

SECTION 1: PRODUCT IDENTIFICATION

PRODUCT NAME	PROPYLENE GLYCOL, USP
PRODUCT CODE	0510
SUPPLIER	MEDISCA Inc. Tel.: 1.800.932.1039 Fax.: 1.855.850.5855 661 Route 3, Unit C, Plattsburgh, NY, 12901 3955 W. Mesa Vista Ave., Unit A-10, Las Vegas, NV, 89118 6641 N. Belt Line Road, Suite 130, Irving, TX, 75063 MEDISCA Pharmaceutique Inc. Tel.: 1.800.665.6334 Fax.: 514.338.1693 4509 Rue Dobrin, St. Laurent, QC, H4R 2L8 21300 Gordon Way, Unit 153/158, Richmond, BC V6W 1M2 MEDISCA Australia PTY LTD Tel.: 1.300.786.392 Fax.: 61.2.9700.9047 Unit 7, Heritage Business Park 5-9 Ricketty Street, Mascot, NSW 2020
EMERGENCY PHONE	CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 NSW Poisons Information Centre: 131 126
USES	Pharmaceutic Aid (solvent, diluent)

SECTION 2: HAZARDS IDENTIFICATION

GHS CLASSIFICATION	Flammable Liquid (Category 4) Skin Irritation (Category 2) Eye Irritation (Category 2B)		
PICTOGRAM			
SIGNAL WORD	Warning		
HAZARD STATEMENT(S)	Combustible liquid. Causes skin irritation and eye irritation.		
AUSTRALIA-ONLY HAZARDS	Repeated exposure may cause skin dryness or cracking.		
PRECAUTIONARY STATEMENT(S)	Prevention	Keep away from heat, sparks, open flames and/or hot surfaces - No smoking. Wear protective gloves, eye protection and face protection. Wash thoroughly after handling.	
	Response	IN CASE OF FIRE: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish. IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. 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.	
	Storage	Store in a well-ventilated place. Keep cool.	
	Disposal	Dispose of contents and/or container in accordance with local regulations.	
HMIS CLASSIFICATION	Health Hazard	1	Flammability1
	Reactivity	0	Personal ProtectionB

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAME	1,2-Propanediol				
BOTANICAL NAME	Not applicable				
SYNONYM	1,2 - Dihydroxypropane, PG 12, Methylethylene glycol				
CHEMICAL FORMULA	C3H8O2				
CAS NUMBER	57-55-6				
ALTERNATE CAS NUMBER	Not applicable				
MOLECULAR WEIGHT	76.09				
COMPOSITION	<table><tr><th>CHEMICAL NAME</th><th>CAS</th></tr><tr><td>PROPYLENE GLYCOL</td><td>57-55-6</td></tr></table>	CHEMICAL NAME	CAS	PROPYLENE GLYCOL	57-55-6
CHEMICAL NAME	CAS				
PROPYLENE GLYCOL	57-55-6				

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as health hazards and hence require reporting in this section.

NOTES Chemical family: Linear aliphatic derivative.

SECTION 4: FIRST-AID MEASURES

IN CASE OF EYE CONTACT	Flush with copious amounts of water for 15 minutes, separating eyelids with fingers. If irritation persists seek medical aid.
IN CASE OF SKIN CONTACT	Wash with soap & water for 15 minutes. If irritation persists seek medical aid.
IF SWALLOWED	Call a physician. Wash out mouth with water. Do not induce vomiting without medical advice.
IF INHALED	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.
SYMPTOMS AND EFFECTS	Not expected to present a significant hazard under anticipated conditions of normal use.

SECTION 5: FIREFIGHTING MEASURES

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL	Not applicable.
FLAMMABLE PROPERTIES	Combustible
HAZARDOUS COMBUSTION PRODUCTS	Under fire conditions, hazardous fumes will be present.
EXTINGUISHING MEDIA	Small fire: dry chemical, CO ₂ or water spray. Large fire: dry chemical, CO ₂ , alcohol resistant foam or water spray. Do not get water inside containers.
PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS	Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS	Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.
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METHODS & MATERIAL FOR CONTAINMENT

On land, sweep or shovel into suitable containers.

