# PROPYLENE GLYCOL USP GRADE

According to ABNT NBR 14725:2023
Revision date: March 13, 2025
Version: 00

## Section 1. Identification

**Product name:** Propylene Glycol USP Grade
**Synonyms:** 1,2-Propanediol; propane-1,2-diol.
**Identified uses:** Chemical raw material
**Company:** Distribuidora Industrial Paranaense Ltda.
**Adress:** Rua Stefano Soik, n.º 20, CIC, CEP 81.420-586 - Curitiba - PR
**Telephone:** +55 41 3245-0777
**Emergency telephone number:**
Disque-Intoxicação (Anvisa) 0800-722-6001
**Fax:** +55 41 3245-0777
**e-mail:** dipa@dipaquimica.com.br

UNCONTROLLED COPY

## Section 2. Hazard Identification

**2.1. Classification of the substance or mixture:**
**GHS Classification in accordance with ABNT NBR 14725 Standard**
Not classified as hazardous under the classification system used.

**2.2. Other hazards:**
No additional information available.

**2.3. Label elements:**
**Hazard pictograms:** Not applicable.
**Signal word:** Not applicable.
**Hazard statements:** Not applicable.
**Precautionary statements:** Not applicable.

## Section 3. Composition/Information on Ingredients

**3.1. Substance / Mixture:** Substance
**Common chemical name:** Sodium Hypochlorite
**Synonyms:** Propylene Glycol USP Grade
**Chemical identity:** 1,2-Propanediol; propane-1,2-diol.
**CAS number:** 57-55-6

**3.2. Components:**

| Substance name | CAS number | Concentration |
|---|---|---|
| Propylene Glycol | 57-55-6 | ≥ 99.8% |

## Section 4. First-Aid Measures

**4.1. Description of necessary first-aid measures:**
**If swallowed:**
Do not induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get medical help if unwell.

**If on skin:**
Take off immediately all contaminated clothing. Immediately rinse with water for several minutes. If skin irritation occurs, get medical help.

**If inhaled:**
Remove person to fresh air and keep comfortable for breathing. Get medical help if unwell.

**If in eyes:**
Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical help.

**4.2. Most important symptoms/effects, acute and delayed:**

**If swallowed:**
High doses may cause central nervous system depression (fatigue, dizziness, or possibly loss of concentration, with collapse, coma, and death in cases of severe overexposure).

**4.3. Indication of immediate medical attention and special treatment needed, if necessary:**
Avoid contact with the product when assisting the victim. If necessary, symptomatic treatment should primarily include supportive measures such as correction of hydroelectrolytic and metabolic disturbances, as well as respiratory assistance.

## Section 5. Fire-Fighting Measures

**5.1. Extinguishing media:**

**Appropriate:**
Alcohol-resistant foam, water mist, dry chemicals and carbon dioxide ($CO_2$).

**Inappropriate:**
Solid water stream.

**5.2. Specific hazards arising from the chemical:**
In case of fire, toxic incineration products may be released such as carbon monoxide and carbon dioxide. The heat from the fire may produce flammable vapors.

**5.3. Special protective actions for fire-fighters:**
Use a self-contained breathing apparatus (SCBA) and full-body protective clothing. Keep containers cool with water spray. Do not allow run-off of contaminated fire extinguishing material to enter drains or surface and ground water.

## Section 6. Accidental Release Measures

**6.1. Personal precautions, protective equipment and emergency procedures:**

**For non-emergency personnel:**
Preventively isolate from ignition sources. Do not smoke. Keep unauthorized persons away from the area. Stop the leak if it can be done without risk. Do not touch damaged containers or the material without appropriate protective clothing. Avoid exposure to the product. Use personal protective equipment as described in Section 8.

**For emergency responders:**
Wear appropriate personal protective equipment, including safety glasses with side protection, impermeable safety gloves, appropriate protective clothing, and safety footwear. The materials used must be impermeable. In case of a leak with significant exposure, the use of a respiratory protection mask (full-face or half-face) with an

UNCONTROLLED COPY

organic vapors filter, a full-face mask with an air supply line, or a self-contained breathing apparatus is recommended.

