

Revision number: 2 Revision date: 10/06/2014

1. IDENTIFICATION

Product name: Product code: 2-Undecylimidazole U0012

Product use: Restrictions on use:

2. HAZARD(S) IDENTIFICATION

OSHA Haz Com: CFR 1910.1200:

Skin Corrosion/Irritation [Category 2] Eye Damage/Irritation [Category 2A]

Signal word:

Warning!

Hazard Statement(s):

Causes serious eye irritation Causes skin irritation

Pictogram(s) or Symbol(s):



Precautionary Statement(s): [Prevention] [Response]

> [Storage] [Disposal]

Wash hands and face thoroughly after handling. Wear protective gloves. Wear eye and face protection. If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. 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 advice or attention. None

SAFETY DATA SHEET

TCI AMERICA

For laboratory research purposes. Not for drug or household use.

| Company: | Emergency telephone number: |
|-----------------------------------|--|
| TCI America | Chemical Emergencies: |
| 9211 N. Harborgate Street | TCI America (8:00am - 5:00pm) PST |
| Portland, OR 97203 U.S.A. | +1-503-286-7624 |
| Telephone: | Transportation Emergencies: |
| +1-800-423-8616 / +1-503-283-1681 | Chemtrec 24-Hour |
| Fax: | +1-800-424-9300 (U.S.A.) |
| +1-888-520-1075 / +1-503-283-1987 | +1-703-527-3887 (International) |
| e-mail: | Responsible department: |
| sales-US@TCIchemicals.com | TCI America |
| www.TCIchemicals.com | Environmental Health Safety and Security +1- 503-286-7624 |

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Substance/Mixture: |
|--------------------|
| Components: |
| Percent: |
| CAS Number: |
| Molecular Weight: |
| Chemical Formula: |

Substance 2-Undecylimidazole >96.0%(T) 16731-68-3 222.38 C₁₄H₂₆N₂

None

4. FIRST-AID MEASURES

| Inhalation: | Call a paisan contar or deptor if you feel upwell. Mayo victim to freeh air. Cive artificial repriration if victim |
|---|--|
| | Call a poison center or doctor if you feel unwell. Move victim to fresh air. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult. Keep victim warm and quiet. Treat symptomatically and supportively. Ensure that medical personnel are aware of the material(s) involved and |
| | take precautions to protect themselves. |
| Skin contact: | If skin irritation occurs get medical advice/attention. Remove and wash contaminated clothing before re- use. In case of contact with substance, immediately flush skin with running water for at least 20 minutes. Treat symptomatically and supportively. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. |
| Eye contact: | IMMEDIATELY flush eyes with running water for at least 15 minutes, keeping eyelids open. Contact with material may irritate or burn eyes. Call emergency medical service. Move victim to fresh air. Check for and remove any contact lenses. Keep victim warm and quiet. Treat symptomatically and supportively. Effects o exposure to substance may be delayed. Ensure that medical personnel are aware of the material(s) |
| Ingestion: | involved and take precautions to protect themselves. Do not induce vomiting with out medical advice. If swallowed, seek medical advice immediately and show the container or label. Do not use mouth-to-mouth method if victim ingested the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Loosen tight clothing such as a collar, tie, belt or waistband. If a person vomits place them in the recovery position so that vomit will not reenter the mouth and throat. Rinse mouth. Keep victim warm and quiet. Treat symptomatically and supportively. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. |
| Symptoms/effects: | |
| Acute: Delayed: | Redness. No data available |
| Immediate medical attention: | If breathing has stopped, perform artificial respiration. Use first aid treatment according to the nature of the injury. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. |
| 5. FIRE-FIGHTING MEASURES | |
| Suitable extinguishing media: | Dry chemical, CO_2 , sand, earth, water spray or regular foam Consult with local fire authorities before attempting large scale fire fighting operations. |
| Specific hazards arising from the che | mical_ |
| Hazardous combustion products: Other specific hazards: | These products include: Carbon oxides Nitrogen oxides Closed containers may explode from heat of a fire. |
| Special precautions for fire-fighters: Use water spray or fog; do not use straig | pht streams. Dike fire-control water for later disposal; do not scatter the material. Containers may explode when |
| heated. Move containers from fire area it | |
| | fighters: eathing apparatus (SCBA). Structural fire fighters' protective clothing provides limited protection in fire situations ations. Wear chemical protective clothing which is specifically recommended by the manufacturer. It may |
| 6. ACCIDENTAL RELEASE MEAS | URES |
| | |
| Personal precautions: | Avoid contact with skin, eyes, and clothing. Keep people away from and upwind of spill/leak. Do not touch |

