

# SAFETY DATA SHEET

Preparation Date: 5/2/2014

Revision Date: 4/26/2018

Revision Number: G2

## 1. IDENTIFICATION

### Product identifier

**Product code:** HP632  
**Product Name:** ETHER, EXCEEDS A.C.S. SPECIFICATIONS, HPLC GRADE

### Other means of identification

**Synonyms:** Diethyl ether  
Diethyl oxide  
Ethyl oxide  
Éther éthylique (French)  
Ethoxyethane  
Ethyl ether  
Oxyde d'ethyle (French)

**CAS #:** 60-29-7  
**RTECS #** KI5775000  
**CI#:** Not available

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

**Recommended use:** Solvent.  
**Uses advised against** No information available

**Supplier:** Spectrum Chemical Mfg. Corp  
14422 South San Pedro St.  
Gardena, CA 90248  
(310) 516-8000

**Order Online At:** <https://www.spectrumchemical.com>  
**Emergency telephone number** Chemtrec 1-800-424-9300  
**Contact Person:** Martin LaBenz (West Coast)  
**Contact Person:** Ibad Tirmiz (East Coast)

## 2. HAZARDS IDENTIFICATION

### Classification

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

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Specific target organ toxicity (single exposure)	Category 3
Flammable liquids	Category 1

### Label elements

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## Danger

### Hazard statements

Harmful if swallowed  
Causes skin irritation  
Causes serious eye irritation  
May cause respiratory irritation. May cause drowsiness or dizziness  
Extremely flammable liquid and vapor



### Hazards not otherwise classified (HNOC)

Not Applicable

### Other hazards

Toxic to aquatic life with long lasting effects  
Toxic to aquatic life

### **Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Wear protective gloves/protective clothing/eye protection/face protection  
Avoid breathing dust/fume/gas/mist/vapors/spray  
Use only outdoors or in a well-ventilated area  
Keep away from heat/sparks/open flames/hot surfaces. — No smoking  
Keep container tightly closed  
Ground/bond container and receiving equipment  
Use explosion-proof electrical/ventilating/lighting/.../equipment  
Use only non-sparking tools  
Take precautionary measures against static discharge  
Keep cool

### **Precautionary Statements - Response**

In case of fire: Use CO<sub>2</sub>, dry chemical, or foam to extinguish.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.  
If skin irritation occurs: Get medical advice/attention  
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
Wash contaminated clothing before reuse  
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.  
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
Rinse mouth

### **Precautionary Statements - Storage**

Store in a well-ventilated place. Keep container tightly closed  
Store locked up

### **Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Product code:** HP632

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Components	CAS-No.	Weight %
Ethyl Ether	60-29-7	97.5-98.5
Ethyl alcohol	64-17-5	1.5-2.5

#### 4. FIRST AID MEASURES

##### First aid measures

- General Advice:** National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222.
- Skin Contact:** Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention. If skin irritation persists, call a physician.
- Eye Contact:** Flush eyes with water for 15 minutes. Get medical attention. If symptoms persist, call a physician.
- Inhalation:** Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
- Ingestion:** Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Obtain medical attention.

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

- Symptoms**
- Irritating to eyes, respiratory system and skin
  - Central nervous system effects
  - Dizziness
  - Drowsiness
  - Fatigue
  - May cause headache
  - Ingestion may cause vomiting and nausea
  - May cause cardiovascular effects

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

- Notes to Physician:** Treat symptomatically.

##### Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

#### 5. FIRE-FIGHTING MEASURES

##### Extinguishing Media

- Suitable Extinguishing Media:** Carbon dioxide (CO<sub>2</sub>). Dry chemical. Water spray mist or foam.
- Unsuitable Extinguishing Media:** Do not use a solid (straight) water stream as it may scatter and spread fire.

##### Specific hazards arising from the chemical

- Hazardous Combustion Products:** Carbon Monoxide, Carbon Dioxide.
- Specific hazards:** Extremely flammable. May be ignited by heat, sparks or flames. Container explosion may occur under fire

conditions or when heated. Vapor may travel considerable distance to source of ignition and flash back. Vapors may form explosive mixtures with air. Most vapors are heavier than air. They will spread along the ground and collect in low or confined areas (sewers, basements, tanks). Fire may produce irritating, corrosive and/or toxic gases.

### **Special Protective Actions for Firefighters**

#### **Specific Methods:**

Water mist may be used to cool closed containers. For larger fires, use water spray or fog. Cool containers with flooding quantities of water until well after fire is out.

