

# Material Safety Data Sheet



## HYPER SOLVE™ Metal Cleaner, Degreaser & Flux Remover

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**FOR CHEMICAL EMERGENCY**  
Call INFOTRAC  
800/535-5053 (24 HOURS)

### Section I: Product Identification

Product name: Hypersolve™  
Synonym: Alkyl Bromide  
Molecular Formula: See Section II

### The “Plain English” Section

Material Safety Data Sheets can be confusing. Federal law requires us to print a great deal of technical information, which probably won't help the non-scientist. ECOLINK includes this “PLAIN ENGLISH” section, written to address the questions and concerns of the average person. If you have additional health, safety or product questions, don't hesitate to call us at 800/886-8240.

**Health Hazards:** HYPER SOLVE™ is an industrial chemical. We call it “environmentally preferred” because it is intended to replace products that are more hazardous, (Trichloroethylene, Methylene Chloride, etc.). This does not mean that it is harmless. It is strong enough to remove tough industrial soils, so it can irritate your skin. We suggest you wear gloves, and avoid extended exposure to unprotected skin. Don't get it in your eyes, or breath large amounts of the vapor, (it will dry out your nasal passages). Used on a rag or from a spray bottle, the product won't produce fumes in any great quantity, (don't spray this material under high pressure without adequate ventilation). For more exposure and first aid information, please read through this MSDS.

**Flashpoint:** HYPER SOLVE™ does not have a flashpoint. Under virtually all industrial circumstances and conditions, this material will not burn, (under exactly the right conditions, it can be made to ignite). Combustion in ordinary use isn't a big concern but if you want to discuss a specific application, please call us. We do not recommend using this, or any other industrial solvent, around welding or hot work areas.

**Disposal:** HYPER SOLVE™ is a brominated solvent. Liquid waste that is captured after the cleaning process must be disposed of according to certain specific guidelines. Additionally, once this material is contaminated with whatever you are cleaning, the resulting mixture may fall under a hazardous classification, depending on whether or not the material you are cleaning is hazardous. If you aren't sure how to dispose of this material, give us a call and we will help you make the right decisions.

### Section II: Chemical or Hazardous Components

Chemical Name	n - Propyl Bromide
CAS No.	106-94-5
Approx. wt.%	>95%
Exposure	OSHA -PEL – N/E MREL – 100 PPM 8 hr. TWA*

(\* ) Manufacturer's recommended exposure limits.

Chemical Name	1,2 - Butylene Oxide
CAS No.	106-88-7
Approx. wt. %	<1%
Exposure	ACGIH-TLV-TWA – N/E OSHA-PEL-TWA – N/E

Chemical Name	Dimethoxymethane
CAS No.	109-87-5
Approx. wt. %	<5%
Exposure	Y (Hazardous) OSHA-PEL-TWA - 1000 ppm ACGIH TLV TWA -1000 ppm

Chemical Name	t - Butanol
CAS No.	75-65-0
Approx. wt. %	<5%
Exposure	Y (Hazardous) OSHA-PEL-TWA - 100 ppm ACGIH TLV TWA -100 ppm

1,2-Butylene Oxide and t-Butanol are subject to the reporting requirements of Section 313. 1,3 Butylene Oxide is a CERCLA regulated material, RQ 100 lbs.

n-Propyl Bromide is listed as a reproductive toxin under the California Safe Drinking Water Act (Proposition 65)

ALL MATERIALS IN PRODUCT ARE TSCA LISTED

DOT regulated: No

### Section III: Physical Data

Appearance & Odor:	Clear, colorless liquid with characteristic odor.
Boiling Point:	160° F (71° C)
Evaporation Rate (nBuAc=1):	6.0
Percent Volatile:	100%
Solubility in Water:	.25g /100 ml @ 20°C
Specific Gravity:	1.35
Vapor Density (AIR=1):	~4.3
Vapor Pressure:	111 mm Hg @ 20°C

## Section IV: Fire and Explosion Hazard Data

Flash Point (Method): None (TCC)

Flammable Limits:  
LEL ~ 3.8%  
UEL ~ 7.5%

Extinguishing Media:  
All conventional media are suitable.

Special Fire Fighting Procedures:  
Keep fire exposed containers cool with water. Fire fighters should wear self-contained breathing apparatus with a full face piece operated in the positive pressure demand mode with appropriate gear and chemical resistant personal protective equipment.

Unusual Fire & Explosion Hazards:  
Material forms a flammable mixture with air in a narrow flammability range (3.8% – 7.5% by volume). Containers exposed to flame or high heat may explode. In fire, toxic gases may be released. Use water to cool containers exposed to fire.

## Section V: Reactivity Data

Stability: Stable

Conditions to Avoid:  
Sources of ignition such as sparks, hot spots, welding, flames and cigarettes. Ignition/flash may result if concentration of product is in the flammable range. (See section IV for LEL and UEL values.)