| Personal precautions: | Avoid contact with skin, eyes, and clothing. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing (Section 8). Warn unnecessary personnel to move away. Stop leak if you can do it without risk. Ensure adequate ventilation. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. |
|--------------------------------|--|
| Personal protective equipment: | Wear eye protection (splash goggles) and face protection (full length face shield). Lab coat. Dust respirator. Be sure to use a MSHA/NIOSH approved respirator or equivalent. Wear protective gloves (nitrile). |
| Emergency procedures: | Prevent dust cloud. In case of a spill and/or a leak, always shut off any sources of ignition, ventilate the area, and excercise caution. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Warn personnel to move away. Prevent entry into sewers, basements or confined areas; dike if needed. |

Methods and materials for containment and cleaning up:

ELIMINATE all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop leak if without risk. Ventilate the area. Absorb with an inert material and put the spilled material in an appropriate waste disposal container. Use clean non-sparking tools to collect absorbed material. Environmental precautions: Prevent further leakage or spillage if safe to do so. Water runoff can cause environmental damage. Prevent entry into sewers, basements or confined

areas; dike if needed.

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| Precautions for safe handling: | Avoid inhalation of vapor or mist. Avoid contact with skin and eyes. Good general ventilation should be sufficient to control airborne levels. Keep container dry. Handle and open container with care. Wear suitable protective alathing alayer and avoid free protection. When using do not ext dript, or employed free protections. |
|--------------------------------|--|
| | suitable protective clothing, gloves and eye/face protection. When using do not eat, drink, or smoke. Keep away from sources of ignition. |
| Conditions for safe storage: | Keep only in the original container in a cool well-ventilated place. Keep away from incompatibles. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Avoid prolonged storage periods. |
| Storage incompatibilities: | Store away from oxidizing agents |

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits: No data available

Appropriate engineering controls:

Good general ventilation should be sufficient to control airborne levels. Ventilation is normally required when handling or using this product. Eyewash fountains should be provided in areas where there is any possibility that workers could be exposed to the substance. Follow safe industrial engineering/laboratory practices when handling any chemical.

| Personal protective equipment | |
|-------------------------------|---------------------------------|
| Respiratory protection: | Dust respirator. Be sure to use |

Hand protection: Eye protection: Skin and body protection: Dust respirator. Be sure to use a MSHA/NIOSH approved respirator or equivalent. Nitrile gloves. Safety glasses. Lab coat.

9. PHYSICAL AND CHEMICAL PROPERTIES

| Physical state (20°C): Form: Color: Odor: Odor threshold: | Solid Crystal - Powder White - Almost white No data available No data available | | | |
|--|--|---|---------------|--|
| Melting point/freezing point: Boiling point/range: Decomposition temperature: Relative density: Kinematic Viscosity: | 73°C (163°F) 215°C (419°F)/2.7kPa No data available No data available No data available No data available | pH: Vapor pressure: Vapor density: Dynamic Viscosity | : | No data available No data available No data available No data available |
| Partition coefficient: n-octanol/water (log Pow) | No data available | Evaporation rate: (Butyl Acetate = 1) | | No data available |
| Flash point: Flammability (solid, gas): | No data available No data available | Autoignition tempe Flammability or ex Lower: | | No data available able |
| • · · · · · · · · · · | | Upper: | No data avail | able |
| Solubility(ies): | | | | |

Solubility(les): Soluble: Methanol

10. STABILITY AND REACTIVITY

Reactivity: Chemical Stability: Possibility of Hazardous Reactions: Conditions to avoid: Incompatible materials: Hazardous Decomposition Products: Not Available. Stable under recommended storage conditions. (See Section 7) No hazardous reactivity has been reported. Avoid excessive heat and light. Oxidizing agents No data available

