

# SAFETY DATA SHEET

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P10

## 1. Identification of the Substance/Mixture and of the Company/Undertaking

Product Name: P10

Product Code: R-P186

Company Name of Supplier: ARK Resource Co., Ltd.

Address: 383-2 Nakahara-machi, Nishi-ku, Kumamoto-shi, Kumamoto, Japan

Telephone Number: 096-329-0880

FAX Number: 096-329-0882

Recommended Use and Restrictions on Use: For research use only. Not for use in diagnostic or therapeutic procedures.

## 2. Hazards Identification

GHS Classification

Physical and Chemical Hazards

Hazard Classification Element	Propane-1,2-diol
Physical and Chemical Hazards	-

Health Hazards

Hazard Classification Element	Propane-1,2-diol
Specific Target Organ Toxicity (Single Exposure)	Category 1 (Central nervous system, Blood system) Category 3 (Narcotic effects)
Specific Target Organ Toxicity (Repeated Exposure)	Category 1 (Central nervous system, Respiratory system)

Environmental Hazards

Hazard Classification Element	Propane-1,2-diol
Environmental Hazards	-

GHS Label Elements

Pictograms or Symbols:



Signal Word: DANGER

Element	Propane-1,2-diol
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Hazard Statements	Causes damage to organs (Central nervous system, Blood system). May cause drowsiness or dizziness. Causes damage to organs (Central nervous system, Respiratory system) through prolonged or repeated exposure.
Precautionary Statements: Prevention	Do not breathe dust/fume/gas/mist/vapors/spray. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area.
Precautionary Statements: Response	If exposed or concerned: Call a physician. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a physician if you feel unwell. Get medical advice/attention if you feel unwell.
Precautionary Statements: Storage	Store in a well-ventilated place. Keep container tightly closed.
Precautionary Statements: Disposal	Dispose of contents/container should be in accordance with local/regional/national/international regulations.
Other Hazards	-

## 3. Composition/Information on Ingredients

Substance/Mixture Distinction: Mixture

Chemical Name / Common Name	Chemical Formula	Weight (%)	CAS RN	CSCL No. (Japan)	ISHL No. (Japan)
Propane-1,2-diol	CH <sub>3</sub> CH(OH)CH <sub>2</sub> OH	10	57-55-6	(2)-234	Published

Impurities Contributing to GHS Classification: None

## 4. First-Aid Measures

Element	Propane-1,2-diol
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. After inhalation of large amounts or in case of complaints, keep the affected person quiet and protect from hypothermia. Get medical advice/attention.
Skin Contact	Take off contaminated clothing. Rinse the affected skin area with running water for 10 to 20 minutes. Get medical advice/attention.
Eye Contact	Rinse with running water for 10 minutes. Remove contact lenses if possible. Get medical advice/attention.
Ingestion	Rinse mouth. Give one glass of water (approx. 200 mL). Do NOT induce vomiting. Get medical advice/attention.
Most Important Symptoms and Effects (acute or delayed)	Inhalation: Sore throat, cough. High concentrations of hot vapors/aerosols may cause slight irritation of the upper respiratory tract and breathing difficulties. Systemic toxic effects are unlikely. Skin: Slight redness or no local reaction. Rarely causes allergic reactions. Systemic effects are unlikely. Eye: Dryness, itching, pain, lacrimation, possible conjunctivitis. Ingestion: High doses may cause gastrointestinal symptoms (nausea, vomiting), systemic toxic effects. Absorption: After high doses, central nervous system symptoms such as headache,



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	nausea, dizziness, impaired consciousness to coma, and in some cases convulsions may occur. Cardiac dysfunction (such as tachycardia, arrhythmia). In severe cases, renal dysfunction.
Protection of First-Aiders	No information available
Special Notes to Physician	No information available

## 5. Fire-Fighting Measures

Element	Propane-1,2-diol
Suitable Extinguishing Media	Water spray, dry chemical, carbon dioxide (CO <sub>2</sub> ). For large fires, use alcohol-resistant foam or water spray.
Unsuitable Extinguishing Media	Do not use water jet (straight stream).
Specific Hazards Arising from the Chemical	In case of fire, hazardous materials (carbon monoxide, carbon dioxide) may be released.
Special Fire-Fighting Procedures	Cool surrounding containers with water spray. If possible, remove containers from danger area. Heating increases pressure and creates a risk of bursting. Shut off all sources of ignition.
Special Protective Equipment	Wear appropriate self-contained breathing apparatus (SCBA) and eye/skin protective clothing (heat resistant) during fire-fighting.

