

MATERIAL SAFETY DATA SHEET

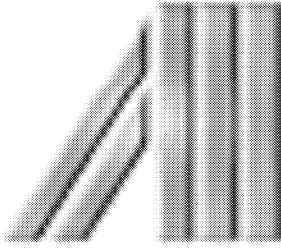
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| First Aid for Eye: | Immediately flush with water for at least 15 minutes, including under eyelids. Seek medical attention if discomfort persists. |
| First Aid for Skin: | Wash thoroughly with soap and water. Remove contaminated clothing and wash before reuse. Seek medical attention if discomfort persists. |
| First Aid for Inhalation: | If large amounts are inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen, and call a physician. |
| First Aid for Ingestion: | If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Seek medical attention for advice about whether to induce vomiting. If possible do not leave individual unattended. |

Section 5. Fire Fighting Measures

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| Flash Point (°F/°C): | 68°F/20°C (tagged closed) |
| Flammable Limit (vol%): | LEL: 2% UEL: 11.4% |
| Auto-ignition Temp. (vol%) | N/A |
| Extinguisher Media: | Use CO ₂ , dry chemical for small fires, or alcohol type aqueous film forming foam. |
| Fire Fighting Instructions: | Wear self-contained breathing apparatus and full protective gear. USE WATER WITH CAUTION. Water spray may be used to keep fire-exposed containers cool. Water may be ineffective in fighting the fire. Fight fire from a safe distance and protected location. |
| Unusual Hazards: | Flammable. When exposed to heat and flame, material is a fire explosion hazard. It may produce toxic products CO, carbon dioxide and oxides of nitrogen. Vapors may cause a flash fire or ignite explosively. Vapors may travel a considerable distance to a source of ignition and flash back. prevent buildup of vapors or gases to explosive concentrations. |

Section 6. Accidental Release Measures

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| Spill or Release Procedures: | Eliminate all sources of heat and ignition. Use absorbent materials for spills and dike it, was spill material into retaining containers. Place containers in a well ventilated area. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations. Keep unnecessary and unprotected personnel from entering. contain and recover liquid when possible. Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e.g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible material such as sawdust. Do not flush to sewer! |
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MATERIAL SAFETY DATA SHEET

US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response center is (800) 424-8802. EU Regulations require the consultation of Directive 98/24/EC. If a leak or spill has not ignited, use water spray to disperse the vapors, to protect personnel attempting to stop leak, and flush spills away from exposure.

Section 7. Handling and Storage

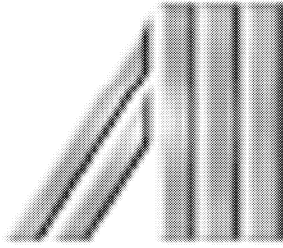
- Handling:** Closed containers exposed to temperatures above (120°F) in transit or storage may develop vapor pressure. Open containers slowly. Ground all metal containers when transferring materials. Wash face and hands thoroughly with soap and water after handling and before eating drinking or smoking.
- Storage:** Store in a cool, well ventilated area away from heat, sparks and flame. Keep containers closed when not in use.
- Explosion Hazard:** Flammable liquid. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.
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Section 8. Exposure Controls / Personal Protective Equipment

- Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eye facility and safety shower. Use process enclosure local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion proof ventilation equipment.
- Personal Protective Equipment:**
- General:** To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR 1910.132), or European Standard EN166 be conducted before using this product. Provide eye wash stations and safety showers. Wear impervious clothing to prevent ANY contact with this product, such as gloves, apron, boots, or whole body suit. Nitrile rubber is better than PVC.
- Skin Protection:** Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact. Neoprene and nitrile rubber are recommended materials.
- Eye Protection:** Wear safety glasses. Wear coverall chemical splash goggles and face shield when the possibility exists for eye and face contact due to splashing or spraying of material.
- Respiratory Protection:** A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain limited circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by nuisance level organic vapor dust masks can be used, however the use of the respirator is limited. Follow OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149.
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Section 9. Physical and Chemical Properties

- Appearance @ 25°C:** Clear, colorless, mobile liquid
- Viscosity (RVT):** Not applicable



MATERIAL SAFETY DATA SHEET

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| Odor @ 25°C: | Fruity pungent mix odor | Vapor Pressure: | 73 mm Hg @ 20°C |
| pH | Not applicable | Vapor Density: | 3.0 |
| Specific Gravity: | Not applicable | Evaporation Rate: | (Butyl Acetate =1): 4.5 |
| Ignition: | Not applicable | % Volatiles: | W/W % : 99+ |
| Boiling Point: | 77°C | | |
| Solubility in Water (20°C) | 8.7% | | |

Section 10. Stability and Reactivity

Stability: Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products:
Carbon Monoxide

Incompatibility (Materials to Avoid):
Oxidizing agent i.e Hydrogen peroxide, Nitric Acid. Perchloric Acid, Chromium Trioxide

Hazardous Polymerization: Will not occur

Conditions to Avoid: Heat, flame, ignition sources and incompatibles.

