

Material Safety Data Sheet



K-Pak Chelating Shampoo

1. Product and company identification

| | |
|---------------------------------|--|
| Product name | : K-Pak Chelating Shampoo |
| 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 | : Clear. White. Various |
| Odor | : Odorless. Characteristic. |
| Hazard statements | : CAUSES 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 | : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). |

Potential acute health effects

| | |
|-------------------|--|
| Inhalation | : No known significant effects or critical hazards. |
| Ingestion | : No known significant effects or critical hazards. |
| Skin | : Severely irritating to the skin. |
| Eyes | : Severely irritating to eyes. Risk of serious damage to eyes. |

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. |
|---|--|

See toxicological information (Section 11)

3. Composition/information on ingredients

United States

| Name | CAS number | % |
|------------------------------|------------|-----|
| hexadecan-1-ol | 36653-82-4 | 1.1 |
| Ethylene glycol monostearate | 111-60-4 | 1.1 |

Canada

| Name | CAS number | % |
|------------------------------|------------|-----|
| hexadecan-1-ol | 36653-82-4 | 1.1 |
| Ethylene glycol monostearate | 111-60-4 | 1.1 |

Mexico

| Name | CAS number | UN number | % | IDLH | Classification | | | |
|------------------------------|------------|----------------|-----|------|----------------|---|---|---------|
| | | | | | H | F | R | Special |
| Ethylene glycol monostearate | 111-60-4 | Not available. | 1.1 | - | 1 | 0 | 0 | - |
| hexadecan-1-ol | 36653-82-4 | Not available. | 1.1 | - | 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** : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. May cause eye irritation.
- Skin contact** : Prolonged or repeated contact with skin or mucous membrane may result in irritation symptoms, such as redness, blistering, dermatitis etc. Discontinue use of product. Apply cold compresses to affected areas to relieve any discomfort. Seek medical attention if irritation persists.
- Inhalation** : Move affected person to fresh air.
- Ingestion** : Have conscious person drink several glasses of water or milk. Do not induce vomiting. Get medical attention if adverse health effects persist or are severe.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
- Notes to physician** : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

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. Dike liquid for later disposal.
- 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
- Special protective equipment for fire-fighters** : Non-combustible. No special recommendations.

6. Accidental release measures

- Personal precautions** : Do not touch or walk through spilled material. Keep container closed.
- 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** : 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** : Keep container tightly closed. Store in a dry place.

8. Exposure controls/personal protection

United States

| Ingredient | Exposure limits |
|------------------------------|--|
| Ethylene glycol monostearate | ACGIH TLV (United States, 2/2010). TWA: 10 mg/m ³ 8 hour(s). Form: Total particulate mass |

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 |
| Ethylene glycol monostearate | US ACGIH 2/2010 | - | 10 | - | - | - | - | - | - | - | [a] |
| | AB 4/2009 | - | 10 | - | - | - | - | - | - | - | [3] |
| | BC 9/2010 | - | 10 | - | - | - | - | - | - | - | |
| | ON 7/2010 | - | 10 | - | - | - | - | - | - | - | [a] |

[3]Skin sensitization

Form: [a]Total particulate mass

Mexico

Occupational exposure limits

| Ingredient | Exposure limits |
|------------------------------|--|
| Ethylene glycol monostearate | ACGIH TLV (United States, 2/2010). TWA: 10 mg/m ³ 8 hour(s). Form: Total particulate mass |

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** : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Personal protection**
- Respiratory** : 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.
- Hands** : Wear suitable gloves.

8. Exposure controls/personal protection

- Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.
- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- 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. White. Various
- Odor** : Odorless. Characteristic.
- pH** : 5 to 7
- Boiling/condensation point** : >100°C (>212°F)
- Relative density** : 1.1 to 1.2

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** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

11. Toxicological information

United States

Acute toxicity

| Product/ingredient name | Result | Dose | Exposure |
|------------------------------|-----------|-------------|----------|
| Ethylene glycol monostearate | LD50 Oral | >5000 mg/kg | - |
| hexadecan-1-ol | LD50 Oral | 5 g/kg | - |

- Conclusion/Summary** : Not available.

Chronic toxicity

- Conclusion/Summary** : Not available.

