Hexadecyl Amine, distilled Revision: 1.00 CHEM INTERNATIONAL Issuing date: 09/28/2018

1. Chemical Product and Company Identification

Product Name: Hexadecyl Amine
Supplier: Chem International, Inc.

6099 Ponders Court Greenville, SC 29615

Tel: 864-458-7868 Fax: 864-458-7783

Emergency Tel: Chemtrec: 800-424-9300 (inside U.S. and Canada)

2. Hazards Identification

Classification of the substance or mixture

Acute toxicity, Category 4 H302: Harmful if swallowed.

Skin corrosion, Category 1B H314: Causes severe skin burns and eye damage.

Serious eye damage, Category 1 H318: Causes serious eye damage.

Acute aquatic toxicity, Category 1 H400: Very toxic to aquatic life.

Chronic aquatic toxicity, Category 1 H410: Very toxic to aquatic life with long lasting effects.

Hazardous products which must be listed on the label:

Hexadecyl Amine CAS No. 143-27-1

GHS LABEL ELEMENTS:

PICTOGRAM





SIGNAL WORD: Danger!

Hazard Statements

H302 - Harmful if swallowed.

H314 - Causes severe skin burns and eye damage.

H410 - Very toxic to aquatic life with long lasting effects.

Precautionary Statements

General:

None

Prevention:

P260 – Do not breathe dust or mist.

P264 – Wash face, hands and any exposed skin thoroughly after handling.

P270 – Do not eat, drink or smoke when using this product.

P273 - Avoid release to the environment.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel

unwell. P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all

contaminated clothing. Rinse skin with water/shower.

P304 + P340 – IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes.

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

P310 – Immediately call a POISON CENTER or doctor/physician.

P321 – Specific treatment (see supplemental first aid instructions on this

label). P363 – Wash contaminated clothing before reuse.

P391 - Collect spillage.

Storage:

P405 – Store locked up.

Disposal:

P501 - Dispose of contents/container to an approved incineration plant.

Other hazards which do not result in classification

No data available.

3. Composition, Information on Ingredients

| Chemical name | CAS No | EC No | GHS Classification | % |
|-----------------|----------|-----------|--|----|
| Amine, | 143-27-1 | 205-596-8 | Acute toxicity , Category 4 ; H302 | 99 |
| Hexadecyl- | | | Skin corrosion , Category 1B ; H314 | |
| | | | Serious eye damage , Category 1 ;H318 | |
| | | | Acute aquatic toxicity, Category 1; H400 | |
| | | | Chronic aquatic toxicity, Category 1; H410 | |
| Amine, Stearyl- | 124-30-1 | 204-695-3 | Acute toxicity , Category 4 ; H302 | 1 |
| | | | Skin corrosion , Category 1B ; H314 | |
| | | | Serious eye damage , Category 1 ;H318 | |
| | | | Acute aquatic toxicity, Category 1; H400 | |
| | | | Chronic aquatic toxicity, Category 1; H410 | |

4. First Aid Measures

FIRST AID MEASURES FOR ACCIDENTAL:

INHALATION: In case of exposure: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

INGESTION: NEVER attempt to induce vomiting. If victim is conscious and alert, give 2-4 glasses of milk or water. Do not give anything by mouth to an unconscious person. Always obtain medical attention immediately. Rinse mouth out with water. Show this sheet to the doctor.

SKIN CONTACT: Remove all contaminated clothing and footwear. Wash immediately and thoroughly for a prolonged period (at least 15 minutes). In case of inflammation (redness, irritation) obtain medical attention. Show this sheet to the doctor.

EYE CONTACT: Immediately rinse with plenty of running water for a prolonged period, (at least 15 minutes) whilst keeping the eyes wide open. Always obtain medical advice immediately, even if there are no symptoms. Show this sheet to the doctor.

5. Fire Fighting Measures

Flash point:

>110 °C closed cup

EXTINGUISHING MEDIA:

Suitable - Dry chemical powder, foam or Carbon Dioxide (CO2).

Unsuitable - Strong water jet.

SPECIFIC HAZARDS:

On heating or during combustion:

On heating there is a risk of a build-up of pressure in hermetically sealed containers or tanks.

During combustion, harmful, corrosive and / or toxic vapors are released.

SPECIFIC FIRE FIGHTING METHODS: Cool down the containers / equipment exposed to heat with a water spray. Do not use a water jet since it may cause the fire to spread. Do not dispose of fire-fighting water in the environment.

PROTECTION OF FIRE FIGHTERS: Self-contained breathing apparatus. Full protective clothing, Boots, gloves, goggles and face mask.

