		-

PG* : Packing group

15. Regulatory information

United States

HCS Classification : Irritating material
Target organ effects

U.S. Federal regulations : TSCA : Exempt

15. Regulatory information

SARA 302/304/311/312 extremely hazardous substances: ammonia, anhydrous
SARA 302/304 emergency planning and notification: ammonia, anhydrous
SARA 302/304/311/312 hazardous chemicals: ammonium hydrogencarbonate; ammonia, anhydrous
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: ammonium hydrogencarbonate: Immediate (acute) health hazard; ammonia, anhydrous: Sudden release of pressure, Immediate (acute) health hazard
Clean Water Act (CWA) 311: ammonia, anhydrous; ammonium hydrogencarbonate

Clean Air Act (CAA) 112 regulated toxic substances: ammonia, anhydrous

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 313

	Product name	CAS number	Concentration
Form R - Reporting requirements	ammonium hydrogencarbonate	1066-33-7	2.50
Supplier notification	ammonium hydrogencarbonate	1066-33-7	2.50

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

State regulations

Massachusetts : The following components are listed: AMMONIA; AMMONIUM BICARBONATE

New York : The following components are listed: Ammonia; Ammonium bicarbonate

New Jersey : The following components are listed: AMMONIA; AMMONIUM BICARBONATE; CARBONIC ACID, MONOAMMONIUM SALT

Pennsylvania : The following components are listed: AMMONIA; CARBONIC ACID, MONOAMMONIUM SALT

California Prop. 65

CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986. This product is not known to the State of California to cause cancer.

United States inventory (TSCA 8b) : Not determined.

Canada

WHMIS (Canada) : Class D-2B: Material causing other toxic effects (Toxic).

Canadian lists

Canadian NPRI : The following components are listed: Ammonia (total); Ammonia (total); Ammonia (total)

CEPA Toxic substances : None of the components are listed.

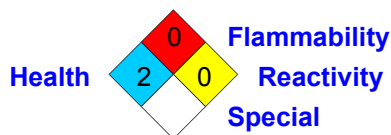
Canada inventory : Not determined.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

15. Regulatory information

Mexico

Classification :



International regulations

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

16. Other information

Hazardous Material Information System (U.S.A.) :

Health	2
Flammability	0
Physical hazards	0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

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16. Other information

Version : 1

Prepared by : Regulatory Affairs Group

✔ Indicates information that has changed from previously issued version.

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