

MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION:

PRODUCT CODE

A0264

HEXYL ALDEHYDE

PRODUCT NAME

SUPPLIER

Shanghai M & U International Trade Co., Ltd. Rm 1717, No 598 North NuJiang Road 200333 Shanghai, China +86-21-32515501 32515502 sales@mu-intel.com

FOR EMERGENCIES CALL CHEMTREC:

800-424-9300 (24-HOURS)

2. HAZARD IDENTIFICATION:

Emergency Overview OSHA Hazards Flammable liquid

GHS Classification

Flammable liquids (Category 3) Acute toxicity, Oral (Category 5) Skin irritation (Category 3) Eye irritation (Category 2B)

GHS Label elements, including precautionary statements

Pictogram Signal word Warning

Hazard statement(s)

H226Flammable liquid and vaporH303May be harmful if swallowedH316Causes mild skin irritationH320Cases eye irritation

Precautionary statement(s)

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

| HMIS Classification | |
|---------------------|---|
| Health hazard | 2 |
| Flammability | 3 |

| Physical hazards | 2 |
|--------------------------|---|
| NFPA Rating | |
| Health hazard | 2 |
| Fire | 3 |
| Reactivity Hazard | 0 |

Potential Health Effects

| Inhalation | May be harmful if inhaled. May cause respiratory tract irritation |
|------------|--|
| Skin | May be harmful if absorbed through skin. May cause skin irritation |
| Eyes | May cause eye irritation |
| Ingestion | May be harmful if swallowed |

3. COMPOSITION AND INFORMATION ON INGREDIENTS:

| ALDEHYDE C-6 |
|--------------|
| C6 H12 O |
| 100.16 g/mol |
| EC-No |
| 200-624-5 |
| |

4. FIRST-AID GUIDE:

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician

In case of skin contact

Wash off with soap and plenty of water. Consult a physician

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician

5. FIRE-FIGHTING GUIDE:

Suitable extinguishing media

For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for firefighting if necessary

Hazardous combustion products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Further information

Use water spray to cool unopened containers

6. ACCIDENTAL RELEASE GUIDE:

Personal precautions

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains

Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wetbrushing and place in container for disposal according to local regulations (see section 13)

7. HANDLING AND STORAGE:

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge

Conditions for safe storage

Store in cool place, keep container tightly closed in a dry and well-ventilated place Containers which are opened must be carefully resealed and kept upright to prevent leakage

Recommended storage temperature: 2 - 8 C

8. EXPOSURE AND PERSONAL PROTECTION:

Contains no substances with occupational exposure limit values

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup

to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU)

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands

Eye protection

Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU)

Skin and body protection

Impervious clothing, Flame retardant antistatic protective clothing, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance Form Color Safety data pН Melting point (°C) Boiling point (°C) Flash point (°F) Ignition temperature Auto ignition temperature Lower explosion limit Upper explosion limit Vapor pressure (mm Hg @20 °C) Density @25 °C Water solubility Partition coefficient: n-octanol/ water Relative vapor density Odor Odor Threshold Evaporation rate

LIQUID COLORLESS TO PALE YELLOW

no data available no data available 131 Closed Cup 85 no data available no data available no data available no data available 10.0 0.824 SLIGHT

no data available no data available FATTY, SHARP, PENETRATING no data available no data available

10. STABILITY AND REACTIVITY:

Chemical stability Stable under recommended storage conditions

Possibility of hazardous reactions Vapors may form explosive mixture with air

Conditions to avoid Heat, flames and sparks

Materials to avoid Oxidizing agents, Strong bases, and Strong reducing bases, Do not store near acids

Hazardous decomposition products Hazardous decomposition products formed under fire conditions. - Carbon oxides

Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION:

Acute toxicity Oral LD50 LD50 Oral - rat - 4,890 mg.kg

Inhalation LC50 No data available

Dermal LD50 No data available

Other information on acute toxicity No data available

Skin corrosion/irritation Skin - rabbit - Mild skin irritation - 24 h

Serious eye damage/eye irritation Eyes - rabbit - Mild eye irritation - 24 h

Respiratory or skin sensitization No data available

Germ cell mutagenicity Genotoxicity in vitro - Hamster - Lungs Mutation in mammalian somatic cells

Genotoxicity in vitro - rat - Liver Unscheduled DNA synthesis

Carcinogenicity

IARC

No components of this product present at levels greater than or equal to 0.1% is identified as probable. Possible or confirmed human carcinogen by IARC

ACGIH

No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH

NTP

No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP

OSHA

No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA

Reproductive toxicity

No data available

Teratogenicity

No data available

Specific target organ toxicity - single exposure (Globally Harmonized System) No data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System) No data available

Aspiration hazard

No data available

Potential health effects

| Inhalation | May be harmful if inhaled. May cause respiratory tract irritation |
|------------|--|
| Ingestion | May be harmful if swallowed |
| Skin | May be harmful if absorbed through skin May. cause skin irritation |
| Eyes | May cause eye irritation |

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated

Synergistic effects

No data available

Additional Information RTECS: MN7175000

12. ECOLOGICAL INFORMATION:

Toxicity No data available

Persistence and degradability No data available

Bioaccumulative potential No data available

Mobility in soil No data available

PBT and vPvB assessment No data available

Other adverse effects No data available

13. DISPOSAL RECOMMENDATIONS:

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material

Contaminated packaging Dispose of as unused product

14. TRANSPORTATION INFORMATION:

DOT (US)

UN number: 1207 Class: 3 Packing group: III Proper shipping name: HEXALDEHYDE

IMDG

UN number: 1207 Class: 3 Packing group: III Proper shipping name: HEXALDEHYDE

IATA

UN number: 1207 Class: 3 Packing group: III Proper shipping name: HEXALDEHYDE

15. REGULATORY INFORMATION:

OSHA Hazards

Flammable liquid

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title Ill, Section 313

SARA 311/312 Hazards

| Fire Hazard | | | |
|-----------------|--------------------|---------------|--|
| Massachusetts 1 | Right to Know Comp | onents | |
| Hexanal | CAS-No | Revision Date | |
| | 66-25-1 | 1993-04-24 | |
| Pennsylvania R | ight to Know Compo | nents | |
| Hexanal | CAS-No | Revision Date | |
| | 66-25-1 | 1993-04-24 | |
| New Jersey Rig | ht to Know Compone | ents | |
| Hexanal | CAS-No | Revision Date | |
| | 66-25-1 | 1993-04-24 | |
| California Prop | 65 Components | | |

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm

16. OTHER INFORMATION:

The information in this MSDS was obtained from current and reliable sources. However, the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions for use, handling, storage and disposal of this product are beyond M&U's control, it is the responsibility of the user both to determine safe conditions for use of this product and to assume liability for loss, damage, or expense arising out of the products improper use. No warranty expressed or implied regarding the product described herein will be created by or inferred from any statement or omission in the MSDS. Various federal, state, or provincial agencies may have specific regulations concerning the transportation, handling, storage, use, or disposal of this product which may not be reflected in the MSDS. The user should review these regulations to ensure full compliance.