

## SAFETY DATA SHEET

Preparation Date: 2/5/2016

Revision Date: 2/5/2016

Revision Number: G1

### 1. IDENTIFICATION

**Product identifier**

**Product code:** P2088  
**Product Name:** 1,5-PENTANEDIOL

**Other means of identification**

**Synonyms:** 1,5-Dihydroxypentane  
 1,5-Pentamethylene glycol  
 alpha,omega-Pentanediol  
 Pentane-1,5-diol  
 Pentamethylene glycol  
 1,5-Pentylene glycol

**CAS #:** 111-29-5  
**RTECS #** SA0480000  
**CI#:** Not available

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

**Recommended use:** No information available.  
**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 not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)  
 Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

**Label elements**

Not classified

**Hazards not otherwise classified (HNOC)**

Not Applicable

**Other hazards**

Not available

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %
1,5-Pentanediol 111-29-5	111-29-5	100

### 4. FIRST AID MEASURES

**First aid measures**

**General Advice:**

Poison information centers in each State capital city can provide additional assistance for scheduled poisons (13 1126)

**Skin Contact:**

Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention if irritation develops.

**Eye Contact:**

Flush eyes with water for 15 minutes. Get medical attention if irritation occurs. If symptoms persist, call a physician.

**Inhalation:**

Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Ingestion:**

Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

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

**Symptoms**

May cause eye/skin irritation. Ingestion may cause nausea, vomiting, and diarrhea. Central nervous system effects. Ataxia. Somnolence. Weakness. Excitement.

**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:**

Dry chemical. Carbon dioxide (CO<sub>2</sub>). Foam.

**Unsuitable Extinguishing Media:**

No information available.

**Specific hazards arising from the chemical**

**Hazardous Combustion Products:**

Carbon monoxide; Carbon dioxide

**Specific hazards:**

May be combustible at high temperatures  
May be ignited by heat, sparks or flames  
Container explosion may occur under fire conditions or when heated

## Special Protective Actions for Firefighters

**Specific Methods:** Water mist may be used to cool closed containers.

**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. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Remove all sources of ignition.

**Environmental precautions** No information available.

### 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. 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. Keep away from incompatible materials.

#### **Safe Handling Advice**

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not ingest. Do not breathe vapors or spray mist. Handle in accordance with good industrial hygiene and safety practice.

### Conditions for safe storage, including any incompatibilities

#### **Technical Measures/Storage Conditions:**

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials. Hygroscopic. Protect from moisture.

#### **Incompatible Materials:**

Strong oxidizing agents. Acid anhydrides. Acid chlorides. Reducing agents. Chloroformates.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

### **National occupational exposure limits**

U.S Occupational Exposure Limits: Not determined

#### **United States**

Components	OSHA	NIOSH	ACGIH	AIHA WHEEL
1,5-Pentanediol 111-29-5	None	None	None	None

#### **Canada**

Canada Occupational Exposure Limits: Not determined

Components	Alberta	British Columbia	Ontario	Quebec
1,5-Pentanediol 111-29-5	None	None	None	None

### Australia and Mexico

Occupational Exposure Limits for Australia and Mexico: Not determined

Components	Australia	Mexico
1,5-Pentanediol 111-29-5	None	None

### 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

- Eye protection:** Goggles or Safety glasses with side-shields
- Skin and body protection:** Long sleeved clothing. Chemical resistant apron. Gloves.
- Respiratory protection:** Respiratory protection is not necessary for normal handling. Good room ventilation or use of local exhaust (fume hood) is sufficient. Use a vapor respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentrations of mist or vapor, inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent. .
- Hygiene measures:** Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

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<b>Physical state:</b> Liquid.	<b>Appearance:</b> Oily.	<b>Color:</b> Colorless.
<b>Odor:</b> No information available	<b>Taste</b> No information available	<b>Formula:</b> C5-H12-O2
<b>Molecular/Formula weight:</b> 104.15	<b>Flammability:</b> No information available	<b>Flash point (°C):</b> 129-136
<b>Flashpoint (°C/°F):</b> 136 °C/276.8 °F 129 °C/264 °F	<b>Flash Point Tested according to:</b> Closed cup Open cup	<b>Autoignition Temperature (°C/°F):</b> 335 °C/635 °F
<b>Lower Explosion Limit (%):</b> 1.3%	<b>Upper Explosion Limit (%):</b> 13.1%	<b>pH:</b> No information available
<b>Melting point/range(°C/°F):</b> -16 °C/3.2 °F	<b>Boiling point/range(°C/°F):</b> 239-244 °C/462-471 °F	<b>Decomposition temperature(°C/°F):</b> No information available
<b>Bulk density:</b> No information available	<b>Density (g/cm3):</b> 0.99 @ 20 °C	<b>Specific gravity:</b> 0.99 @ 20 °C
<b>Vapor pressure @ 20°C (kPa):</b> No information available	<b>Evaporation rate:</b> No information available	<b>Vapor density:</b> No information available
<b>VOC content (g/L):</b> No information available	<b>Odor threshold (ppm):</b> No information available	<b>Partition coefficient (n-octanol/water):</b> -0.49 @ 25 °C
<b>Viscosity:</b> No information available	<b>Miscibility:</b> Miscible with water	<b>Solubility:</b> No information available

## 10. STABILITY AND REACTIVITY

### Reactivity

Reactive with oxidizing agents

### Chemical stability

#### **Stability:**

Stable under recommended storage conditions. Hygroscopic.