CLEANUP PROCEDURE

Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Wear respirator, chemical safety goggles, rubber boots and heavy rubber gloves. Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas. Shut off all sources of ignition. Evacuate the area. If necessary, employ water fog to disperse the vapors. Absorb the matter with compatible vermiculite or other absorbing material. Place in a suitable container and retain for disposal. Ventilate and clean the affected area. Do not flush into sewerage system or to drains.

SECTION 7: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

Do not inhale. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure. Wash thoroughly after handling. Store away from incompatible materials, in a well-ventilated area. Eliminate all sources of ignition. Store in accordance with local regulations. Do not store in unlabelled containers. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Use appropriate containment to avoid environmental contamination.

STORAGE CONDITIONS

Store in original container, tightly sealed, protected from direct sunlight and moisture. Preserve in tight containers.

SECTION 8: EXPOSURE CONTROLS/ PERSONAL PROTECTION

Chemical Name: PROPYLENE GLYCOL, USP CAS #: 57-55-6

	TWA	Ceiling	STEL	REL	IDLH	Remarks
OSHA PEL	N/L	N/L	-	-	-	-
ACGIH TLV	N/L	N/L	N/L	-	-	-
NIOSH	N/L	N/L	N/L	N/L	N/L	-
AIHA WEEL	10 mg/m ³	N/L	N/L	-	-	-
Safe Work Australia HSIS	150 ppm; 474 mg/m ³	N/L	N/L	-	-	total vapour and particulates
HSE	150 ppm; 474 mg/m ³	N/L	N/L	-	-	total vapour and particulates

N/L = Not Listed

EXPOSURE GUIDELINES

Consult local authorities for provincial or state exposure limits. Particulates not otherwise regulated, respirable fraction: 5 mg/m³

PERSONAL PROTECTIVE EQUIPMENT

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by WHMIS or OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. **Skin:** Wear appropriate gloves to prevent skin exposure. **Clothing:** Wear appropriate protective clothing to minimize contact with skin. **Respirators:** Follow WHMIS or OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

SPECIFIC ENGINEERING CONTROLS

Adequate mechanical ventilation. Fumehood, eye wash station, and safety shower.

NOTES

OEL: AUSTRALIA: TWA: 10 mg/m³ (150 ppm)
OEL: RUSSIA: STEL: 7 mg/m³
CAD ON OEL: TWA: 155 mg/m³ (50 ppm)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Liquid				
DESCRIPTION	Clear, colorless, viscous liquid. Is practically odorless. Absorbs moisture when exposed to moist air.				
SOLUBILITY	Miscible with water, with acetone, and with chloroform. Soluble in ether and will dissolve many essential oils, but is immiscible with fixed oils.				
ODOR	Odorless				
FLAMMABILITY	Combustible				
ODOR THRESHOLD	Not available	pH	Not available	MELTING POINT	-59°C, -74.2°F
BOILING POINT	188.2°C, 370.76°F	FREEZING POINT	-59°C, -74.2°F	FLASH POINT	98.89°C, 210.002°F (closed cup)
SPECIFIC GRAVITY	1.035 – 1.037	EVAPORATION RATE	0.01 (Estimated)	EXPLOSIVE LIMIT	2.6 - 12.6
UPPER FLAMMABLE/ EXPLOSIVE LIMIT(S)	12.5 %(V) (Estimated)	LOWER FLAMMABLE/ EXPLOSIVE LIMIT(S)	2.6 %(V) (Estimated)	VAPOR PRESSURE	0.017198 kPa (25°C)
VAPOR DENSITY (AIR = 1)	2.62	RELATIVE DENSITY (WATER = 1)	1.04	log P (OCTANOL-WATER)	- 0.92
AUTO-IGNITION TEMPERATURE	371.11°C, 700°F	DECOMPOSITION TEMPERATURE	Not available	VISCOSITY	48.6 mPa·s (25°C)

NOTES The physical data presented above are typical values and should not be construed as a specification.

