The life science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the US and Canada

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers
   
   Product name: Poly(propylene glycol)
   
   Product Number: 202304
   Brand: Aldrich
   CAS-No.: 25322-69-4

1.2 Relevant identified uses of the substance or mixture and uses advised against
   
   Identified uses: Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet
   
   Company: Sigma-Aldrich Inc.
   3050 SPRUCE ST
   ST. LOUIS MO 63103
   UNITED STATES
   
   Telephone: +1 314 771-5765
   Fax: +1 800 325-5052

1.4 Emergency telephone
   
   Emergency Phone #: 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
   
   Not a hazardous substance or mixture.

2.2 GHS Label elements, including precautionary statements
   
   Not a hazardous substance or mixture.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

SECTION 3: Composition/information on ingredients

3.1 Substances
   
   Synonyms: PPG
   Poly(propylene oxide)
   
   Formula: C3H8O2
   Aldrich - 202304
SECTION 4: First aid measures

4.1 Description of first-aid measures

If inhaled
After inhalation: fresh air.

In case of skin contact
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower.

In case of eye contact
After eye contact: rinse out with plenty of water. Remove contact lenses.

If swallowed
After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
Carbon oxides
Combustible.
Vapors are heavier than air and may spread along floors.
Forms explosive mixtures with air on intense heating.
Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters
In the event of fire, wear self-contained breathing apparatus.

5.4 Further information
Prevent fire extinguishing water from contaminating surface water or the ground water system.
SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel: Do not breathe vapors, aerosols. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

6.2 Environmental precautions
Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Storage conditions
Tightly closed.
Storage class (TRGS 510): 10: Combustible liquids

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Value</th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>polymer of 1,2-propylene glycol</td>
<td>25322-69-4</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td>USA. Workplace Environmental Exposure Levels (WEEL)</td>
</tr>
</tbody>
</table>

8.2 Exposure controls

Appropriate engineering controls
Change contaminated clothing. Wash hands after working with substance.

Personal protective equipment

Eye/face protection
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Skin protection
This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other
substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested: KCL 741 Dermatril® L

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested: KCL 741 Dermatril® L

**Respiratory protection**
Respiratory protection is not required. Where protection is desired, use multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Control of environmental exposure**
Do not let product enter drains.

### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a)</strong> Appearance</td>
<td>Form: liquid</td>
</tr>
<tr>
<td><strong>b)</strong> Odor</td>
<td>No data available</td>
</tr>
<tr>
<td><strong>c)</strong> Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td><strong>d)</strong> pH</td>
<td>No data available</td>
</tr>
<tr>
<td><strong>e)</strong> Melting point/freezing point</td>
<td>Melting point/range: &lt; -150 °C (&lt; -238 °F) - OECD Test Guideline 102</td>
</tr>
<tr>
<td><strong>f)</strong> Initial boiling point and boiling range</td>
<td>287.6 °C 549.7 °F - OECD Test Guideline 103</td>
</tr>
<tr>
<td><strong>g)</strong> Flash point</td>
<td>229.44 °C (444.99 °F) - closed cup</td>
</tr>
<tr>
<td><strong>h)</strong> Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td><strong>i)</strong> Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td><strong>j)</strong> Upper/lower flammability or explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td><strong>k)</strong> Vapor pressure</td>
<td>&lt; 0.01 hPa at 20 °C (68 °F)</td>
</tr>
<tr>
<td><strong>l)</strong> Vapor density</td>
<td>No data available</td>
</tr>
<tr>
<td><strong>m)</strong> Relative density</td>
<td>1.01 at 20 °C (68 °F) - OECD Test Guideline 109</td>
</tr>
</tbody>
</table>
n) Water solubility  insoluble
o) Partition coefficient: n-octanol/water  log Pow: 0.3 - 0.9 at 23 °C (73 °F)
p) Autoignition temperature  305 °C (581 °F)
q) Decomposition temperature  No data available
r) Viscosity  No data available
s) Explosive properties  No data available
t) Oxidizing properties  No data available

9.2 Other safety information
   Surface tension  63.62 mN/m at 20 °C (68 °F)

SECTION 10: Stability and reactivity

10.1 Reactivity
   Forms explosive mixtures with air on intense heating.
   A range from approx. 15 Kelvin below the flash point is to be rated as critical.

10.2 Chemical stability
   The product is chemically stable under standard ambient conditions (room temperature).

10.3 Possibility of hazardous reactions
   Violent reactions possible with:
   Strong oxidizing agents

10.4 Conditions to avoid
   Strong heating.

10.5 Incompatible materials
   No data available

10.6 Hazardous decomposition products
   In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects
   Acute toxicity
   LD50 Oral - Rat - > 2,000 mg/kg
   Inhalation: No data available
   LD50 Dermal - Rabbit - male - > 3,000 mg/kg
   (OECD Test Guideline 402)

   Skin corrosion/irritation
   Skin - Rabbit
   Result: No skin irritation - 24 h
Serious eye damage/eye irritation
Eyes - Rabbit
Result: No eye irritation
(Directive 67/548/EEC, Annex V, B.5.)

Respiratory or skin sensitization
in vivo assay - Mouse
Result: Does not cause skin sensitization.
(OECD Test Guideline 429)

Germ cell mutagenicity
Test Type: Ames test
Test system: S. typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Carcinogenicity
IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
NTP: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA’s list of regulated carcinogens.

Reproductive toxicity
No data available
No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

11.2 Additional Information
RTECS: TR5250000
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: Ecological information
12.1 Toxicity
Toxicity to fish static test LC50 - Danio rerio (zebra fish) - > 100 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates static test EC50 - Daphnia magna (Water flea) - 105.8 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae static test EC50 - Desmodesmus subspicatus (green algae) - > 100 mg/l - 72 h
Toxicity to bacteria
EC50 - Sludge Treatment - > 1,000 mg/l - 3 h
(OECD Test Guideline 201)

12.2 **Persistence and degradability**
Biodegradability
aerobic - Exposure time 28 d
Result: 86.6 % - Readily biodegradable.
(OECD Test Guideline 301F)

12.3 **Bioaccumulative potential**
No data available

12.4 **Mobility in soil**
No data available

12.5 **Results of PBT and vPvB assessment**
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 **Other adverse effects**
No data available

**SECTION 13: Disposal considerations**

13.1 **Waste treatment methods**

*Product*
Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself. See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

**SECTION 14: Transport information**

- **DOT (US)**
  Not dangerous goods

- **IMDG**
  Not dangerous goods

- **IATA**
  Not dangerous goods

Further information
Not classified as dangerous in the meaning of transport regulations.

**SECTION 15: Regulatory information**

- **SARA 302 Components**
  This material does not contain any components with a section 302 EHS TPQ.

- **SARA 313 Components**
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards**
No SARA Hazards

**Massachusetts Right To Know Components**
No components are subject to the Massachusetts Right to Know Act.

No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know Components**
- polymer of 1,2-propylene glycol
  - CAS-No.: 25322-69-4

**New Jersey Right To Know Components**
- polymer of 1,2-propylene glycol
  - CAS-No.: 25322-69-4

### SECTION 16: Other information

**Further information**
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. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

Copyright 2020 Sigma-Aldrich Co. LLC. License granted to make unlimited paper copies for internal use only.
The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact mlsbranding@sial.com.

Version: 6.4       Revision Date: 06/07/2021       Print Date: 12/16/2023