#### **Possibility of Hazardous Reactions:**

Hazardous polymerization does not occur

#### **Conditions to avoid:**

Heat. Ignition sources. Exposure to moist air. Exposure to moisture. Incompatible materials.

#### **Incompatible Materials:**

Strong oxidizing agents. Acid anhydrides. Acid chlorides. Reducing agents. Chloroformates.

#### **Hazardous decomposition products:**

Carbon monoxide. Carbon dioxide.

### 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.

### Acute Toxicity

#### **Component Information**

*1,5-Pentanediol - 111-29-5*

**LD50/oral/rat** = 2 g/kg Oral LD50 Rat (LOLI; RTECS)  
10000 mg/kg (European Chemicals Bureau IUCLID dataset)  
**LD50/oral/mouse** = No information available  
**LD50/dermal/rat** = No information available  
**LD50/dermal/rabbit** = >20 mL/kg Dermal LD50Rabbit  
**LC50/inhalation/rat** = No information available  
**LC50/inhalation/mouse** = No information available  
**Other LD50 or LC50 information** = No information available

#### **Product Information**

**LD50/oral/rat** =  
**VALUE- Acute Tox Oral** = 2000-10000mg/kg

**LD50/oral/mouse** =  
**Value - Acute Tox Oral** = No information available

**LD50/dermal/rabbit**  
**VALUE-Acute Tox Dermal** = >20ml/kg

**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:** May cause skin irritation.

**Eye Contact:** May cause eye irritation.

**Inhalation** May cause irritation of respiratory tract.

**Ingestion** Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May affect behavior/central nervous system(somnolence, excitement, muscle weakness). May affect behavior/central nervous system (ataxia).

**Aspiration hazard** No information available

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

**Chronic Toxicity** No information available

**Sensitization:** No information available

**Mutagenic Effects:** No information available

**Carcinogenic effects:** Not considered carcinogenic

Components	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
1,5-Pentanediol	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

**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** No information available

**STOT - repeated exposure** No information available

**Target Organs:** No information available.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Ecotoxicity effects:** Aquatic environment.

*1,5-Pentanediol - 111-29-5*

**Freshwater Algae Data:** 500 mg/L EC50 *Desmodesmus subspicatus* 72 h

500 mg/L EC50 *Desmodesmus subspicatus* 96 h

**Freshwater Fish Species Data:** 4600 mg/L LC50 *Leuciscus idus* 96 h static 1

**Water Flea Data:** 500 mg/L EC50 *Daphnia magna* 48 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	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
1,5-Pentanediol	None	None	None	None

## 14. TRANSPORT INFORMATION

### DOT

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** None  
**ERG No:** No information available  
**Marine Pollutant:** No data available  
**DOT RQ (lbs):** No information available

### TDG (Canada)

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Description:** No information available

### ADR

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Packing Group:** No information available  
**Subsidiary Risk:** No information available  
**Classification Code:** No information available  
**Description:** No information available  
**CEFIC Tremcard No:** No information available

### IMO / IMDG

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Description:** No information available  
**IMDG Page:** No information available  
**Marine Pollutant:** No information available  
**MFAG:** No information available  
**Maximum Quantity:** No information available

### RID

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Classification Code:** No information available  
**Description:** No information available

### ICAO

**14. TRANSPORT INFORMATION**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Description:** No information available

**IATA**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Description:** No information available

**15. REGULATORY INFORMATION****International Inventories**

Components	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
1,5-Pentanediol	Present	Present KE-27985	Present	Present (2)-240	Present	Present	Present 203-854-4

**U.S. Regulations****California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.****Chemicals Known to the State of California to Cause Cancer:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

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

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
1,5-Pentanediol	Not Listed	Not Listed	Not Listed	Not Listed

**CERCLA/SARA**

Components	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 <i>de minimis</i>
1,5-Pentanediol	None	None	None	None	None

**U.S. TSCA**

Components	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
1,5-Pentanediol	Not Applicable	Not Applicable

**Canada****WHMIS hazard class:**

Non-controlled

**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.

**Inventory**

Components	Canada (DSL)	Canada (NDSL)
1,5-Pentanediol	Present	Not Listed

Components	CEPA Schedule I - Toxic Substances	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
1,5-Pentanediol	Not listed	Not listed

**EU Classification****R-phrase(s)**

not determined (not applicable)

**S -phrase(s)**

none

Components	Classification	Concentration Limits:	Safety Phrases
1,5-Pentanediol		No information	

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

**Indication of danger:**

Not dangerous

**16. OTHER INFORMATION**

## 16. OTHER INFORMATION

**Preparation Date:** 2/5/2016  
**Revision Date:** 2/5/2016  
**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 completeness or accuracy of the information contained herein.

**End of Safety Data Sheet**