SECTION 10: STABILITY AND REACTIVITY

REACTIVITY	Reacts violently with strong oxidants and alkalis. This generates fire hazard.
STABILITY	Stable under recommended storage conditions.
MATERIALS TO AVOID	Strong oxidizing agents. Strong acids. Reducing agents. Caustics. Aliphatic amines. Isocyanates. Acid chlorides. Acid anhydrides. Chloroformates.
HAZARDOUS DECOMPOSITION PRODUCTS	Toxic fumes of carbon monoxide, carbon dioxide, nitrogen oxides and other gases may occur.
HAZARDOUS POLYMERIZATION	Will not occur.
POSSIBILITY OF HAZARDOUS REACTION	Not established.
CONDITIONS TO AVOID	Moisture, sunlight and extreme temperatures.

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE TOXICITY	Oral: Rat: LD50: (mg/kg): 30000 Dermal: Rat LD50: (mg/kg): 10000 Inhalation: Rat: LC50: (mg/L/4hr): Not available
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SKIN CORROSION/IRRITATION

Causes skin irritation.
 Skin child: 30%/96 hour- continuous moderate
 Skin human: 500 mg/7 day - mild
 Skin human: 104 mg/3 day intermittent - moderate
 Skin woman: 30%/96 hour open irritation test - mild

SERIOUS EYE DAMAGE/EYE IRRITATION

Causes eye irritation.
 Eye rabbit: 100 mg - mild
 Eye rabbit: 500 mg/24 hour - mild
 Eye irritancy assay (Draize); Species: Rabbit Test Duration: 96 hours; Result: Mild irritancy; fully reversible.

RESPIRATORY OR SKIN SENSITIZATION

Respiratory sensitization: Due to lack of data the classification is not possible.
 Skin sensitization: Based on available data, the classification criteria are not met. Did not cause allergic skin reactions when tested in humans.

GERM CELL MUTAGENICITY

Based on available data, the classification criteria are not met.
 In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

CARCINOGENICITY

OSHA PROPYLENE GLYCOL is not listed.
NTP PROPYLENE GLYCOL is not listed.
IARC PROPYLENE GLYCOL is not evaluated.
California Proposition 65 This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

ADDITIONAL CARCINOGENICITY INFORMATION

Based on available data, the classification criteria are not met.
 Did not cause cancer in laboratory animals.

REPRODUCTIVE TOXICITY

Based on available data, the classification criteria are not met.
 The Center for the Evaluation of Risks to Human Reproduction concluded that propylene glycol is not a reproductive or developmental toxicant in animals, and that human developmental or reproductive risks are of negligible concern.

SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE

Based on available data, the classification criteria are not met.
 Evaluation of available data suggests that this material is not an STOT-SE toxicant.

SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE

Based on available data, the classification criteria are not met.
 In rare cases, repeated excessive exposure to propylene glycol may cause central nervous system effects.

ASPIRATION HAZARDS

Based on physical properties, not likely to be an aspiration hazard.

SIGNS AND SYMPTOMS OF EXPOSURE

Symptoms related to the physical, chemical, and toxicological characteristics:
 Headache, Dizziness, Drowsiness, Seizures, Gastrointestinal disturbances.
 Delayed and immediate effects of exposure:
 Central nervous system depression. Lactic acidosis. Coma. Cardiovascular collapse. Hypoglycemia.
 Medical conditions aggravated by exposure:
 Impaired kidney function.

POTENTIAL HEALTH EFFECTS

Inhalation At room temperature, exposure to vapor is minimal due to low volatility. Mist may cause irritation of upper respiratory tract (nose and throat). Dry throat. Cough.
Ingestion Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. Ingestion of large amounts could cause metabolic acidosis.
Skin Prolonged skin contact is unlikely to result in absorption of harmful amounts. Prolonged contact is essentially nonirritating to skin. Repeated contact may cause flaking and softening of skin.
Eyes Cause mild eye irritation. Dryness of eyes. Pain. Itching. Corneal injury is unlikely.

