SAFETY DATA SHEET

Aqua Ammonia (19%)

Section 1. Identification

GHS product identifier

: Aqua Ammonia (19%)

Other means of identification

: Aqua Ammonia, Ammonium Hydroxide

identification
Product use

: Synthetic/Analytical chemistry.

Synonym

: Aqua Ammonia, Ammonium Hydroxide

SDS#

: 001196

Supplier's details

: Supplier 3

24-hour telephone

:

Section 2. Hazards identification

OSHA/HCS status

: This material is considered hazardous by the OSHA Hazard Communication Standard

(29 CFR 1910.1200).

Classification of the substance or mixture

: SKIN CORROSION/IRRITATION - Category 1B

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract

irritation) - Category 3

AQUATIC HAZARD (ACUTE) - Category 1

GHS label elements

Hazard pictograms







Signal word

: Danger

Hazard statements

: May displace oxygen and cause rapid suffocation. Causes severe skin burns and eye damage.

May cause respiratory irritation. Very toxic to aquatic life.

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 protective gloves. Wear eye or face protection. Wear protective clothing. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Avoid

breathing vapor. Wash hands thoroughly after handling.

Response

: Collect spillage. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician. IF IN EYES: Rinse cautiously with water for several

minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER or physician.

Storage : Store locked up.

Disposal : Dispose of contents and container in accordance with all local, regional, national and

international regulations.

Hazards not otherwise

classified

: None known.

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Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification

: Aqua Ammonia, Ammonium Hydroxide

CAS number/other identifiers

CAS number : Not applicable.

Product code : 001196

| Ingredient name | % | CAS number |
|---------------------------------------|------------------------------|-------------------------------------|
| * * * · · · · · · · · · · · · · · · · | 100 80.1 - 95 5 - 19.9 | 1336-21-6 7732-18-5 7664-41-7 |

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 : Get me

: Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns

must be treated promptly by a physician.

Inhalation

: Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. 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.

Skin contact

Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion

Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : May cause respiratory irritation.

Skin contact : Causes severe burns.

Frostbite : Try to warm up the frozen tissues and seek medical attention.

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Section 4. First aid measures

: No known significant effects or critical hazards. Ingestion

Over-exposure signs/symptoms

: Adverse symptoms may include the following:, pain, watering, redness Eye contact

: Adverse symptoms may include the following:, respiratory tract irritation, coughing Inhalation

: Adverse symptoms may include the following:, pain or irritation, redness, blistering may Skin contact

occur

: Adverse symptoms may include the following:, stomach pains Ingestion

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

: In case of inhalation of decomposition products in a fire, symptoms may be delayed. Notes to physician

The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is

suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water

before removing it, or wear gloves.

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. This material is very toxic to aquatic life. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:

nitrogen 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.

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. Do not breathe 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 nonemergency 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). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

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Section 6. Accidental release measures

Methods and materials for containment and cleaning up

Small spill

: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. 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). Dispose of via a licensed waste disposal contractor. 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 get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating. drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

including any incompatibilities

Conditions for safe storage, : 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. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers, Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

| Ingredient name | Exposure limits |
|---------------------------------------|---|
| Aqua Ammonia WATER ammonia, anhydrous | None. None. ACGIH TLV (United States, 3/2016). STEL: 24 mg/m³ 15 minutes. STEL: 35 ppm 15 minutes. TWA: 17 mg/m³ 8 hours. TWA: 25 ppm 8 hours. NIOSH REL (United States, 10/2013). STEL: 27 mg/m³ 15 minutes. STEL: 35 ppm 15 minutes. TWA: 18 mg/m³ 10 hours. TWA: 25 ppm 10 hours. TWA: 25 ppm 10 hours. TWA: 35 mg/m³ 8 hours. TWA: 35 mg/m³ 8 hours. TWA: 50 ppm 8 hours. OSHA PEL 1989 (United States, 3/1989). STEL: 27 mg/m³ 15 minutes. |
| | STEL: 35 ppm 15 minutes. |

Section 8. Exposure controls/personal protection

Appropriate engineering controls

: Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits

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

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.

Eye/face protection

: 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, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/ or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Hand protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

 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.

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.

Section 9. Physical and chemical properties

Appearance

Physical state

: Liquid.

Color

: Colorless.

