MATERIAL SAFETY DATA SHEET

Johnson Matthey Catalog Chemicals
Aesar Group/Alfa Products
152 Andover Street
Danvers, MA 01923
Emergency Phone-(508) 777-1970

IDENTIFICATION

Product Code: 32240
Product Name: Adipoyl chloride
Formula: CICO(CH2)4COCI
Chemical Nature: Acid chloride
% Activity: 100%

PHYSICAL DATA

Boiling Point: 105-107°C/2mm Hg
Freeze Point: No data
Specific Gravity: 1.26
Vapor Pressure at 20°C: No data
Vapor Density (Air=1): No data
Solubility in H2O: Reacts
Percent Volatiles by Weight: No data
Ionic Nature: No
Appearance and Odor: Dark liquid, pungent odor

HAZARDOUS INGREDIENTS

Material % TLV/PEL
Adipoyl chloride 100% Not established

FIRE AND EXPLOSION HAZARD DATA

Flash Point: >230°F
Autoignition Temperature: Not established
Flammable Limits in Air, % by volume: Lower No data
Upper No data
Extinguishing Media: Non-combustible. DO NOT USE WATER. Use potassium bicarbonate, (urea-based) dry chemical agent such as a MONNEX, carbon dioxide is effective at close range only.
Special Fire Fighting Procedures: No special firefighting procedures needed. Use normal procedures which include wearing NIOSH/MSHA approved self-contained breathing apparatus, flame and chemical resistant clothing; hats, boots and gloves. If without risk, remove material from fire area. Cool container with water from maximum distance.
Unusual Fire and Explosion Hazards: Water hydrolyzes adipoyl chloride, liberating hydrogen chloride, which in contact with metals can generate flammable hydrogen gas.

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HEALTH HAZARD DATA
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Threshold Limit Value: Not established
Effects of Overexposure: Acid chlorides such as adipoyl chloride are extremely irritating to the airway, eyes and skin. Symptoms of exposure include burning sensations, coughing, wheezing, shortness of breath, headache, nausea and vomiting. Eye contact causes pain, tearing, inflammation and possible destruction of the eye. Skin contact will cause severe burns.
Emergency and First Aid Procedures: Remove from exposure. Eyes: Flush with copious amounts of water for at least 15 minutes. Skin: Remove any contaminated clothing. Flood skin with large volumes of water for 15 minutes. Ingestion/Inhalation: Seek prompt, competent medical attention.

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REACTIVITY DATA
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Stability: Stable
Conditions to Avoid: Extreme heat, moisture, sources of ignition
Incompatibility: Water, alcohols, alkali, oxidizers and certain hydrogen-containing materials
Hazardous Decomposition Products: Hydrogen chloride
Hazardous Polymerization: Will not occur
Conditions to Avoid: Not applicable

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SPILL OR LEAK PROCEDURES
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Steps to be Taken if Material is Released or Spilled: Wearing full protective clothing and respiratory protection, eliminate all sources of ignition. Cover spill with dry sand or dry vermiculite, mix well and carefully transfer to a well-marked container. Close container tightly. Submit or retain for disposal.
Waste Disposal Method: Consult state, local, and federal regulations for proper disposal of adipoyl chloride.

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SPECIAL PROTECTION INFORMATION
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Respiratory Protection: NIOSH/MSHA approved high efficiency particulate respirator for ordinary use and self-contained breathing apparatus for emergency use.
Ventilation: Local exhaust: Adequate
Mechanical: Fume hood
Special: Not applicable
Other: Not applicable
Protective Gloves: Rubber
Eye Protection: OSHA approved safety goggles
Other Protective Equipment: Lab coat and apron, flame and chemical resistant coveralls, eyewash capable of sustained flushing, safety drench shower and hygienic facilities for washing.

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SPECIAL PRECAUTIONS
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Precautionary Labeling: Warning! Corrosive liquid!
Other Handling and Storage Conditions: Keep container tightly closed. Store in a cool, dry, well-ventilated area. Wash thoroughly after use. Segregate containers from caustic or basic materials and oxidizing agents. Keep away from moisture.

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.