## 6. Accidental Release Measures

Element	Propane-1,2-diol
Personal Precautions, Protective Equipment	Sufficient consideration must be given to preventing exposure (inhalation, dermal, and ingestion) of operational personnel.
Environmental Precautions	Hazard to the aquatic environment is low. If exceptionally large amounts enter water bodies, drains, sewers, or the ground, contact local authorities.
Methods for Containment and Cleaning Up	Eliminate all ignition sources (no smoking, flares, sparks or flames in the immediate area). Stop leak if you can do it without risk. For small spills, wipe up thoroughly with cloths, rags, etc., and collect into appropriate waste containers. For large spills, surround with an embankment to prevent spillage. Prevent entry into waterways, sewers, basements or confined areas.
Prevention of Secondary Hazards	No information available

## 7. Handling and Storage

### Handling

Element	Propane-1,2-diol
Technical Measures	Engineering controls should be implemented as specified in Section 8, and personal protective equipment must be worn.
Precautions for Safe Handling	Keep containers tightly closed when not in use. Ensure adequate ventilation during use. Use explosion-proof equipment, and take precautionary measures against static discharge. Prohibit the use of high-temperature objects, sparks, and open flames in the vicinity. Take precautionary measures against static discharge.
Avoidance of Contact	Refer to Section 10. Stability and Reactivity.
Hygiene Measures	Wash skin with soap and water before breaks and at the end of work. Avoid breathing vapor or mist. Do not eat, drink or smoke when using this product.



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Safe Storage Conditions: Confirm storage conditions indicated on the product label.

Safe Packaging Materials: Glass

## 8. Exposure Controls/Personal Protection

Element	Propane-1,2-diol
Occupational Exposure Limits	-
Acceptable Concentration	-
Engineering Controls	Install appropriate ventilation equipment in the workplace. Provide washing facilities near the handling area. Ensure the floor is non-slip.
Respiratory Protection	Use appropriate respiratory protection depending on the situation and requirements.
Hand Protection	Wear protective gloves (Natural rubber, chloroprene, nitrile rubber, butyl rubber, fluorine rubber, and PVC are suitable).
Eye Protection	Wear safety glasses with side shields.
Skin and Body Protection	Wear an apron or laboratory coat.

## 9. Physical and Chemical Properties

Physical State: Liquid

Color: Clear, colorless

Odor: Odorless

Melting Point/Freezing Point: No data available

Boiling Point/Range: No data available

Flammability: No data available

Explosion Limits (Lower/Upper): No data available

Flash Point: No data available

Auto-Ignition Temperature: No data available

Decomposition Temperature: No data available

pH: 7.0 – 7.5

Kinematic Viscosity: No data available

Solubility in Water: Soluble

n-Octanol/Water Partition Coefficient: No data available

Vapor Pressure: No data available

Density / Relative Density: No data available

Relative Gas Density: No data available

Particle Characteristics: No data available

## 10. Stability and Reactivity

Element	Propane-1,2-diol
Reactivity	Refer to 'Possibility of Hazardous Reactions'.
Chemical Stability	Reacts violently with strong oxidizing agents and alkalis.



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Possibility of Hazardous Reactions	This substance may react dangerously with oxidizing agents, acid anhydrides, and acid chlorides.
Conditions to Avoid	Open flames, heating, high temperatures, static electricity, sparks, and formation of explosive mixtures.
Incompatible Materials	Oxidizing substances, acid chlorides, acid anhydrides, chloroformates, reducing agents
Hazardous Decomposition Products	No information available