Boiling/condensation point

Melting/freezing point

: Lowest known value: 38°C (100.4°F) (ammonia). Weighted average: 68.21°C (154.8°F) : May start to solidify at the following temperature: 0°C (32°F) This is based on data for

the following ingredient: water. Weighted average: -29.74°C (-21.5°F)

Critical temperature

: Not available.

Odor

: Pungent.: Not available.

pН

: Approx. 11.6 for 1 N Sol'n, in water

Flash point
Burning time
Burning rate

Evaporation rate

Odor threshold

: Not available.

: Not applicable.: Not applicable.: Not available.

Flammability (solid, gas)

: Not available.

Section 9. Physical and chemical properties

Lower and upper explosive

(flammable) limits

: Not available.

Vapor pressure

: Not available.

Vapor density

Relative density

: Highest known value: 0.6 to 1.2 (Air = 1) (ammonia).

Gas Density (lb/ft 3)

: Weighted average: 0.33

Solubility
Solubility in water

: Not available.: Not available.: Complete

Partition coefficient: n-

octanol/water

: Not available.

Auto-ignition temperature

Decomposition temperature

: Not available.: Not available.: Not available.: Not available.

SADT Viscosity

14 1

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.

Hazardous decomposition

products

: Under normal conditions of storage and use, hazardous decomposition products should

not be produced.

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|-------------------------|----------------------|---------|-----------|----------|
| Aqua Ammonia | LD50 Oral | Rat | 350 mg/kg | - |
| ammonia, anhydrous | LC50 Inhalation Gas. | Rat | 7338 ppm | 1 hours |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|-------------------------|------------------------|---------|-------|--------------------------|-------------|
| Aqua Ammonia | Eyes - Severe irritant | Rabbit | - | 250 | - |
| | Eyes - Severe irritant | Rabbit | - | Micrograms 0.5 minutes 1 | _ |
| | | İ | | milligrams | |

Sensitization

Not available.

Mutagenicity

Not available.

Section 11. Toxicological information

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

| Name | Category | Route of exposure | Target organs |
|--------------|------------|-------------------|------------------------------|
| Aqua Ammonia | Category 3 | Not applicable. | Respiratory tract irritation |

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely

: Not available.

routes of exposure

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : May cause respiratory irritation.

Skin contact : Causes severe burns.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:, pain, watering, redness

Inhalation : Adverse symptoms may include the following:, respiratory tract irritation, coughing

Skin contact : Adverse symptoms may include the following:, pain or irritation, redness, blistering may

occur

Ingestion : Adverse symptoms may include the following:, stomach pains

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

Short term exposure

Potential immediate

: Not available.

effects

Potential delayed effects : Not available.

Long term exposure

Potential immediate : Not available.

effects

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.

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Section 11. Toxicological information

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

| Product/ingredient name | Result | Species | Exposure |
|------------------------------------|---|--|---|
| Aqua Ammonia ammonia, anhydrous | Acute LC50 37 ppm Fresh water Acute EC50 29.2 mg/l Marine water Acute LC50 2080 µg/l Fresh water Acute LC50 0.53 ppm Fresh water Acute LC50 300 µg/l Fresh water Chronic NOEC 0.204 mg/l Marine water | Fish - Gambusia affinis - Adult Algae - Ulva fasciata - Zoea Crustaceans - Gammarus pulex Daphnia - Daphnia magna Fish - Hypophthalmichthys nobilis Fish - Dicentrarchus labrax | 96 hours 96 hours 48 hours 48 hours 96 hours 62 days |

Persistence and degradability

Not available.

Bioaccumulative potential

| Product/ingredient name | LogPow | BCF | Potential |
|-------------------------|--------|-----|-----------|
| WATER | -1.38 | - | low |

Mobility in soil

Soil/water partition coefficient (Koc)

: Not available.