**6.2. Environmental precautions:**

Prevent product from entering drains, soil and waterways. Prevent further leakage or spillage if safe to do so. Notify the competent authorities if the product has run into drainage systems or watercourse or has contaminated the ground or vegetation.

**6.3. Methods and materials for containment and cleaning up:**

Use natural spill containment barriers. Collect the spilled product and place it in appropriate containers. Absorb the remaining product with dry sand, earth, vermiculite, or any other inert material. Place the absorbed material in appropriate containers and remove them to a safe location. For final disposal, proceed as per Section 13 of this SDS.

## Section 7. Handling and Storage

**7.1. Appropriate technical measures for handling:**

**Precautions for safe handling:**

Handle in a well-ventilated area or with general ventilation/local exhaust system. Avoid exposure to the product. Avoid contact with incompatible materials. Use personal protective equipment as described in Section 8.

**Hygiene measures:**

Wash hands and face thoroughly after handling and before eating, drinking, smoking, or using the restroom. Contaminated clothing should be changed and washed before reuse. Remove contaminated clothing and protective equipment before entering eating areas.

**7.2. Conditions for safe storage, including any incompatibilities:**

**Information about protection against explosion and fire:**

Handle empty containers with care, as residues may ignite when heated. Empty containers should be rinsed with large amounts of clean water.

**Appropriate conditions:**

Store in a dry, cool, well-ventilated place, away from direct sunlight. Keep the container closed and store at room temperature. This product is hygroscopic and absorbs moisture from the air. To minimize this effect, store in airtight or sealed containers, avoiding exposure to air after opening. Keep away from incompatible materials as described in Section 10..

## Section 8. Exposure Controls/Personal Protection

**8.1. Control parameters:**

**Ingredients with workplace control parameters:**

Not established.

**Biological exposure indices:**

Not established.

**Other limits and values:**

Not established.

**8.2. Appropriate engineering controls:**

Promote mechanical ventilation and direct exhaust system to the outside. These measures help reduce exposure to the product.

UNCONTROLLED COPY

**8.3. Individual protection measures, such as personal protective equipment (PPE):**

**Eye/face protection:**
Safety glasses with side protection.

**Skin protection:**
Impermeable safety gloves, appropriate protective clothing, and safety footwear.

**Respiratory protection:**
In case of exposure to high concentrations the vapors of the product use a respiratory protection mask (full-face or half-face) with an organic vapors filter.

**Thermal hazards:**
Not required.

## Section 9. Physical and Chemical Properties

**9.1. Basic physical and Chemical properties:**

| | |
|---|---|
| **Physical state:** | Clear liquid |
| **Color:** | Colorless |
| **Odor:** | Practically odorless |
| **pH:** | Not available |
| **Particle characteristics** | Not applicable |
| **Melting point/freezing point:** | -60 °C |
| **Boiling point or initial boiling point and boiling range:** | 184 °C (1003.2 hPa) |
| **Flash point:** | 104 °C (1000.01 hPa) |
| **Flammability:** | Not flammable |
| **Lower and upper explosion limit/ flammability limit:** | Upper: ~17.4 %vol<br>Lower: ~2.4 %vol |
| **Vapor pressure:** | 0.02 mbar (25 °C) |
| **Relative vapor density:** | Not available |
| **Density:** | 1.035 - 1.037 g/cm³ (25 °C) |
| **Solubility:** | Miscible with water. Soluble in ethanol, ether, and most organic solvents. |
| **Partition coefficient n-octanol/water (log value):** | log $K_{ow}$ = -1.07 (20 °C) |
| **Auto-ignition temperature:** | > 400 °C (100.01 - 101.44 kPa) |
| **Decomposition temperature:** | Not available |
| **Kinematic viscosity:** | 42.1 mm²/s (25 °C) |

**9.2. Other information:**

| | |
|---|---|
| **Surface tension:** | 71.6 mN/m (1.01 g/L; 21.5 °C) |
| **Oxidizing properties:** | Not classified as an oxidizer |
| **Explosion hazards:** | Not explosive |

UNCONTROLLED COPY

## Section 10. Stability and Reactivity

**10.1. Reactivity:**
No hazardous reactivity is expected.

**10.2. Chemical stability:**
Stable under normal conditions of use and storage.

**10.3. Possibility of hazardous reactions:**
No dangerous reactions under normal handling conditions.

**10.4. Conditions to avoid:**
High temperatures and contact with incompatible materials.

**10.5. Incompatible materials:**
Strong acids, isocyanates, and strong oxidizing agents.

**10.6. Hazardous decomposition products:**
Not developed under normal uses. Dangerous outcomes such as carbon monoxide and carbon dioxide are formed at high temperature and in fire.

