



# SAFETY DATA SHEET

## Harvard Chemical Research, Inc.

Issue Date 19-Jun-2014

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Version 1

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

#### Product identifier

Product Name DE-ZOV-ALL

#### Other means of identification

Product Code 504  
Synonyms None

#### Recommended use of the chemical and restrictions on use

Recommended Use D-Limonene Spotter & Cleaner  
Uses advised against No information available

#### Details of the supplier of the safety data sheet

##### Manufacturer Address

Harvard Chemical Research, Inc., 3595 Zip Industrial Blvd., Atlanta, GA 30354

#### Emergency telephone number

Company Phone Number 1-404-761-0657  
24 Hour Emergency Phone Number 800-424-9300  
Emergency Telephone Chemtrec 1-800-424-9300

### 2. HAZARDS IDENTIFICATION

#### Classification

##### **OSHA Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Flammable liquids	Category 4

#### Label elements

#### **Emergency Overview**

##### **Warning**

##### **Hazard statements**

Causes skin irritation  
Causes serious eye irritation  
Combustible liquid

**Appearance** Clear or Amber**Physical state** liquid**Odor** Orange**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
 Wear protective gloves and eye protection.  
 Keep away from heat/sparks/open flames/hot surfaces. — No smoking

**Precautionary Statements - Response**

Specific treatment (see .? on this label)  
 IF ON SKIN: Wash with plenty of soap and water  
 If skin irritation occurs: Get medical advice/attention  
 Take off contaminated clothing and wash before reuse  
 In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction

**Precautionary Statements - Storage**

Store in a well-ventilated place. Keep cool

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)****Other Information**

- May be harmful if swallowed
  - May be harmful in contact with skin
- Unknown Acute Toxicity                      % of the mixture consists of ingredient(s) of unknown toxicity

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%	Trade Secret
Ethylene Glycol Monobutyl Ether	111-76-2	<25	*

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

### 4. FIRST AID MEASURES

**First aid measures**

<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
<b>Skin Contact</b>	Rinse with clear water.
<b>Inhalation</b>	Remove to fresh air. If breathing does not return to normal, seek medical attention.
<b>Ingestion</b>	Immediately drink large quantities of water. Get medical attention. Do not induce vomiting.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** No information available.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

**Suitable extinguishing media**

Use water spray or fog, foam, dry chemical or carbon dioxide.

**Unsuitable extinguishing media** Caution: Use of water spray when fighting fire may be inefficient.

**Specific hazards arising from the chemical**

Fumes produced under fire conditions are toxic and irritating.

**Hazardous combustion products** Heated drums may explode.

**Explosion data**

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

**Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Local exhaust use explosion-proof ventilation as required to control vapor concentration.

**Environmental precautions**

**Environmental precautions** See Section 12 for additional ecological information.

**Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** For large spills, eliminate potential sources of ignition. For small spills, soak up with noncombustible absorbent and place in drums for disposal. Flush area with water to remove trace residue. Collect flush solutions for disposal.

## 7. HANDLING AND STORAGE

**Precautions for safe handling**

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep container closed when not in use. Keep away from oxidizing materials. Keep away from flames. Keep out of reach of children.

**Incompatible materials** Strong acids. OXIDIZERS.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters****Exposure Guidelines**

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ethylene Glycol Monobutyl Ether 111-76-2	TWA: 20 ppm	TWA: 50 ppm TWA: 240 mg/m <sup>3</sup> (vacated) TWA: 25 ppm (vacated) TWA: 120 mg/m <sup>3</sup> (vacated) S* S*	IDLH: 700 ppm TWA: 5 ppm TWA: 24 mg/m <sup>3</sup>

**Appropriate engineering controls****Engineering Controls**

Showers  
Eyewash stations  
Ventilation systems.

**Individual protection measures, such as personal protective equipment****Eye/face protection**

Tight sealing safety goggles.

**Skin and body protection**

Wear Neoprene or protective rubber gloves. Do not wear tennis shoes or other porous or fabric footwear while applying this product, as the product will saturate them and may burn your skin. Wear water/solvent proof boots and keep your feet out of the product.