#### **Special Protective Equipment 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:**

Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Remove all sources of ignition. Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use spark-proof tools and explosion-proof equipment. In case of large spill, water spray or vapor suppressing foam may be used to reduce vapors, but may not prevent ignition in closed spaces.

#### **Environmental precautions**

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not let this chemical enter the environment. Prevent entry into waterways, sewers, basements or confined areas. In case of large spill, dike if needed. Dike far ahead of liquid spill for later disposal.

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

#### **Methods for containment**

Stop leak if you can do it without risk. Absorb spill with inert material (e.g. vermiculite, dry sand or earth).

#### **Methods for cleaning up**

Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Use only non-sparking tools. Clean contaminated surface thoroughly.

## **7. HANDLING AND STORAGE**

### **Precautions for safe handling**

#### **Technical Measures/Precautions:**

Provide sufficient air exchange and/or exhaust in work rooms. Remove all sources of ignition. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from incompatible materials.

#### **Safe Handling Advice**

Wear personal protective equipment. Use only in well-ventilated areas. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not breathe vapors or spray mist. Do not ingest. When using do not smoke. Handle in accordance with good industrial hygiene and safety practice.

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

**Technical Measures/Storage Conditions:**

Sensitive to light. Store in light-resistant containers. Air sensitive. Hygroscopic. Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Keep at temperatures below 24 °C. Keep away from heat and sources of ignition. Store in a segregated and approved area. Store away from incompatible materials.

**Incompatible Materials:**

Oxidizing agents  
Acids  
Halogens  
Sulfur  
Sulfur compounds

<b>8. EXPOSURE CONTROLS/PERSONAL PROTECTION</b>
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**Control parameters****National occupational exposure limits****United States**

Components	CAS-No.	OSHA	NIOSH	ACGIH	AIHA WEEL
Ethyl Ether	60-29-7	400 ppm TWA 1200 mg/m <sup>3</sup> TWA	None	500 ppm STEL 400 ppm TWA	None
Ethyl alcohol	64-17-5	1000 ppm TWA 1900 mg/m <sup>3</sup> TWA	1000 ppm TWA 1900 mg/m <sup>3</sup> TWA	1000 ppm STEL	None

**Canada**

Components	CAS-No.	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Ethyl Ether	60-29-7	400 ppm TWA 1210 mg/m <sup>3</sup> TWA 500 ppm STEL 1520 mg/m <sup>3</sup> STEL	400 ppm TWA 500 ppm STEL	500 ppm STEL	None
Ethyl alcohol	64-17-5	1000 ppm TWA 1880 mg/m <sup>3</sup> TWA	1000 ppm STEL	1000 ppm STEL	None

**Australia and Mexico**

Components	CAS-No.	Australia	Mexico
Ethyl Ether	60-29-7	500 ppm STEL 1520 mg/m <sup>3</sup> STEL 400 ppm TWA 1210 mg/m <sup>3</sup> TWA	400 ppm TWA 1200 mg/m <sup>3</sup> TWA 500 ppm STEL 1500 mg/m <sup>3</sup> STEL
Ethyl alcohol	64-17-5	1000 ppm TWA 1880 mg/m <sup>3</sup> TWA	1000 ppm TWA 1900 mg/m <sup>3</sup> TWA

