

Material Safety Data Sheet



Zep Inc.
1310 Seaboard Industrial Blvd.
Atlanta, GA 30318
1-877-793-7776

Section 1. Chemical Product and Company Identification

Product name BROMINATED SOLVENT
DEGREASER
Product use Solvent Degreaser
Product code R191
Date of issue 08/18/09 **Supersedes**

Emergency Telephone Numbers

For MSDS Information:
Compliance Services 1-877-793-7776

For Medical Emergency
(877) 541-2016 Toll Free - All Calls Recorded

For Transportation Emergency
CHEMTREC: (800) 424-9300 - All Calls Recorded
In the District of Columbia (202) 483-7616

Prepared By

Compliance Services
1420 Seaboard Industrial Blvd.
Atlanta, GA 30318

Section 2. Hazards Identification

Emergency overview

WARNING

CAUSES EYE AND SKIN IRRITATION.

HARMFUL IF INHALED OR ABSORBED THROUGH SKIN.

NOTE: MSDS data pertains to the product as delivered in the original shipping container(s). Risk of adverse effects are lessened by following all prescribed safety precautions, including the use of proper personal protective equipment.

*Hazard Determination System (HDS): Health, Flammability, Reactivity



Acute Effects

Routes of Entry

Dermal contact. Eye contact. Inhalation.

Eyes

Causes eye irritation. Inflammation of the eye is characterized by redness, watering and itching.

Skin

Causes skin irritation. Harmful if absorbed through the skin. Direct contact may cause irritation and redness. Prolonged or repeated contact may dry skin and cause irritation.

Inhalation

Over-exposure by inhalation may cause respiratory irritation. Can cause central nervous system (CNS) depression. Inhalation of vapor/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea.

Ingestion

Harmful if swallowed. Aspiration hazard if swallowed. Can enter lungs and cause damage.

Chronic effects

Inhalation of spray mists or vapors may cause central nervous system depression characterized by headache, dizziness, nausea, stupor, weakness and/or numbness and tingling in the extremities (medical term - peripheral neuropathy). The substance may be toxic to kidneys, lungs, liver, peripheral nervous system and central nervous system (CNS).

Carcinogenicity Ingredients: Not listed as carcinogen by OSHA, NTP or IARC.

Product/ingredient name

Not available.

Additional Information: See Toxicological Information (Section 11)

Section 3. Composition/Information on Ingredients

	<u>CAS number</u>	
1-BROMOPROPANE; n-propyl bromide	106-94-5	>95
t-butyl alcohol	75-65-0	<5
METHYLAL; dimethoxymethane	109-87-5	<5

Section 4. First Aid Measures

Eye Contact

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Skin Contact

Flush affected skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Wash clothing before reuse. Get medical attention if symptoms occur.

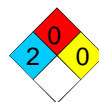
Inhalation

Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention if adverse health effects persist or are severe.

Ingestion Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if adverse health effects persist or are severe.

Section 5. Fire Fighting Measures

National Fire Protection Association (U.S.A.)



Flash Point Not available.

Flammable Limits Lower: 4.6% Upper: 8.5%

Flammability Non-flammable.

Fire hazard Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Vapor will form a flammable mixture in a narrow concentration range of 4.6% to 8.5% by volume in air. May emit toxic fumes under fire conditions.

Fire-Fighting Procedures Use an extinguishing agent suitable for the surrounding fire. Do not release runoff from fire to sewers or waterways. Fire-fighters should wear appropriate protective equipment.

Section 6. Accidental Release Measures

Spill Clean up Put on appropriate personal protective equipment (see section 8). Absorb with an inert material and place in an appropriate waste disposal container.

Section 7. Handling and Storage

Handling Put on appropriate personal protective equipment (see section 8). Avoid contact with eyes, skin and clothing. Do not breathe vapor or mist. Use only with adequate ventilation. Do not store or consume food, drink or tobacco in areas where they may become contaminated with this material. Empty containers may contain harmful, flammable/combustible or explosive residue or vapors. Do not cut, grind, drill, weld, reuse or dispose of containers unless adequate precautions are taken against these hazards. Wash thoroughly after handling.

Storage Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Store and use away from heat, sparks, open flame or any other ignition source. Store between the following temperatures: 40°F - 120°F (4.4°C - 49°C). Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Keep out of the reach of children.

Section 8. Exposure Controls/Personal Protection

Product name

1-BROMOPROPANE; n-propyl bromide

t-butyl alcohol

METHYLAL; dimethoxymethane

Exposure limits

US EPA (United States).

TWA: 25 ppm 8 hour(s).

Supplier (United States).

TWA: 100 ppm 8 hour(s).

ACGIH TLV (United States).

TWA: 100 ppm

OSHA PEL (United States).

TWA: 1000 ppm

Personal Protective Equipment (PPE)

Eyes Recommended: Splash goggles.

Body Recommended: Chemical-resistant gloves. Viton

Respiratory Use with adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.



Section 9. Physical and Chemical Properties

Physical State Liquid.

pH Not applicable.

Boiling Point 70°C (158°F)

Specific Gravity 1.35 (Water = 1)

Solubility Very slightly soluble in the following materials: cold water and hot water.

Color Clear. Colorless.

Odor Characteristic. (Strong.)

Vapor Pressure 18.5 kPa (139 mm Hg) (at 20°C)

Vapor Density >1 (Air = 1)

Evaporation Rate >1 compared with Butyl acetate.

VOC (Consumer) 1313 (g/l) 10.96 lb/gal 100.00%

Section 10. Stability and Reactivity

Stability and Reactivity	The product is stable.
Incompatibility	Reactive or incompatible with the following materials: natural rubber (latex), oxidizing materials, metals, acids and alkalis. Prolonged contact with aluminum, magnesium and zinc.
Hazardous Polymerization	Will not occur.
Hazardous Decomposition Products	Carbon dioxide (CO ₂), Carbon monoxide and Hydrogen Bromide (HBr).

Section 11. Toxicological Information**Acute Toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
1-Bromopropane	LD50 Oral	Rat	4260 mg/kg	-
	LC50 Inhalation Vapor	Rat	14374 ppm	4 hours
2-methyl-2-propanol	LD50 Oral	Rat	2743 mg/kg	-
	LC50 Inhalation Vapor	Rat	>10000 ppm	4 hours
METHYLAL	LD50 Oral	Rat	>7950 mg/kg	-
	LD50 Oral	Rabbit	5708 mg/kg	-

Section 12. Ecological Information

Environmental Effects No known significant effects or critical hazards.

Aquatic Ecotoxicity

Not available.

Section 13. Disposal Considerations**Waste Information**

Waste must be disposed of in accordance with federal, state and local environmental control regulations. Consult your local or regional authorities for additional information.

Waste Stream Code: - (Not applicable.)
Classification: - (Non-hazardous waste)

Section 14. Transport Information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label
DOT Classification	None.	Not a DOT controlled material (United States).			
IMDG Class	Not determined.				

NOTE: DOT classification applies to most package sizes. For specific container size classifications or for size exceptions, refer to the Bill of Lading with your shipment.

PG* : Packing group

Section 15. Regulatory Information**U.S. Federal Regulations**

SARA 313 toxic chemical notification and release reporting:

Product name

No products were found.

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: No products were found.

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

All Components of this product are listed or exempt from listing on TSCA Inventory.

State Regulations**California Prop 65**

WARNING: This product contains a chemical or chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.: 1-Bromopropane

Section 16. Other Information

*To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its 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 materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.*

*NOTE: Hazard Determination System (HDS) ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although these ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HDS ratings are to be used with a fully implemented program to relay the meanings of this scale.