



Tel: 514-956-7503
Fax: 514-956-7504
Internet: www.megs.ca
Email : support@megs.ca

Montreal St-Laurent Tel : 514-956-7503
Ottawa Nepean Tel : 613-226-4228
Quebec Quebec Tel : 418-834-7447
MSDS: 1.3 Butadiene

PRODUCT INFORMATION

PRODUCT: 1,3-Butadiene
TRADE NAME: 1,3-Butadiene
CHEMICAL NAME: Butadiene; 1,3-Butadiene
SYNONYMS: Biethylene, Erythrene, Vinylethylene
FORMULA: C₄H₆
CHEMICAL FAMILY: Diolefin
SUPPLIER'S NAME: MEGS Inc.
SUPPLIER'S ADDRESS: 2675 De Miniac
Ville St-Laurent, Qc, H4S 1E5
EMERGENCY PHONE NUMBER: (514) 956-7503
MOLECULAR WEIGHT: 54.10
PRODUCT USE: Various
**PRODUCT IDENTIFICATION UN 1010
NUMBER:**

HAZARDOUS INGREDIENTS

CHEMICAL ID	CONCENTRATION	CAS #	LD(50)	LC(50)
1,3-Butadiene	100%	106-99-0	Orl-rat 5480 mg/kg	Inhl-rat 285 mg/m ³ /2 h

PHYSICAL DATA

PHYSICAL STATE: Gas and liquid under pressure
APPEARANCE: Colorless gas
ODOR: Sharp, aromatic odor
ODOR THRESHOLD: Unknown
SPECIFIC GRAVITY (H₂O = 1): 0.651
VAPOR PRESSURE: 203 kPa @ 15°C

VAPOR DENSITY (air = 1): 1.94

EVAPORATION RATE: Unknown

BOILING POINT: -4.5°C

FREEZING POINT: -108.9°C

pH: Not applicable

GAS DENSITY: 2.32 kg/m³ @ 15°C, 101.3 kPa

COEFFICIENT OF WATER/OIL: Slightly soluble in water

DISTRIBUTION:

FIRE OR EXPLOSION HAZARD

CONDITIONS OF FLAMMABILITY: Flammable in air within a specific range

MEANS OF EXTINCTION: Water, carbon dioxide, dry chemical. "Stop flow of gas before extinguishing fire".

FLASHPOINT AND METHOD OF DETERMINATION: -76°C cc

UPPER EXPLOSION LIMIT (% BY VOL): 12

LOWER EXPLOSION LIMIT (% BY VOL): 2

AUTO-IGNITION TEMPERATURE: 420°C

FLAMMABILITY CLASSIFICATION: Class 1, Group D

HAZARDOUS COMBUSTION PRODUCTS: None

EXPLOSION DATA: Yes with oxidizers

SENSITIVITY TO STATIC DISCHARGE: Yes

REACTIVITY DATA

CHEMICAL STABILITY: Highly reactive and easily polymerizes.

INCOMPATIBLE MATERIALS: Oxidizers

CONDITIONS OF REACTIVITY: Hazardous polymerization may occur. Forms explosive peroxides in air and in the absence of inhibitor therefore, shipped with an inhibitor

HAZARDOUS DECOMPOSITION: None

PRODUCTS:

TOXICOLOGICAL PROPERTIES

ROUTES OF ENTRY:

SKIN CONTACT: It is irritating to mucous membranes and the skin. Due to its rapid rate of evaporation, it can cause tissue freezing or frostbite on dermal contact.

SKIN ABSORPTION: None

EYE: See Skin Contact, above

INHALATION: Moderate concentrations cause dizziness, drowsiness, blurring of vision and nausea. In higher concentrations, it is an anesthetic and can cause respiratory paralysis and death. Inhalation of a 1% concentration in air has been reported to have had no effect on the respiration or blood pressure. The pulse rate, however, may quicken.

INGESTION: None

ACUTE OVER EXPOSURE EFFECTS: It is an asphyxiant and anesthetic causing respiratory paralysis in high concentrations. Repeated exposures have given no indication of cumulative action. Vapors cause skin rash and are irritating to the eyes and mucous membranes. Frostbite effects are a change in color of the skin to gray or white possibly followed by blistering.

CHRONIC OVER EXPOSURE EFFECTS: ACGIH (1995-1996), Definition A2 of Appendix A describes 1,3 Butadiene as a "Suspected Human Carcinogen".

EXPOSURE LIMITS: TWA = 2 molar ppm (ACGIH 1995-1996)

IRRITANCY OF PRODUCT: Vapors are irritating to skin, eyes and mucous membranes

SENSITIZATION TO MATERIAL: None known

CARCINOGENICITY, REPRODUCTIVE EFFECTS: Suspected

TERATOGENICITY, MUTAGENICITY: Suspected

TOXICOLOGICALLY SYNERGISTIC PRODUCTS: None known

PREVENTIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT: Plastic or rubber gloves. Safety goggles or glasses. Safety shoes, safety shower and eyewash "fountain".