**Appropriate engineering controls****Engineering measures to reduce exposure:**

Ensure adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

**Individual protection measures, such as personal protective equipment****Personal Protective Equipment**

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<b>Eye protection:</b>	Goggles
<b>Skin and body protection:</b>	Chemical resistant apron Long sleeved clothing Gloves
<b>Respiratory protection:</b>	Vapor respirator. Be sure to use an approved/certified respirator or equivalent.
<b>Hygiene measures:</b>	Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b> Liquid	<b>Appearance:</b> No information available.	<b>Color:</b> Colorless.
<b>Odor:</b> Ethereal. Sweetish. Pungent.	<b>Taste</b> Burning. Sweet.	<b>Formula:</b> C4-H10-O
<b>Molecular/Formula weight:</b> 74.12	<b>Flammability:</b> No information available	<b>Flash point (°C):</b> -45
<b>Flashpoint (°C/°F):</b> -45 °C/ -49 °F -40 °C/-40 °F	<b>Flash Point Tested according to:</b> Closed cup Open cup	<b>Autoignition Temperature (°C/°F):</b> 160-180 °C/320-356 °F
<b>Lower Explosion Limit (%):</b> 1.9%	<b>Upper Explosion Limit (%):</b> 36-48%	<b>Melting point/range(°C/°F):</b> -116 °C; -177 °F
<b>Decomposition temperature(°C/°F):</b> No information available	<b>Boiling point/range(°C/°F):</b> 34.6 °C/94.3 °F at 760 mm Hg 17.9 °C/64.2 °F at 400 mm Hg 2.2 °C/36 °F at 200 mm Hg	<b>Bulk density:</b> No information available
<b>Density (g/cm3):</b> No information available	<b>Specific gravity:</b> 0.7134-0.7147 @ 20 °C	<b>pH:</b> No information available
<b>Vapor pressure @ 20°C (kPa):</b> 58.9	<b>Evaporation rate:</b> No information available	<b>Vapor density:</b> 2.55
<b>VOC content (g/L):</b> 713-714	<b>Odor threshold (ppm):</b> No information available	<b>Partition coefficient (n-octanol/water):</b> No information available
<b>Viscosity:</b> No information available	<b>Miscibility:</b> Miscible with many organic solvents Miscible with Benzene Miscible with Chloroform Miscible with oils Miscible with Petroleum Ether Miscible with lower aliphatic alcohols	<b>Solubility:</b> Soluble in Acetone Very soluble in Ethanol Soluble in Benzene Slightly soluble in water

## 10. STABILITY AND REACTIVITY

**Reactivity**  
Reactive with oxidizing agents  
Reactive with acids

**Chemical stability**

**Stability:** Stable under recommended storage conditions.

**Possibility of Hazardous Reactions:** Hazardous polymerization does not occur

**Conditions to avoid:** Heat. Ignition sources. Exposure to light. Exposure to moisture. Exposure to moist air. Exposure to air. Incompatible materials.

**Incompatible Materials:** Oxidizing agents  
Acids  
Halogens  
Sulfur  
Sulfur compounds

**Hazardous decomposition products:** Carbon monoxide. Carbon dioxide. When heated to decomposition it emits acrid smoke and irritating fumes.

**Other Information**

**Corrosivity:** No information available

**Special Remarks on Corrosivity:** No information available

**11. TOXICOLOGICAL INFORMATION**

**Information on likely routes of exposure**

**Principal Routes of Exposure:**  
Ingestion. Skin. Inhalation. Eyes.

**Acute Toxicity**

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

ATEmix (oral) 1230 mg/kg  
ATEmix (inhalation-dust/mist) 8313.3 mg/l

**Component Information**

Ethyl Ether
CAS-No. 60-29-7

**LD50/oral/rat** = 1215 mg/kg Oral LD50 Rat  
**LD50/oral/mouse** = 1760 mg/kg  
**LD50/dermal/rabbit** = >20 mL/kg Dermal LD50 Rabbit  
**LD50/dermal/rat** = No information available  
**LC50/inhalation/rat** = 32000 ppm 4 hr  
**LC50/inhalation/mouse** = 130000 mg/m<sup>3</sup> 3 hr  
31000 ppm 30 M  
**Other LD50 or LC50 information** = No information available

Ethyl alcohol
CAS-No. 64-17-5

**LD50/oral/rat** = 7060 mg/kg Oral LD50 Rat  
**LD50/oral/mouse** = 3450 mg/kg  
**LD50/dermal/rabbit** = No information available  
**LD50/dermal/rat** = No information available  
**LC50/inhalation/rat** = 124.7 mg/L Inhalation LC50 Rat 4 h  
**LC50/inhalation/mouse** = No information available  
**Other LD50 or LC50 information** = 5900 mg/m<sup>3</sup> Inhalation LC50 Rat 6 h

20000 ppm Inhalation LC50 Rat 10 h  
5560 mg/kg Oral LD50 Guinea Pig  
6300 mg/kg Oral LD50 Rabbit

## Product Information

### LD50/oral/rat =

VALUE- Acute Tox Oral = No information available

### LD50/oral/mouse =

Value - Acute Tox Oral = No information available

### LD50/dermal/rabbit

VALUE-Acute Tox Dermal = No information available

### LD50/dermal/rat

VALUE -Acute Tox Dermal = No information available

### LC50/inhalation/rat

VALUE-Vapor = No information available

VALUE-Gas = No information available

VALUE-Dust/Mist = No information available

### LC50/Inhalation/mouse

VALUE-Vapor = No information available

VALUE - Gas = No information available

VALUE - Dust/Mist = No information available

## Symptoms

### Skin Contact:

Causes skin irritation. Moderate skin irritation. It may be absorbed through the skin. If absorbed through skin it may cause systemic effects.