UNCONTROLLED COPY

## Section 11. Toxicological Information

**11.1. Acute toxicity:**

**Acute oral toxicity:**
$LD_{50}$: 22,000 mg/kg - rat.

**Acute inhalation toxicity:**
$LC_{50}$ - 2 h: > 317,042 mg/L - rabbit.

**Acute dermal toxicity:**
$LD_{50}$: > 5,000 mg/kg - rabbit.

**11.2. Skin corrosion/irritation:**
Based on available data the classification criteria are not met.

**11.3. Serious eye damage/irritation:**
Based on available data the classification criteria are not met.

**11.4. Respiratory or skin sensitization:**
Based on available data the classification criteria are not met.

**11.5. Germ cell mutagenicity:**
Negative for genotoxicity using in vitro and in vivo tests.

**11.6. Carcinogenicity:**
No increase in tumors was observed in rats and dogs exposed to high concentrations of propylene glycol through the diet for up to 2 years. In rats, the incidence of skin tumors did not change after lifelong dermal application.

**11.7. Reproductive toxicity:**

No adverse effects on reproductive performance were observed in male and female mice continuously exposed to high doses of propylene glycol in drinking water for up to 3 months. Study results in pregnant rats, mice, hamsters, and rabbits show that propylene glycol is neither teratogenic nor fetotoxic.

**11.8. Toxicity for specific target organ – single exposure:**

Based on available data the classification criteria are not met.

**11.9. Toxicity for specific target organ – repeated exposure:**

Long-term studies in rodents with high oral doses showed no evidence of adverse effects. However, ingestion by cats results in species-specific hematological changes.

**11.10. Aspiration hazard:**

Based on available data the classification criteria are not met.

UNCONTROLLED COPY

## Section 12. Ecological Information

**12.1. Toxicity:**

**Acute toxicity to fish:**

$LC_{50}$ - 96 h: 40,613 mg/L - *Oncorhynchus mykiss*

**Acute toxicity to daphnia and other aquatic invertebrates:**

$EC_{50}$ - 48 h: 18,340 mg/L - *Ceriodaphnia dubia*
$EC_{50}$ - 96 h: 18,800 mg/L - *Americamysis bahia*

**Acute toxicity to algae:**

$EC_{50}$ - 96 h: 19,000 mg/L - *Raphidocelis subcapitata*

**Chronic toxicity to daphnia and other aquatic invertebrates:**

NOEC - 7 d: 13,020 mg/L - *Ceriodaphnia sp*.

**12.2. Persistence and degradability:**

Easily biodegradable. Biodegradation: 72% - 100%.

**12.3. Bioaccumulative potential:**

Not bioaccumulative.
BCF: 0.09.

**12.4. Mobility in soil:**

High mobility and low adsorption potential in soil are expected.
log Kow = -1.07 (20 °C).

**12.5. Other adverse effects:**

No additional information available.

## Section 13. Disposal Considerations

**13.1. Disposal methos:**

**Product:**

The preferred options for disposal include reuse, recycling, co-processing, finding a use for a byproduct, incineration or other thermal destruction process at licensed facilities. All procedures must follow specific

operation standards in order to reduce health, safety and environmental risks. Perform co-processing, incineration or other thermal destruction process at facilities capable of minimizing or reducing air pollution emissions. The disposal must comply with federal, state, and local laws and regulations in accordance with the environmental agencies.

**Waste from residues:**
Any unused product should be put in labelled containers for waste collection and submitted for disposal. All procedures must follow specific operation standards in order to reduce health, safety and environmental risks. Perform co-processing, incineration or other thermal destruction process at facilities capable of minimizing or reducing air pollution emissions. The disposal must comply with federal, state, and local laws and regulations in accordance with the environmental agencies.