Section 11. Toxicological Information

Acute Oral Toxicity: No data available

Acute Dermal Toxicity: No data available

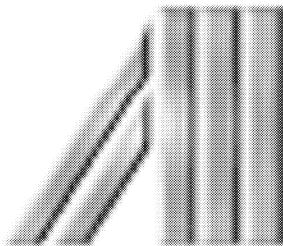
Acute Inhalation: No data available

Mutagenicity: No data available

Section 12. Ecological Information

Biodegradability: When released into the soil, this material is expected to quickly evaporate. When released into the soil, this material may leach into groundwater. When released into the soil, this material may biodegrade to a moderate extent. When released to water, this material is expected to quickly evaporate. When released into the water, this material is expected to have a half-life between 1 and 10 days. This material is not expected to significantly bioaccumulate.

Section 13. Disposable Considerations



MATERIAL SAFETY DATA SHEET

Dispose of diking materials and absorbent in compliance with State, Local and Federal regulations. Residual vapors may explode on ignition; don't not cut, drill or weld on or near the container. Mix with compatible chemical which is less flammable and incinerate. Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved incinerator or disposed in a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements. For EU Member States, please refer to any relevant Community provisions relating to waste. In their absence, it is useful to remind the user that national or regional provisions may be in force.

Section 14. Transportation Information

<DOT Information>

Proper Shipping Name: Flammable liquids, NOS, (ethyl acetate, isopropyl alcohol, 3, UN1993, PGII)
Emergency Response Guidebook (ERG)# : 128

Section 15. Regulatory Information

Federal Regulatory Status:

Resource Conservation & Recover Act (RCRA) Classification:

This product contains the following chemicals considered to be hazardous waste under RCRA (40 CFR 261)

Ethyl Acetate CAS # 141-78-6 RCRA Code: U112

FDA: This product has not been approved by the FDA for use in food packaging and/or other applications as an indirect food additive.

Clean Water Act: This product contains the following chemicals listed under the U.S Clean Water Act Hazardous Substances List: Isobutyl acetate CAS # 110-

Clean Air Act: HAP/ODS: None

Occupational Safety and Health Act: This Product is considered to be a hazardous chemical under the OSHA Hazard Communication Standard. Its hazards are: Immediate (acute) health hazard. Fire Hazard

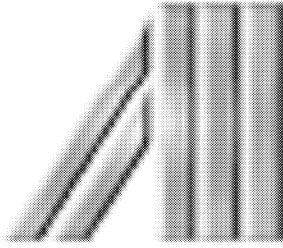
SARA Title III: Section 302: None

SARA Title III: Section 304: This product chemicals regulated under Section 304 as extremely hazardous chemicals for emergency release notification ("CERCLA" List).

Ethyl Acetate CAS # 141-78-6, RQ (Lbs): 5000

Isobutyl acetate CAS # 110-19-0, RQ (Lbs): 5000

SARA Hazard Categories (311/312): Fire Hazard. Immediate (Acute) Health Hazard.



MATERIAL SAFETY DATA SHEET

SARA Title III: Section 313: This product contains chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

Isopropyl Alcohol CAS # 67-63-0

TSCA Section 8(b): Inventory: This product contains chemicals listed on the TSCA inventory or otherwise complies with TSCA premanufacture notification requirements.

State Regulatory Status:

CA Right-to-Know Law:

Ethyl Acetate CAS # 141-78-6, Isopropyl Alcohol CAS # 67-63-3, Isobutyl acetate CAS # 110-19-0

MA Right-to-Know Law:

Ethyl Acetate CAS # 141-78-6, Isopropyl Alcohol CAS # 67-63-3, Isobutyl acetate CAS # 110-19-0

NJ Right-to Know Law:

Ethyl Acetate CAS # 141-78-6, Isopropyl Alcohol CAS # 67-63-3, Isobutyl acetate CAS # 110-19-0

PA Right-to-Know:

Ethyl Acetate CAS # 141-78-6, Isopropyl Alcohol CAS # 67-63-3, Isobutyl acetate CAS # 110-19-0

FL Right-to-Know:

Ethyl Acetate CAS # 141-78-6, Isopropyl Alcohol CAS # 67-63-3, Isobutyl acetate CAS # 110-19-0

MN Right-to-Know:

Ethyl Acetate CAS # 141-78-6, Isopropyl Alcohol CAS # 67-63-3, Isobutyl acetate CAS # 110-19-0

Section 16. Other Information

HMIS:

Health=2

Flammability=3

Reactivity=0