### Eye Contact:

Causes eye irritation. May cause conjunctivitis.

### Inhalation

Irritating to respiratory system. May cause conjunctival irritation. May affect respiration (respiratory depression). Symptoms may include coughing and bronchodilation. May cause salivation. May cause loss of appetite. May affect cardiovascular system (bradycardia, tachycardia, cardiac arrhythmias). Inhalation of high concentrations of vapors may cause dizziness or suffocation. Inhalation of high concentrations of vapor may cause anesthetic effects. May cause central nervous system effects, central nervous system depression. It may affect behavior/central nervous system (convulsions, excitement). It may affect behavior/central nervous system (ataxia, general anesthetic, drowsiness). It may affect behavior/central nervous system (headache, euphoria, fatigue, slurred speech).

### Ingestion

Harmful if swallowed. May cause digestive (gastrointestinal) tract irritation. It may cause abdominal (stomach) distention. Ingestion may cause nausea, vomiting. May cause central nervous system effects (affect behavior). Aspiration hazard if swallowed. Aspiration into the lungs can cause chemical pneumonitis. May cause loss of appetite.

### Aspiration hazard

No information available.

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

### Chronic Toxicity

Prolonged or repeated inhalation and/or ingestion may cause central nervous

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system effects (affect behavior). Prolonged or repeated ingestion may cause weight loss. Prolonged or repeated inhalation may affect metabolism (weight loss). Prolonged or repeated ingestion may affect the liver. Prolonged or repeated inhalation may affect the liver. Prolonged or repeated skin contact may cause dermatitis and defatting, dryness, and cracking of the skin. Prolonged or repeated inhalation may affect the kidneys.

**Sensitization:** No information available.

**Mutagenic Effects:** For Ethyl Ether:  
May affect genetic material  
Animal experiments showed mutagenic effects  
Experiments with bacteria have shown mutagenic effects

**Carcinogenic effects:** Not considered carcinogenic.

Components	CAS-No.	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Ethyl Ether	60-29-7	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed
Ethyl alcohol	64-17-5	Group 1 - Monograph 100E [2012] in alcoholic beverages Monograph 96 [2010] in alcoholic beverages	A3 Confirmed Animal Carcinogen with Unknown Relevance to Humans	Not listed	Present	Not listed	Not listed

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

**Reproductive toxicity** No data is available

**Reproductive Effects:** No information available  
**Developmental Effects:** No information available  
**Teratogenic Effects:** No information available

**Specific Target Organ Toxicity**

**STOT - single exposure** Respiratory system. central nervous system.  
**STOT - repeated exposure** No information available.  
**Target Organs:** Central nervous system.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Ecotoxicity effects:** Aquatic environment.

*Ethyl Ether - 60-29-7*

**Freshwater Fish Species Data:** 2560 mg/L LC50 Pimephales promelas 96 h flow-through 1 10000 mg/L LC50 Lepomis macrochirus 96 h static 1

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**Water Flea Data:** 165 mg/L EC50 Daphnia magna 24 h  
*Ethyl alcohol - 64-17-5*

**Freshwater Fish Species Data:** 12.0 - 16.0 mL/L LC50 Oncorhynchus mykiss 96 h static 1 100 mg/L LC50 Pimephales promelas 96 h static 1 13400 - 15100 mg/L LC50 Pimephales promelas 96 h flow-through 1

**Water Flea Data:** 9268 - 14221 mg/L LC50 Daphnia magna 48 h 2 mg/L EC50 Daphnia magna 48 h 10800 mg/L EC50 Daphnia magna 24 h

**Persistence and degradability:** No information available

**Bioaccumulative potential:** No information available.

**Mobility:** No information available.

### 13. DISPOSAL CONSIDERATIONS

#### Disposal Methods

**Waste from residues / unused products:**  
 Waste must be disposed of in accordance with Federal, State and Local regulation.