**Contaminated packaging:**
Do not cut or pierce the packaging, nor do hot work near them. Do not remove labels until the product has been fully removed and the packaging cleaned. All procedures must follow specific operation standards in order to reduce health, safety and environmental risks. Perform co-processing, incineration or other thermal destruction process at facilities capable of minimizing or reducing air pollution emissions. The disposal must comply with federal, state, and local laws and regulations in accordance with the environmental agencies.

UNCONTROLLED COPY

## Section 14. Transport Information

### 14.1. Regulations

**Land transport:**
Resolução nº 5998 de 3 de Novembro de 2022 da Agência Nacional de Transportes Terrestres (ANTT), *Atualiza o Regulamento para o Transporte Rodoviário de Produtos Perigosos, aprova suas Instruções Complementares, e dá outras providências*.

**Maritime Transport:**
IMO - *International Maritime Organization*
IMGD - *International Maritime Dangerous Goods Code*
DPC - Diretoria de Portos e Costas (transport in brazilian waters)
Normas de Autoridade Marítima (NORMAM)
NORMAM 201/DPC: Embarcações Empregadas na Navegação em Mar Aberto
NORMAM 202/DPC: Embarcações Empregadas na Navegação Interior
NORMAM 321/DPC: Homologação de Material e Certificação de Laboratórios e Sistemas de Embarque
ANTAQ - Agência Nacional de Transportes Aquaviários

**Air transport:**
ICAO - *International Civil Aviation Organization* - Techinical Instructions (TI) Doc 9284.
IATA - *International Air Transport Association - Dangerous Goods Regulation* (DGR).
ANAC - Agência Nacional de Aviação Civil - Resolução n° 129 de 8 de dezembro de 2009.
RBAC Nº 175 - (Regulamento Brasileiro da Aviação Civil) - Transporte de Artigos Perigosos em Aeronaves Civis.

| | |
|---|---|
| **UN number:** | Not classified as hazardous for transportation by any mode. |
| **UN proper shipping name** | N.A. |
| **Hazard class:** | N.A. |
| **Subsidiary hazard class:** | N.A. |
| **Packing group:** | N.A. |

## Section 15. Regulatory Information

**15.1. Specific regulation for the product:**

Decreto Federal nº 10.088, de 5 de novembro de 2019 – Anexo LX.
Norma ABNT-NBR 14725.
Lei nº 12.305, de 02 de agosto de 2010 (Política Nacional de Resíduos Sólidos).
Decreto nº 10.936, de 12 de janeiro de 2022.
Portaria MTB nº 3.214, de 08 de junho de 1978 - Norma Regulamentadora nº 26.

## Section 16. Other Information

In locations where chemical products are handled, monitoring of worker exposure should be conducted in accordance with the applicable Risk Management Program and international occupational safety guidelines. Employees who handle chemical products in general should undergo biological monitoring according to the Occupational Health and Safety Program or other applicable international standards.

The information and recommendations in this document were researched and compiled from reliable sources, the Safety Data Sheets (SDS) provided by suppliers, and applicable regulations for the product, in accordance with ABNT NBR 14725.

The data in this document refers to a specific product and may not be valid when this product is used in combination with others. DISTRIBUIDORA INDUSTRIAL PARANAENSE LTDA, based on the facts presented in this document, does not intend to establish absolute and definitive information about the product and its risks, but rather to provide guidance with information to protect its employees and clients, ensuring individual protection, continuity of operations, and environmental preservation.

UNCONTROLLED COPY

**16.1. Abbreviations and acronyms**

| | |
|---|---|
| **ABNT-NBR** | Associação Brasileira de Normas Técnicas - Norma Técnica Brasileira |
| **BCF** | Bioconcentration Factor |
| **CAS** | Chemical Abstracts Service |
| **DPC** | Diretoria de Portos e Costas |
| **$EC_{50}$** | Half maximal Effective Concentration |
| **IATA–DGR** | International Air Transport Association – Dangerous Goods Regulation |
| **IMDG** | International Maritime Dangerous Goods Code |
| **IMO** | International Maritime Organization |
| **$K_{ow}$** | Octanol-Water Partition Coefficient |
| **$LD_{50}$** | Median Lethal Dose |
| **N.A.** | Not applicable |
| **NOEC** | No Observed Effect Concentration |
| **RBAC** | Regulamento Brasileiro da Aviação Civil |
| **UN** | United Nations |