6. Accidental Release Measures

PERSONAL PRECAUTIONS: Avoid contact with skin and eyes. Wear appropriate gloves, safety goggles and suitable protective clothing. Stop the leak. Turn leaking containers leak-side up to prevent the escape of liquid.

ENVIRONMENTAL PRECAUTIONS: For a large spillage, contain the spillage by bunding.

Prevent the product from spreading into the environment. Product is dangerous for the environment.

METHODS FOR CLEANING UP: Recovery: Absorb the product onto porous material. Sweep up or vacuum up the product.

Collect the spilled product and place it in a suitably labelled spare container. Keep the recovered product for subsequent disposal.

Cleaning / Decontamination: Wash non-recoverable remainder with large amounts of water.

Recover the cleaning water for subsequent disposal.

Disposal: Dispose of all contaminated materials in accordance with current regulations.

7. Handling and Storage

HANDLING:

Technical Measures: Vapor extraction at source.

Measures: Avoid the formation or spread of mists in the atmosphere.

Safe Handling Advice: Comply with instructions for use. Avoid contact with skin and eyes.

Do not breathe fumes / gas /mists / vapor / spray. Ensure that there is a suitable ventilation system.

Do NOT handle in a confined space.

Do NOT expose to heat. Following use, do not pierce the packaging, even if it is empty.

STORAGE:

Technical Measures: Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems.

Storage Conditions: Stable under normal storage conditions. Store in a cool, well-ventilated area, away from ignition sources and combustible materials. A storage temperature between 4-60 $^{\circ}$ C is recommended. Do not store with strong oxidizing / reducing materials, aqueous ammonia, highly oxygenated or halogenated solvents.

Packaging Materials: Plastic materials are recommended.

Shelf Life: 12 months.

8. Exposure Controls, Personal Protection

ENGINEERING MEASURES: Frequent renewal of the air in the workstation (> 10 times/hour). **RESPIRATORY PROTECTION:** If vapor is released, use self-contained breathing apparatus.

HAND PROTECTION: Impermeable protective gloves. **EYE PROTECTION:** Safety goggles and a face shield. **SKIN AND BODY PROTECTION:** Protective clothing.

OTHERS: Emergency equipment and first-aid box with instructions should be readily available.

Safety shower and eye fountain as collective emergency equipment.

WORK PRACTICE CONTROLS: Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material:

Do not store, use, and / or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.

Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.

Wash exposed skin promptly to remove accidental splashes of contact with the material.

9. Physical and Chemical Properties

Appearance: White solid @ 25 °C

PH: 8-10

Boiling/Condensation Point: >300°C @ 760 mm Hg(101.3Kpa)

Melting/Freezing Point: 35-47°C Flash point: >110°C, closed up Explosive Properties: N/A Oxidizing properties: N/A

Specific Gravity: 0.81 (Water = 1)
Vapor Pressure: < 1 mmHg(@ 20°C)
Relative density: 0.81@ 21/21°C
Evaporation rate) nBuOAc=1: N/A

Explosive limits: N/A

Auto Ignition temperature: N/A

Evaporation Rate: <1 compared to Butylacetate

Volatility: <1% (w/w).

Solubility: Insoluble in water.

10. Stability and Reactivity

STABILITY: Stable under normal conditions of use.

MATERIALS TO AVOID: Strong oxidizing agents, strong acids, copper, zinc, aluminium, and

related alloys, phenols and peroxides.

CONDITIONS TO AVOID: Excessive heat and open flame.

HAZARDOUS DECOMPOSITION PRODUCTS: On combustion or on thermal decomposition

(pyrolysis) releases: Oxides of Carbon and oxides of Nitrogen.

Section 11. Toxicological Information

Acute toxicity

Acute oral toxicity: The product itself has not been tested. According to the data on the components, harmful if swallowed.

Acute inhalation toxicity: The product itself has not been tested. According to the data on the components, may be harmful if inhaled.

Acute dermal toxicity: The product itself has not been tested. According to the data on the components, harmful in contact with skin.

Acute toxicity (other routes of administration): no data available

Skin corrosion/irritation

Skin irritation: The product itself has not been tested. According to the data on the components, irritating to skin.

Serious eye damage/eye irritation

Eye irritation: The product itself has not been tested. According to the data on the components, risk of serious damage to eyes.

Respiratory or skin sensitization

Sensitization: The product itself has not been tested. According to the data on the components, not classified as sensitizing by skin contact.