**Contaminated packaging:**  
 Empty containers should be taken for local recycling, recovery or waste disposal

Components	CAS-No.	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Ethyl Ether	60-29-7	None	None	None	U117 ignitable waste
Ethyl alcohol	64-17-5	None	None	None	None

### 14. TRANSPORT INFORMATION

#### DOT

**UN-No:** UN1155  
**Proper Shipping Name:** Diethyl ether  
**Hazard Class:** 3  
**Subsidiary Class** No information available  
**Packing group:** I  
**Emergency Response Guide Number** No information available  
**Marine Pollutant** No data available  
**DOT RQ (lbs):** 100 lbs/45.4 kg  
**Special Provisions** No Information available  
**Symbol(s):** No information available  
**Description:** No information available

#### TDG (Canada)

**UN-No:** UN1155  
**Proper Shipping Name:** Diethyl ether  
**Hazard Class:** 3  
**Subsidiary Risk:** No information available  
**Packing Group:** I  
**Marine Pollutant** No Information available  
**Description:** No information available

#### ADR

**UN-No:** UN1155

**Product code:** HP632

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**Proper Shipping Name:** Diethyl ether (Ethyl ether)  
**Hazard Class:** 3  
**Packing Group:** I  
**Subsidiary Risk:** No information available

**IMO / IMDG**

**UN-No:** UN1155  
**Proper Shipping Name:** Diethyl ether (Ethyl ether)  
**Hazard Class:** 3  
**Subsidiary Risk:** No information available  
**Packing Group:** I  
**Marine Pollutant** No information available  
**EMS:** F-E

**RID**

**UN-No:** UN1155  
**Proper Shipping Name:** Diethyl ether (Ethyl ether)  
**Hazard Class:** 3  
**Subsidiary Risk:** 3  
**Packing Group:** I

**ICAO**

**UN-No:** UN1155  
**Proper Shipping Name:** Diethyl ether  
**Hazard Class:** 3  
**Subsidiary Risk:** No information available  
**Packing Group:** I

**IATA**

**UN-No:** UN1155  
**Proper Shipping Name:** Diethyl ether  
**Hazard Class:** 3  
**Subsidiary Risk:** No information available  
**Packing Group:** I  
**ERG Code:** 3AH  
**Special Provisions** No information available

<b>15. REGULATORY INFORMATION</b>
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**International Inventories**

Components	CAS-No.	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
<i>Ethyl Ether</i>	60-29-7	PresentACTIV E	Present KE-27690	Present	Present (2)-365,(2)-36 1	Present	Present	Present 200-467-2
<i>Ethyl alcohol</i>	64-17-5	PresentACTIV E	Present KE-13217	Present	Present (2)-202	Present	Present	Present 200-578-6

**U.S. Regulations**

*Ethyl Ether*

**Massachusetts RTK:** Present  
**New Jersey RTK Hazardous Substance List:** 0701  
**New Jersey (EHS) List:** 0701 500 lb TPQ  
**New Jersey - Discharge Prevention - List of Hazardous Substances:** Present  
**New Jersey TCPA - EHS:** 10000lbTQ  
**Pennsylvania RTK:** Environmental hazard

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**Pennsylvania RTK - Environmental Hazard List** Present  
**Minnesota - Hazardous Substance List:** Present  
**New York Release Reporting - List of Hazardous Substances:**  
 100 lb RQ  
**Louisiana Reportable Quantity List for Pollutants:** 100lbfinal RQ  
 45.4kgfinal RQ  
**California Directors List of Hazardous Substances:** Present


*Ethyl alcohol*

**Massachusetts RTK:** Present  
**New Jersey RTK Hazardous Substance List:** 0844  
**Pennsylvania RTK:** Present  
**Minnesota - Hazardous Substance List:** Present  
**California Directors List of Hazardous Substances:** Present  
**FDA - Food Additives Generally Recognized as Safe (GRAS):** 21 CFR 184.1293


**FDA - 21 CFR - Total Food Additives** 169.175, 169.176, 169.177, 169.181, 172.340, 172.560, 172.580, 175.105, 176.180, 176.200, 177.1200, 177.1650, 178.1010, 184.1293, 73.30, 73.345, 73.615

**California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.**

**Chemicals Known to the State of California to Cause Cancer:**

 **WARNING:** This product can expose you to chemicals including (see table below) which is (are) known to the State of California to cause cancer. For more information go to [www.p65warnings.ca.gov](http://www.p65warnings.ca.gov).

**Chemicals Known to the State of California to Cause Reproductive Toxicity:**

 **WARNING:** This product can expose you to chemicals including (see table below) which is (are) known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.p65warnings.ca.gov](http://www.p65warnings.ca.gov).