11. TOXICOLOGICAL INFORMATION

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|---|--|---------------------------------------|
| Acute Toxicity: No data available | | |
| Skin corrosion/irritation: No data available | | |
| Serious eye damage/irritation: No data available | | |
| Respiratory or skin sensitization: No data available | | |
| Germ cell mutagenicity: No data available | | |
| Carcinogenicity: | | |
| No data available | | |
| IARC: No data available | NTP: No data available OSHA: | No data available |
| Reproductive toxicity: No data available | | |
| or dry skin. Eye contact may result in redne Potential Health Effects: | | contact may result in redness, pain |
| Skin and eye contact may result in irritation Target organ(s): | No data available | |
| 12. ECOLOGICAL INFORMATION | | |
| Ecotoxicity | | |
| Fish: Crustacea: | No data available No data available | |
| Algae: | No data available | |
| Persistence and degradability: | No data available | |
| Bioaccumulative potential (BCF): Mobillity in soil: | No data available No data available | |
| Partition coefficient: n-octanol/water (log Pow) | No data available | |
| Soil adsorption (Koc): | No data available | |
| Henry's Law: | No data available | |
| constant (PaM ³ /mol) | | |
| | | |
| 13. DISPOSAL CONSIDERATIONS Disposal of product: | Recycle to process if possible. It is the generator's responsibility to co | mply with Federal. State and Local |
| | rules and regulations. You may be able to dissolve or mix material wit | h a combustible solvent and burn in a |
| | chemical incinerator equipped with an afterburner and scrubber system assistance but does not replace these laws, nor does compliance in a | |
| | regulatory compliance according to the law. US EPA guidelines for Ide Waste are listed in 40 CFR Parts 261. The product should not be allow water ways, or the soil. | entification and Listing of Hazardous |
| Disposal of container: | Dispose of as unused product. Do not re-use empty containers. | |
| Other considerations: | Observe all federal, state and local regulations when disposing of the | substance. |
| 14. TRANSPORT INFORMATION | | |
| DOT (US) | Non-hazardous for transportation. | |
| ΙΑΤΑ | Non-hazardous for transportation. | |
| IMDG | Non-hazardous for transportation. | |
| | | |

15. REGULATORY INFORMATION

Toxic Substance Control Act (TSCA 8b.): This product is ON the EPA Toxic Substances Control Act (TSCA) inventory.

| CERCLA Hazardo SARA 313 SARA 302 | : | Id Reportable Quantity: Not Listed Not Listed | | | |
|--|------------|---|---|--|--|
| State Regulation | <u>S</u> | | | | |
| State Right-to-Kr | wo | | | | |
| Massachusetts | | Not Listed | | | |
| New Jerse | | Not Listed | | | |
| Pennsylvania | | Not Listed | | | |
| California Propos | sition 65: | Not Listed | | | |
| Other Information | <u>n</u> | | | | |
| NFPA Rating: | | HMIS Classification: | | | |
| Health: | 1 | Health: | 1 | | |
| Flammability: | 0 | Flammability: | 0 | | |
| Instability: | 0 | Physical: | 0 | | |
| International Inve | entories | | | | |
| WHMIS hazard cl EC-No: | ass: | D2B: Materials causing other toxic effects. (Toxic) 240-796-9 | | | |

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TCI chemicals are for research purposes only and are NOT intended for use as drugs, food additives, households, or pesticides. The information herein is believed to be correct, but does not claim to be all inclusive and should be used only as a guide. Neither the above named supplier nor any of its affiliates or 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 chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. All chemical reagents should be handled only by individuals who are familiar with their potential hazards and who have been fully trained in proper safety, laboratory, and chemical handling procedures. Although certain hazards are described herein, we can not guarantee that these are the only hazards which exist. Our SDS are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods since the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated SDS for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective goggles, protective clothing, breathing equipment, face mask, fume hood). For proper handling and disposal, always comply with federal, state and local regulations.