**Respiratory protection**

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**General Hygiene Considerations**

Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

Physical state	liquid	Odor	Orange
Appearance	Clear	Odor threshold	No information available
Color	Clear or Amber		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	6.5	
Melting point/freezing point	No information available	
Boiling point / boiling range	100 >212°F	
Flash point	90 194°F	
Evaporation rate	>1	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	>1	
Specific Gravity	1	
Water solubility	Miscible	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	

Dynamic viscosity	No information available
Explosive properties	No information available
Oxidizing properties	No information available

**Other Information**

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Density	7.58
Bulk density	No information available

**10. STABILITY AND REACTIVITY****Reactivity**

No data available

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of Hazardous Reactions**

None under normal processing.

**Hazardous polymerization** Hazardous polymerization does not occur.

**Conditions to avoid**

Extremes of temperature and direct sunlight.

**Incompatible materials**

Strong acids. OXIDIZERS.

**Hazardous Decomposition Products**

Carbon monoxide. Carbon dioxide (CO<sub>2</sub>). Unidentified organic compounds may be formed during combustion.

**11. TOXICOLOGICAL INFORMATION****Information on likely routes of exposure**

<b>Product Information</b>	No data available
<b>Inhalation</b>	Irritation and difficulty in breathing.
<b>Eye contact</b>	Severely irritating to eyes.
<b>Skin Contact</b>	Irritating to skin.
<b>Ingestion</b>	Gastric pain and vomiting.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Ethylene Glycol Monobutyl Ether 111-76-2	= 470 mg/kg ( Rat )	= 99 mg/kg ( Rabbit )	= 450 ppm ( Rat ) 4 h

**Information on toxicological effects**

**Symptoms** No information available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Sensitization** No information available.

**Germ cell mutagenicity** No information available.  
**Carcinogenicity** No information available.

Chemical Name	ACGIH	IARC	NTP	OSHA
Ethylene Glycol Monobutyl Ether 111-76-2	A3	Group 3	-	-

**Reproductive toxicity** No information available.  
**STOT - single exposure** No information available.  
**STOT - repeated exposure** No information available.  
**Aspiration hazard** No information available.

#### **Numerical measures of toxicity - Product Information**

The following values are calculated based on chapter 3.1 of the GHS document .

### **12. ECOLOGICAL INFORMATION**

#### **Ecotoxicity**

48% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Ethylene Glycol Monobutyl Ether 111-76-2	-	2950: 96 h Lepomis macrochirus mg/L LC50 1490: 96 h Lepomis macrochirus mg/L LC50 static	1000: 48 h Daphnia magna mg/L EC50 1698 - 1940: 24 h Daphnia magna mg/L EC50

#### **Persistence and degradability**

No information available.

#### **Bioaccumulation**

No information available.

Chemical Name	Partition coefficient
Ethylene Glycol Monobutyl Ether 111-76-2	0.81

**Other adverse effects** No information available

### **13. DISPOSAL CONSIDERATIONS**

#### **Waste treatment methods**

**Disposal of wastes** Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated packaging** Do not reuse container.

### **14. TRANSPORT INFORMATION**

**DOT** Not regulated

## 15. REGULATORY INFORMATION

### International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Does not comply
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

### Legend:

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

### US Federal Regulations

#### SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	SARA 313 - Threshold Values %
Ethylene Glycol Monobutyl Ether - 111-76-2	1.0

#### SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

#### CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

#### CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

### US State Regulations

#### California Proposition 65

This product does not contain any Proposition 65 chemicals

#### U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Ethylene Glycol Monobutyl Ether 111-76-2	X	X	X

#### U.S. EPA Label Information

EPA Pesticide Registration Number Not Applicable

**16. OTHER INFORMATION**

<b><u>NFPA</u></b>	Health hazards 0	Flammability 0	Instability 0	Physical and Chemical Properties -
<b><u>HMIS</u></b>	Health hazards 2	Flammability 2	Physical hazards 0	Personal protection X

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**Revision Note**

No information available

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**