Components	CAS-No.	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Ethyl Ether	60-29-7	Not Listed	Not Listed	Not Listed	Not Listed
Ethyl alcohol	64-17-5	carcinogen (Ethanol in alcoholic beverages)	developmental toxicity (Ethyl alcohol in alcoholic beverages)	Not Listed	Not Listed

**CERCLA/SARA**

Components	CAS-No.	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
<i>Ethyl Ether</i>	60-29-7	100 lb final RQ 45.4 kg final RQ	None	None	None	None
<i>Ethyl alcohol</i>	64-17-5	None	None	None	None	None

**U.S. TSCA**

Components	CAS-No.	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Ethyl Ether	60-29-7	Not Applicable	01/26/199406/30/1998
Ethyl alcohol	64-17-5	Not Applicable	Not Applicable

**Canada**

**WHMIS 2015 - GHS Classifications**

WHMIS 2015 Hazard Classification Information:

Component  
 Ethyl Ether  
 60-29-7 ( 97.5-98.5 )

WHMIS 2015 Hazard Classification  
 Flammable liquids - Category 1: H224 Extremely flammable liquid and vapour.; Acute toxicity - Oral - Category 4: H302 Harmful if

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Ethyl alcohol  
64-17-5 ( 1.5-2.5 )

swallowed.; Specific target organ toxicity - Single exposure -  
Category 3: H336 May cause drowsiness or dizziness.  
Flammable liquids - Category 2: H225 Highly flammable liquid and  
vapour.; Serious Eye Damage/Eye Irritation - Category 2B: H320  
Causes eye irritation.

**Canada Hazardous Products Regulation** This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

**WHMIS 1988 Hazard Class**

B2 Flammable liquid

**Components**

Ethyl Ether  
Ethyl alcohol

WHMIS 1988  
B2  
B2,D2B

**Canada Controlled Products Regulation:**

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Components	WHMIS Ingredient Disclosure List -
Ethyl Ether	1 %
Ethyl alcohol	0.1 %

**Inventory**

Components	CAS-No.	Canada (DSL)	Canada (NDSL)
Ethyl Ether	60-29-7	Present	Not Listed
Ethyl alcohol	64-17-5	Present	Not Listed

Components	CAS-No.	CEPA Schedule I - Toxic Substances
Ethyl Ether	60-29-7	Not listed
Ethyl alcohol	64-17-5	Not listed
Components	CAS-No.	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Ethyl Ether	60-29-7	Not listed
Ethyl alcohol	64-17-5	Not listed

**EU Classification**

**EU GHS - SV - CLP 1272/2008**

Components	CAS-No.	EU GHS - SV - CLP (1272/2008)
Ethyl Ether	60-29-7	Flammable liquids - Flam. Liq. 1: H224 Extremely flammable liquid and vapour.; Acute toxicity - Oral - Acute Tox. 4: H302 Harmful if swallowed. (Minimum classification); Specific target organ toxicity - Single exposure - STOT SE 3: H336 May cause drowsiness or dizziness.; Supplemental Hazards: EUH019 May form explosive peroxides.; Supplemental Hazards: EUH066 Repeated exposure may cause skin dryness or cracking.603-022-00-4
Ethyl alcohol	64-17-5	Flammable liquids - Flam. Liq. 2: H225 Highly flammable liquid and vapour.603-002-00-5

**EU - CLP (1272/2008)**

**R-phrases(s)**

**Product code:** HP632

**Product name:** ETHER, EXCEEDS  
A.C.S. SPECIFICATIONS, HPLC  
GRADE

**13 / 15**

R12 - Extremely flammable.  
 R19 - May form explosive peroxides.  
 R22 - Harmful if swallowed.  
 R66 - Repeated exposure may cause skin dryness or cracking.  
 R67 - Vapors may cause drowsiness and dizziness.

**S -phrase(s)**

S 9 - Keep container in a well-ventilated place.  
 S16 - Keep away from sources of ignition - No smoking.  
 S29 - Do not empty into drains.  
 S33 - Take precautionary measures against static discharges.

Components	CAS-No.	Classification	Concentration Limits:	Safety Phrases
Ethyl Ether	60-29-7	F+; R12 R19 Xn; R22 R66 R67	No information	(S2) S9 S16 S29 S33
Ethyl alcohol	64-17-5	F; R11	No information	S: 7 16

The product is classified in accordance with Annex VI to Directive 67/548/EEC

**Indication of danger:**

F+ - Extremely flammable.  
 Xn - Harmful.



**16. OTHER INFORMATION**

**Preparation Date:** 5/2/2014  
**Revision Date:** 4/26/2018  
**Prepared by:** Sonia Owen

**Disclaimer:**

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the

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**End of Safety Data Sheet**