Incompatibility (Materials to Avoid):  
Not compatible with certain plastics and rubber. Test all non-metals prior to use. Avoid strong oxidizers, acids and bases, acid chlorides, and anhydrides.

Hazardous Decomposition: May form hydrogen bromide, and oxides of carbon.

Hazardous Polymerization: Will not occur.

## Section VI: Health Hazard Data

Primary Routes of Exposure:  
Oral, Inhalation, & Skin

Ingestion:  
Swallowing large amounts may be harmful by causing gastrointestinal irritation.

Inhalation:  
Breathing large amounts may be harmful by causing nose, throat, and respiratory tract irritation and affecting the central nervous system by causing drowsiness, dizziness, and/or possible unconsciousness. Chemical burns are possible.

Eyes:  
Irritant. Liquid contact will irritate eyes and may cause stinging, tearing, and redness. Chemical burns are possible.

Skin or Contact:  
May cause mild irritation of redness and burning. Chemical burns are possible.

May aggravate pre-existing diseases of the skin, liver, kidney and respiratory system.

Long-term overexposure may cause effects of the lung, kidney, liver, urinary blood, bone marrow, heart, eye, nervous and reproductive systems.

Notes: This material is a halogenated alkane. Long term overexposure, (without adequate ventilation and/or protective equipment), may cause lung, kidney, liver, urinary, blood, bone marrow, heart, eye, central nervous system, reproductive and fertility effects. The minor ingredient, 1,2-butylene oxide is classified by IARC as a Group 3 material, which exhibits limited evidence of carcinogenicity in experimental animals and no human data.

### First Aid:

Ingestion: Seek medical attention immediately. If individual is drowsy or unconscious, do not give anything by mouth; place individual on left side with head down. If unconscious, give 1-2 glasses of water. Contact medical facility or poison control center for advice on whether to induce vomiting.

Inhalation: Remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, perform artificial respiration. Keep person warm and quiet. Seek medical attention.

Eyes: Irrigate immediately with water for at least 15 minutes. Get medical attention if irritation persists.

Skin: Wash with soap and water. Thoroughly clean contaminated clothes and shoes before re-use. If symptoms persist, seek medical attention.

Carcinogen: NTP – Not Listed  
IARC Monographs – None  
OSHA REGS – NOT REGULATED

## Section VII: Precautions for Safe Handling

HMIS Information:  
Health – 2 / Reactivity – 0  
Flammability – 1 Personal Protection – X

HMIS Definition:  
0 – Minimal 1 – Slight 2 – Moderate 3 – Serious 4 – Extreme  
“/” in the Health Category denotes material does not target any major organs.  
“\*” in the Health Category denotes material may target certain organs.  
Personal Protection “X” means “Ask your safety specialist for handling instructions.”

Eye Protection  
Chemical safety glasses and splash protection required.

Protective Gloves:  
Viton or Norfoil are recommended (contact your local glove supplier.) Nitrile or butyl rubber provide splash protection only.

Respiratory Protection:  
Not required under conditions of normal use when ventilation is adequate. If vapor mist is present, use NIOSH certified organic vapor mask.

Ventilation: Local exhaust/hood or fan may be used; adequate ventilation is extremely important.

Other Protective Clothing: None required under normal use.

Work Practices: All equipment should be grounded. Proper ventilation is required. Avoid breathing concentrated

vapors/fumes. Treat this chemical with respect and follow all MSDS instructions.

## Section VIII: Control Measures

Small Spill: Absorb liquid on vermiculite, floor absorbent, or other inert absorbent material and place in suitable labeled containers for disposal.

Large Spill: Ventilate contaminated area. Eliminate all ignition sources, (flares, flames including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until clean up has been completed. Stop spill at source. Prevent from entering drains, sewers, streams, etc. If runoff occurs, notify authorities as required. Pump or vacuum transfer spilled product to clean containers for recovery. Transfer contaminated absorbent, soil and other materials to containers for disposal.

Waste Disposal Method: HYPERSOLVE™ may be disposed of as an industrial waste in a manner acceptable to good waste management practices and in compliance with applicable local, state and federal regulations.

Precautions To Be Taken In Handling & Storing: Material should be stored in a cool, dry, well-ventilated area. Aerosol containers may explode when exposed to temperatures at or above 120°F. Since empty containers retain product residues, all hazard precautions given in the data sheet must be observed. All metal pails or drums should be grounded and/or bonded when material is transferred. Any use of this product in elevated temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions. Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperatures may result in ignition. Keep containers tightly closed.

Other Precautions: Keep this and all chemicals out of the reach of children.

## Section IX: Part Numbers & Packaging

<u>Product Name</u>	<u>Part No.</u>	<u>Packaging</u>	<u>National Stock No.</u>
Hypersolve™	0338-55	55 Gal Drum	6850-01-450-6160
Hypersolve™	0338-5	5 Gal Pail	6850-01-450-6162
Hypersolve™	0338-1	4 x 1 Gal Case	6850-01-450-6165

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END OF MSDS