SPECIFIC ENGINEERING CONTROLS: 1,3-Butadiene is noncorrosive and may

be used with any common structural material.

LEAK AND SPILL PROCEDURES: EVACUATE ALL PERSONNEL FROM AFFECTED AREA.

Use appropriate protective equipment. If leak is in user's equipment, be certain to purge piping with an inert gas prior to attempting repairs. If leak is on container or container valve, contact the closest MEGS location.

WASTE DISPOSAL: Do not attempt to dispose of waste or unused quantities. Return in the shipping container properly labeled, with any valve outlet plugs or caps secured and valve protection cap in place to MEGS for proper disposal. For emergency disposal, contact the closest MEGS location.

HANDLING PROCEDURES AND EQUIPMENT: USE ONLY IN WELL-VENTILATED AREAS.

Valve protection caps must remain in place unless container is secured with valve outlet piped to the point of use. Do not drag, slide or roll cylinders. Use a suitable hand truck for cylinder movement. Use a pressure reducing regulator when connecting cylinder to lower pressure piping or systems. Do not heat cylinder by any means to increase the discharge rate of product from the cylinder. Use a check valve or trap in the discharge line to prevent hazardous back flow into the cylinder. Do not tamper with (valve) safety device. Close valve after each use and when empty.

STORAGE REQUIREMENTS: Protect cylinders from physical damage. Store in cool, dry, well-ventilated area of non combustible construction away from heavily trafficked areas and emergency exits. Do not allow the temperature where cylinders are stored to exceed 52°C. Cylinders must be stored upright and firmly secured to prevent falling or being knocked over. Full and empty cylinders should be segregated. Use a "first in - first out" inventory system to prevent full cylinders being stored for excessive periods of time. Post "No Smoking or Open Flames" signs in the storage or use area. There should be no sources of ignition in the storage or use area.

TDG CLASSIFICATION: 2.1

WHMIS CLASSIFICATION: A, B, D2

SPECIAL SHIPPING INFORMATION: Always secure cylinders in an upright position before transporting them. NEVER transport cylinders in trunks of vehicles, enclosed vans, truck cabs or in passenger compartments. Transport cylinders secured in open flatbed or in open pick-up type vehicles.

FIRST AID MEASURES

SPECIFIC FIRST AID PROCEDURES: PROMPT MEDICAL ATTENTION IS MANDATORY IN ALL CASES OF OVEREXPOSURE TO 1,3-BUTADIENE. RESCUE PERSONNEL SHOULD BE EQUIPPED WITH SELF-CONTAINED BREATHING APPARATUS AND BE COGNIZANT OF EXTREME FIRE AND EXPLOSION HAZARD.

INHALATION: Conscious persons should be assisted to an uncontaminated area and inhale fresh air. Quick removal from the contaminated area is most important. Unconscious persons should be moved to an uncontaminated area, given assisted resuscitation and supplemental oxygen. Further treatment should be symptomatic and supportive.

EYE CONTACT: PERSONS WITH POTENTIAL EXPOSURE TO 1,3-BUTADIENE SHOULD NOT WEAR CONTACT LENSES.

SKIN CONTACT: Dermal Contact or Frostbite: Remove contaminated clothing and flush affected areas with lukewarm water. DO NOT USE HOT WATER. A physician should see the patient promptly if the cryogenic "burn" has resulted in blistering of the dermal surface or deep tissue freezing.

PREPARATION INFORMATION

PREPARED BY: Safety Department

DATE PREPARED: 01/01/1999

LAST REVISION DATE: 05/21/2002

THE INFORMATION, RECOMMENDATIONS AND DATA CONTAINED IN THIS DOCUMENT ARE INTENDED TO BE USED BY PROPERLY TRAINED AND QUALIFIED PERSONNEL ONLY AND AT THEIR SOLE RISKS AND DISCRETION. THE INFORMATION, RECOMMENDATIONS AND DATA HEREIN CONTAINED ARE DERIVED FROM SOURCES WHICH WE BELIEVE TO BE RELIABLE. HOWEVER, MEGS INC. MAKES NO REPRESENTATION AND GIVES NO WARRANTY OF ANY KIND WHATSOEVER WITH RESPECT TO THEIR ACCURACY OR COMPLETENESS AND ASSUMES NO LIABILITY FOR DAMAGES OR LOSS ARISING DIRECTLY OR INDIRECTLY FROM THEIR USE, WHETHER PROPER OR IMPROPER.