Other adverse effects

: No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

: The generation of waste should be avoided or minimized wherever possible. 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. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

Section 14. Transport information

| | DOT | TDG | Mexico | IMDG | IATA |
|-------------------------------|---|---|------------------|---|--|
| UN number | UN2672 | UN2672 | UN2672 | UN2672 | UN2672 |
| UN proper shipping name | Ammonium Hydroxide or Ammonia solutions | AMMONIA SOLUTION | AMMONIA SOLUTION | AMMONIA SOLUTION | Ammonia solution |
| Transport hazard class(es) | 8 | 8 | 8 | 8 | 8 |
| Packing group | III | Ш | III | 111 | III |
| Environment | No. | No. | No. | Yes. | No. |
| Additional information | This product is not regulated as a marine pollutant when transported on inland waterways in sizes of 55 L or 55 kg or by road, rail, or inland air in non-bulk sizes, provided the packagings meet the general provisions of §§ 173.24 and 173.24a. Reportable quantity 1000 lbs / 454 kg Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements. | Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.40-2.42 (Class 8), 2.7 (Marine pollutant mark). The marine pollutant mark is not required when transported by road or rail. | • | The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. | The environmentally hazardous substance mark may appear if required by other transportation regulations. |

[&]quot;Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product."

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according : Not available. to Annex II of MARPOL

73/78 and the IBC Code

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 Water Act (CWA) 311: ammonia; ammonia, anhydrous

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

Clean Air Act Section 112

(b) Hazardous Air

: Not listed

Pollutants (HAPs) Clean Air Act Section 602

: Not listed

Class I Substances

Clean Air Act Section 602

Class II Substances

: Not listed

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Section 15. Regulatory information

DEA List I Chemicals

: Not listed

(Precursor Chemicals)

DEA List II Chemicals

: Not listed

(Essential Chemicals)

SARA 302/304

Composition/information on ingredients

| | | | SARA 302 TPQ | | SARA 304 RQ | |
|--------------------|----------|------|--------------|-----------|-------------|-----------|
| Name | % | EHS | (lbs) | (gallons) | (lbs) | (gallons) |
| ammonia, anhydrous | 5 - 19.9 | Yes. | 500 | - | 100 | - |

SARA 304 RQ : 502.5 lbs / 228.1 kg

SARA 311/312

Classification : Immediate (acute) health hazard

Composition/information on ingredients

| Name | % | Fire hazard | Sudden release of pressure | Reactive | Immediate (acute) health hazard | Delayed (chronic) health hazard |
|--------------------|----------|----------------|----------------------------------|----------|--|--|
| Aqua Ammonia | 100 | No. | No. | No. | Yes. | No. |
| ammonia, anhydrous | 5 - 19.9 | Yes. | Yes. | No. | Yes. | No. |

SARA 313

| - | Product name | CAS number | % |
|---------------------------------|-------------------------------|------------------------|-----------------|
| Form R - Reporting requirements | · | | 100 5 - 19.9 |
| Supplier notification | ammonia ammonia, anhydrous | 1336-21-6 7664-41-7 | 100 5 - 19.9 |

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

State regulations

Massachusetts : The following components are listed: AMMONIUM HYDROXIDE; AMMONIUM WATER;

AMMONIA; AMMONIA, ANHYDROUS

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

New Jersey: The following components are listed: AMMONIUM HYDROXIDE; AMMONIAPennsylvania: The following components are listed: AMMONIUM HYDROXIDE; AMMONIA

International regulations

International lists

National inventory

Australia : All components are listed or exempted. Canada : All components are listed or exempted. China : All components are listed or exempted. **Europe** : All components are listed or exempted. Japan : All components are listed or exempted. Malaysia : All components are listed or exempted. **New Zealand** : All components are listed or exempted. **Philippines** : All components are listed or exempted. Republic of Korea : All components are listed or exempted. **Taiwan** : All components are listed or exempted.

Canada

Section 15. Regulatory information

WHMIS (Canada)

: Class D-1A: Material causing immediate and serious toxic effects (Very toxic).

Class E: Corrosive material

CEPA Toxic substances: The following components are listed: Ammonia dissolved in

Canadian ARET: None of the components are listed.

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

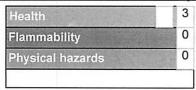
Alberta Designated Substances: None of the components are listed. Ontario Designated Substances: None of the components are listed. Quebec Designated Substances: None of the components are listed.

Section 16. Other information

Canada Label requirements : Class D-1A: Material causing immediate and serious toxic effects (Very

Class E: Corrosive material

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



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.

Procedure used to derive the classification

| Classification | Justification |
|---|---|
| Skin Corr. 1B, H314 STOT SE 3, H335 Aquatic Acute 1, H400 | Expert judgment Calculation method Calculation method |

<u>History</u>

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Section 16. Other information

Key to abbreviations

: ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships,

1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

UN = United Nations

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.

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