
INHALATION EXPOSURE: *If headache, irritation, nausea, or drowsiness occurs, remove to fresh air and call a physician.*

EYE CONTACT: *Remove contact lenses. Flush eyes with cool water for at least 15 minutes. Hold eyelids apart while flushing to rinse entire surface of eyes and lids. Call a physician.*

SKIN CONTACT: *Remove contaminated clothing. Wash skin with mild soap and water. If irritation or any other symptoms occur, call a physician.*

INGESTION: *If patient is conscious and can swallow, administer water and call a physician or poison control center immediately. Do not induce vomiting.*

OTHER INSTRUCTIONS: *None.*

V. FIREFIGHTING MEASURES

FLASH POINT (CC, F): *95*

RECOMMENDED FIRE EXTINGUISHING MEDIA: *Carbon-dioxide, foam, or dry chemicals.*

RECOMMENDED PROTECTIVE EQUIPMENT FOR FIREFIGHTERS AND SPECIAL PROCEDURES: *Use of self-contained breathing apparatus with full face piece operated in the positive pressure demand mode when fighting fires. Protective clothing is recommended. Prevent contact with skin and eyes. Cool fire exposed containers.*

UNUSUAL FIRE AND EXPLOSION HAZARDS: *Combustible liquid. Avoid heat, sparks, and open flames.*

HAZARDOUS COMBUSTION PRODUCTS: *Carbon dioxide, carbon monoxide, fumes.*

HAZARDOUS POLYMERIZATIONS: *None occurs.*

VI. ACCIDENTAL RELEASE MEASURES

PROCEDURES IN CASE OF ACCIDENTAL RELEASE, BREAKAGE, OR LEAKAGE:

Ventilate area. Avoid breathing vapor. Avoid contact with skin, eyes and clothing. Pressure demand air supplied respirators should always be worn when the airborne concentration of the contaminant or oxygen is unknown. Otherwise, wear NIOSH approved respiratory protection and other personal protective equipment as appropriate for the potential exposure hazard. Remove any sources of flame or sparks. Contain spill if possible. Absorb spill with vermiculite or other suitable absorbant material. Shovel up material and place in approved disposal container. Dispose of in accordance with current local, state, and

federal laws and regulations.

VII. HANDLING AND STORAGE INFORMATION

PRECAUTIONS TO BE TAKEN IN HANDLING: Avoid breathing vapors. Avoid contact with skin, eyes and clothing. Avoid prolonged or repeated exposure. Wash thoroughly after handling.

STORAGE: Keep tightly closed. Store in cool dry place.

VIII. EXPOSURE CONTROLS AND PROTECTION INFORMATION

THRESHOLD LIMIT VALUE (TLV): Not established.

OSHA PERMISSIBLE EXPOSURE LIMIT (PEL): Not established.

RESPIRATORY PROTECTION: Usually not required.

VENTILATION: Mechanical (General) - meeting ACGIH standards.

PROTECTIVE GLOVES: Rubber gloves.

EYE PROTECTION: Safety glasses.

OTHER PROTECTIVE EQUIPMENT: Safety shower, eye wash.

IX. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Colorless, mobile liquid.

ODOR DESCRIPTION: Vinous odor.

BOILING POINT: 117.7° C

VAPOR PRESSURE (mm Hg @ 20° C): 5.5

VAPOR DENSITY (AIR = 1): 2.6

SPECIFIC GRAVITY @ 25 C (WATER = 1): 0.81

SOLUBILITY IN WATER: Insoluble

X. STABILITY AND REACTIVITY

CONDITIONS/MATERIALS TO AVOID: Normally stable under proper conditions. Avoid excessive heat, open flames, or other sources of ignition. Avoid contact with strong acids, alkalies, and/or oxidizing agents.

XI. TOXICOLOGICAL INFORMATION

LD 50 ORAL (RAT): 790 mg/kg

LC 50 INHALATION (RAT): 8000 ppm/4H

LD 50 INTRAVENOUS (RAT): 310 mg/kg

LD 50 INTRAPERITONEAL (MOUSE): 603 mg/kg

LD 50 INTRAVENOUS (MOUSE): 377 mg/kg
LD 50 DERMAL (RABBIT): 3400 mg/kg

XII. ECOLOGICAL INFORMATION

Not found

XIII. DISPOSAL CONSIDERATION

WASTE DISPOSAL METHOD: Under RCRA, it is the responsibility of the user of the product to determine at the time of disposal, whether the product meets RCRA criteria for hazardous waste.

XIV. TRANSPORTATION INFORMATION

TRANSPORTATION BY GROUND, AIR OR VESSEL....
PROPER SHIPPING NAME: BUTANOLS
HAZARD CLASS: 3
IDENTIFICATION NUMBER: UN1120
PACKING GROUP: III
PRIMARY LABEL REQUIRED: FLAMMABLE LIQUID
PRIMARY PLACARD REQUIRED: FLAMMABLE LIQUID
STORAGE SEGREGATION: Usual precautions for combustible liquids.

XV. OTHER INFORMATION

Containers should be either reconditioned by CERTIFIED firms or properly disposed of by APPROVED firms. Disposal of containers should be in accordance with applicable laws and regulations. "Empty" drums should not be given to individuals. Misuse of empty containers can be hazardous. Empty containers can be hazardous if used to store toxic, flammable, or reactive material. Cutting or welding of empty containers may cause fire, explosion, or toxic fumes from residues. Do not pressurize or expose to open flame or heat. Keep containers closed and drum bungs in place.

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