## 11. Toxicological Information

Element	Propane-1,2-diol
Acute Toxicity: Oral	Not classified
Acute Toxicity: Dermal	Not classified
Acute Toxicity: Inhalation (Gas)	Liquid according to GHS definition
Acute Toxicity: Inhalation (Vapor)	Classification not possible
Acute Toxicity: Inhalation (Dust/Mist)	Classification not possible
Skin Corrosion/Irritation	Not classified
Serious Eye Damage/Irritation	Not classified
Respiratory Sensitization	Classification not possible
Skin Sensitization	Not classified
Germ Cell Mutagenicity	Classification not possible
Carcinogenicity	Classification not possible
Reproductive Toxicity	Classification not possible
STOT - Single Exposure	Category 1 (Central nervous system, Blood system) Category 3 (Narcotic effects)
STOT - Repeated Exposure	Category 1 (Central nervous system, Respiratory system)
Aspiration Hazard	Classification not possible

## 12. Ecological Information

Element	Propane-1,2-diol
Acute Aquatic Hazard	Not classified
Chronic Aquatic Hazard	Not classified
Persistence / Degradability	CSCL Biodegradation Test: Readily biodegradable
Bioaccumulative Potential	No information available
Mobility in Soil	No information available
Hazardous to the Ozone Layer	This substance is not listed in Annexes A-C and E to the Montreal Protocol.

## 13. Disposal Considerations

Waste from Residues: Dispose of contents/container should be in accordance with local/regional/national/international regulations.

Contaminated Packaging: Completely empty containers before disposal. Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. Transport Information



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*The applicability of transport regulations may vary depending on the product configuration. Information will be modified in accordance with the regulatory testing information and the environmental impact information in Section 12, as required.*

## International Regulations

Element	Propane-1,2-diol
UN Number	-
UN Proper Shipping Name	-
Transport Hazard Class(es)	-
Subsidiary Risk	-
Packing Group	-
Marine Pollutant	Not applicable
Transport in Bulk (MARPOL 73/78)	Not applicable

## Domestic Regulations (Japan)

Element	Propane-1,2-diol
Marine Regulations Information	Not applicable
Aviation Regulations Information	Not applicable
Land Regulations Information	Comply with the provisions of the Fire Service Act.

Element	Propane-1,2-diol
Special Safety Precautions	Subject to the requirement to carry an Emergency Response Card (Yellow Card) under the Fire Service Act.
Other (General) Precautions	During transport, avoid direct sunlight, load properly to prevent container damage, corrosion, or leakage, and ensure robust load collapse prevention. Do not stack heavy objects on top.
Emergency Response Guide Number	Not applicable

## 15. Regulatory Information

*Regulatory information is provided based on the date of creation. When utilizing this information at a workplace, please verify the latest regulations.*

Law / Regulation	Propane-1,2-diol
Industrial Safety and Health Act (ISHL)	Dangerous and Harmful Substances Whose Names Are to Be Indicated (Article 57, Paragraph 1, Enforcement Order Article 18, Ordinance Appended Table 2) (Effective from April 1, 2025) Dangerous and Harmful Substances Whose Names Are to Be Notified (Article 57-2, Enforcement Order Article 18-2, Ordinance Appended Table 2) (Effective from April 1, 2025) Substances Subject to Risk Assessment (Article 57-3) (Effective from April 1, 2025) Obligation for Workplace Labeling (Article 101-4) (Effective from April 1, 2025)
PRTR Law	-
Poisonous and Deleterious	-



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Substances Control Act	
Labor Standards Act	-
Chemical Substances Control Law (CSCL)	Priority Assessment Chemical Substance (Article 2, Paragraph 5)
Fire Service Act	Group 4, Flammable liquids, Class III petroleums, Water-soluble liquids (Article 2, Paragraph 7, Dangerous Goods Appended Table 1, Group 4)

## 16. Other Information

References and Reference Websites:

EMERGENCY RESPONSE GUIDEBOOK (US DOT)

International Chemical Safety Cards (ICSC)

MERCK INDEX

Comprehensive Chemical Dictionary (Kyoritsu Shuppan)

The Registry of Toxic Effects of Chemical Substances (RTECS)

National Institute of Technology and Evaluation (NITE)

Chemical Risk Information Platform (CHRIP)

Japan Chemical Database Ltd.

GHS Classification Results (NITE, "Anzen-Site" for workplaces)

Limitation of Liability:

This product is a research reagent and cannot be used for any other purpose. The contents of this document are prepared based on materials, information, and data currently available, and may be revised based on new findings. Furthermore, the precautionary statements apply only to normal handling. In the case of special handling, please implement sufficient safety measures before use.