Irritation/Corrosion

| Product/ingredient name | Result | Score | Exposure | Observation |
|------------------------------|--------------------------|-------|--------------------------|-------------|
| Ethylene glycol monostearate | Skin - Mild irritant | - | 24 hours 500 milligrams | - |
| hexadecan-1-ol | Eyes - Mild irritant | - | 82 milligrams | - |
| | Skin - Mild irritant | - | 100 Percent | - |
| | Skin - Moderate irritant | - | 24 hours 100 milligrams | - |
| | Skin - Mild irritant | - | 72 hours 75 milligrams | - |
| | Skin - Severe irritant | - | Intermittent 0.2 Percent | - |

11. Toxicological information

| | | | | |
|--|------------------------|---|--------------------------|---|
| | Skin - Mild irritant | - | 48 hours 50 milligrams | - |
| | Skin - Severe irritant | - | 24 hours 100 milligrams | - |
| | Skin - Mild irritant | - | 24 hours 2600 milligrams | - |
| | Skin - Severe irritant | - | 24 hours 100 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 |
|------------------------------|-------|------|-----|-------|-----|------|
| Ethylene glycol monostearate | A4 | - | - | - | - | - |

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 |
|------------------------------|-----------|-------------|----------|
| hexadecan-1-ol | LD50 Oral | 5 g/kg | - |
| Ethylene glycol monostearate | LD50 Oral | >5000 mg/kg | - |

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

| Product/ingredient name | Result | Score | Exposure | Observation |
|-------------------------|------------------------------|----------------------|-------------------------------------|-------------------------|
| hexadecan-1-ol | Eyes - Mild irritant | - | 82 milligrams | - |
| | Skin - Mild irritant | - | 100 Percent | - |
| | Skin - Moderate irritant | - | 24 hours 100 milligrams | - |
| | Skin - Mild irritant | - | 72 hours 75 milligrams Intermittent | - |
| | Skin - Severe irritant | - | 0.2 Percent | - |
| | Skin - Mild irritant | - | 48 hours 50 milligrams | - |
| | Skin - Severe irritant | - | 24 hours 100 milligrams | - |
| | Skin - Mild irritant | - | 24 hours 2600 milligrams | - |
| | Skin - Severe irritant | - | 24 hours 100 milligrams | - |
| | Ethylene glycol monostearate | Skin - Mild irritant | - | 24 hours 500 milligrams |

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 |
|------------------------------|-------|------|-----|-------|-----|------|
| Ethylene glycol monostearate | A4 | - | - | - | - | - |

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 |
|------------------------------|-----------|-------------|----------|
| Ethylene glycol monostearate | LD50 Oral | >5000 mg/kg | - |
| hexadecan-1-ol | LD50 Oral | 5 g/kg | - |

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

| Product/ingredient name | Result | Score | Exposure | Observation |
|------------------------------|--------------------------|-------|-------------------------------------|-------------|
| Ethylene glycol monostearate | Skin - Mild irritant | - | 24 hours 500 milligrams | - |
| hexadecan-1-ol | Eyes - Mild irritant | - | 82 milligrams | - |
| | Skin - Mild irritant | - | 100 Percent | - |
| | Skin - Moderate irritant | - | 24 hours 100 milligrams | - |
| | Skin - Mild irritant | - | 72 hours 75 milligrams Intermittent | - |
| | Skin - Severe irritant | - | 0.2 Percent | - |
| | Skin - Mild irritant | - | 48 hours 50 milligrams | - |
| | Skin - Severe irritant | - | 24 hours 100 milligrams | - |
| | Skin - Mild irritant | - | 24 hours 2600 milligrams | - |
| | Skin - Severe irritant | - | 24 hours 100 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 |
|------------------------------|-------|------|-----|-------|-----|------|
| Ethylene glycol monostearate | A4 | - | - | - | - | - |

Mutagenicity

11. Toxicological information

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.

United States

Aquatic ecotoxicity

Conclusion/Summary : Not available.

Persistence/degradability

Conclusion/Summary : Not available.

Canada

Aquatic ecotoxicity

Conclusion/Summary : Not available.

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.

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: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: No products were found.
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: No products were found.

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 : None of the components are listed.

New York : None of the components are listed.

New Jersey : None of the components are listed.

Pennsylvania : None of the components are listed.

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 : None of the components are listed.

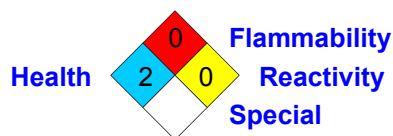
CEPA Toxic substances : None of the components are listed.

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

15. Regulatory information

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.

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



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