SECTION 12: ECOLOGICAL INFORMATION

TOXICITY	EC50: 48 Hr: Crustacea: Daphnia magna: (mg/L): > 10000 LC50: 96 Hr: Fish: (mg/L): >100 mg/L (in the most sensitive species tested) IC50: 72 Hr: Algae: (mg/L): Not available
PERSISTENCE AND DEGRADABILITY	Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation may occur under anaerobic conditions (in the absence of oxygen). Biodegradation: 81%; Exposure time: 28 d; Method: OECD Test Guideline 301F Biodegradation: 96%; Exposure time: 64d; Method: OECD Test Guideline 306 or Equivalent
BIOACCUMULATIVE POTENTIAL	Low. (BCF < 100 or Log Pow < 3) Log Pow: -1.07 (Measured) Bioconcentration factor (BCF): 0.09 (Estimated)
MOBILITY IN SOIL	Water Solubility: 1.00E+06 mg/L (20°C) Henry's Law Constant: 1.29E-08 atm-m³/mole (25°C) Potential for mobility in soil is very high (Koc between 0 and 50). Partition coefficient (Koc): < 1 (Estimated) Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process. Potential for mobility in soil is very high.
OTHER ADVERSE EFFECTS	Not available. This product is not intended to be released into the environment

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL	Dispose of in accordance with federal / local laws and regulations. Avoid release into the environment.
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SECTION 14: TRANSPORT INFORMATION

UNITED STATES & CANADA

UN PROPER SHIPPING NAME	Not dangerous good
UN NUMBER	Not applicable
CLASS	Not applicable
PACKING GROUP	Not applicable

AUSTRALIA

UN PROPER SHIPPING NAME	Not dangerous good
UN NUMBER	Not applicable
CLASS	Not applicable
PACKING GROUP	Not applicable
HAZCHEM	Not applicable

ENVIRONMENTAL HAZARDS	Not available
SPECIAL SHIPPING INFORMATION	Not applicable

SECTION 15: REGULATORY INFORMATION

Chemical Name & CAS	CERCLA 40 CFR Part 302.4	SARA (Title III) 40 CFR Part 372.65	EPA 40 CFR Part 355 Appendix A	EPA 40 CFR Part 355 Appendix B	Pennsylvania	Right-to-know New Jersey	Massachusetts	California Prop 65
PROPYLENE GLYCOL, USP 57-55-6	N/L	N/L	N/L	N/L	X	X	N/L	N/L

N/L = Not Listed; X = Listed

AUSTRALIAN REGULATIONS

Chemical Name & CAS	Poisons and Therapeutic Goods Regulation	Therapeutic Goods Act	Code of Practices - Illicit Drug Precursors
PROPYLENE GLYCOL, USP 57-55-6	N/L	N/L	N/L

SECTION 16: OTHER INFORMATION

REFERENCES

ABBREVIATIONS AND ACRONYMS

Available upon request

CAS – Chemical Abstract Service; **GHS** – Global Harmonized System; **OSHA PEL** – Occupational Safety & Health Administration Permissible Exposure Limits; **TWA** – Time Weighted Average; **HSIS** – Hazardous Substances Information System; **STEL** – Short Term Exposure Limit; **AIHA WEEL** – American Industrial Hygiene Association Workplace Environment Exposure Levels; **LD50** – Lethal Dose, 50%; **IARC** – International Agency for Research on Cancer; **NTP** – National Toxicology Program; **WHMIS** – Workplace Hazardous Materials Information System; **SARA** – Superfund Amendments and Reauthorization Act; **EPA** – Environmental Protection Agency; **CERCLA** – Comprehensive Environmental Response, Compensation, and Liability Act; **HMIS** – Hazardous Materials Information System; **NIOSH** – National Institute for Occupational Safety and Health; **MSHA** – Mine Safety and Health Administration; **ACGIH** – American Conference of Governmental Industrial Hygienists; **IDHL** – Immediately Dangerous to Health or Life; **TLV** – Threshold Limit Value; **HSE** – Health and Safety Executive; **REL** – Recommended Exposure Limit

LAST REVISION

04/2019

SUPERSEDES

07/2015

DISCLAIMER

This document was created in accordance with OSHA, Safe Work Australia and WHMIS regulations. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. MEDISCA® shall not be held liable for any damage resulting from handling or from contact with the above product. Recipients of the product must take responsibility for observing existing laws and regulations.