Mutagenicity

Genotoxicity in vitro: The product itself has not been tested. According to the data on the components, product is not considered to be genotoxic.

Genotoxicity in vivo: The product itself has not been tested. According to the data on the components, product is not considered to be genotoxic.

Carcinogenicity

Carcinogenicity:

The product itself has not been tested. According to the data on the components, not classifiable as a human carcinogen.

Toxicity for reproduction and development

Toxicity to reproduction/Fertility: The product itself has not been tested. According to the data on the components, no toxicity to reproduction.

Developmental Toxicity/ Teratogenicity: The product itself has not been tested. According to the data on the components, no effect observed on development.

Aspiration toxicity

Aspiration toxicity: The product itself has not been tested., According to the data on the components, no aspiration toxicity classification.

12. Ecological Information

MOBILITY: Expected behavior of the product = Ultimate destination of the product: WATER. **BIODEGRADABILITY:** Ultimate aerobic biodegradability = No information available. By analogy, inherently biodegradable.

BIOACCUMULATION: Octanol / water partition coefficient = No information available.

ECOTOXICITY: Effects on the aquatic environment = No information available.

GHS Environmental Hazard Class (Acute): Category 1 -Very toxic to aquatic life.

13. Disposal Considerations

Waste Disposal: Dispose of according to all federal, state and local applicable regulations. Storage of controlled substances must comply with applicable regulatory security requirements; Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Container Disposal: Containers should be cleaned of residual product before disposal. Do not contaminate water by cleaning of equipment or disposal of wastes. Dispose of according to all federal, state and local applicable regulations.

Consult your local or regional authorities.

14. Transport Information

INTERNATIONAL REGULATIONS:

US Department of Transportation:

ID Number: UN3259

Proper Shipping Name: AMINES, SOLID, CORROSIVE, N.O.S. (HEXADECYL AMINE)

Labeling: CORROSIVE Packaging Group: II Class / Division: 8

Land - Rail / Road (RID / ADR):

ID Number: UN3259

Proper Shipping Name: AMINES, SOLID, CORROSIVE, N.O.S. (HEXADECYL AMINE)

Labeling: CORROSIVE Packaging Group: II Class / Division: 8 Sea (IMO / IMDG): ID Number: UN3259

Proper Shipping Name: AMINES, SOLID, CORROSIVE, N.O.S. (HEXADECYL AMINE)

Labeling: 8

Hexadecyl Amine, distilled Revision: 1.00 CHEM INTERNATIONAL Issuing date: 09/28/2018

Packaging Group: II Class / Division: 8

Emergency schedule (EmS): F-A, S-B

Marine Pollutant: YES Air (ICAO-IATA):
ID Number: UN3259

Proper Shipping Name: AMINES, SOLID, CORROSIVE, N.O.S. (HEXADECYL AMINE)

Labeling: 8

Packaging Group: II Class / Division: 8 Marine Pollutant: YES

15. Regulatory Information

INVENTORY STATUS

| Status |
|--------|
| Υ |
| Υ |
| Υ |
| Υ |
| Υ |
| Υ |
| Υ |
| Υ |
| Υ |
| |

Y = All ingredients are on the inventory.

E = All ingredients are on the inventory or exempt from listing.

P = One or more ingredients fall under the polymer exemption or are on the no longer polymer list. All other ingredients are on the inventory or exempt from listing.

N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing.

NOTE: The regulatory information given above only indicates the principal regulations specifically applicable to the product described in the MSDS. The user's attention is drawn to the possible existence of additional provisions which complete these regulations.

Refer to all applicable national, international and local regulations or provisions.

16. Other Information

Full text of H-Statements

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

Full text of P-Statements referred to under section 2.

P260 Do not breathe dust or mist.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.

P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor/physician.

P321 Specific treatment (see supplemental first aid instructions on this label).

P363 Wash contaminated clothing before reuse.

P391 Collect spillage.

P405 Store locked up.

P501 Dispose of contents/ container to an approved waste disposal plant.

To the best of the supplier's knowledge, the information contained herein is accurate.

However, neither the supplier, nor any of its affiliate, make any representative or warranties (expressed or implied), nor assumes any liability including liability for any direct, incidental, consequential, or the damages) with respect to the accuracy or completeness of the information contained herein. Such information may be (without limitation) invalid if the specification material is used in combination with another, in a particular process, or under unusual conditions. Determination of suitability of any material for any given purpose is the sole responsibility of the user who assumes all risk and responsibility therefore. All material may present unknown hazards and should be used with appropriate caution. The supplier cannot and does not guarantee that the hazards described herein are the only ones that exist.

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