

Safety Data Sheet (SDS)

This safety data sheet was created pursuant to the requirements of: Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

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Version: 3

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

1.1. Product identifier

| Product Code(s) | 9549 |
|-----------------|-----------------------------------------|
| Product name | Phospho-PTEN (Ser380) (44A7) Rabbit mAb |

Contains

| Chemical name | Index No. | CAS No. |
|-----------------------|--------------|------------|
| glycerol (30-60) | Not Listed | 56-81-5 |
| sodium azide (<0.02) | 011-004-00-7 | 26628-22-8 |

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses

For Research Use Only. Not for Use in Diagnostic Procedures.

1.3. Details of the supplier of the safety data sheet

| Importer | Manufacturer |
|---------------------------------------|---------------------------------|
| Cell Signaling Technology Europe B.V. | Cell Signaling Technology, Inc. |
| Dellaertweg 9b | 3 Trask Lane |
| 2316 WZ Leiden | Danvers, MA 01923 |
| The Netherlands | United States |
| TEL: +31 (0)71 7200 200 | TEL: +1 978 867 2300 |
| FAX: +31 (0)71 891 0019 | FAX: +1 978 867 2400 |
| FAX: +31 (0)71 891 0019 | FAX: +1 978 867 2400 |

For further information, please contact

| Website | www.cellsignal.com |
|----------------|--------------------|
| E-mail Address | info@cellsignal.eu |

1.4. Emergency telephone number

Emergency telephone - §45 - (EC)1272/2008

CHEMTREC 24 hours a day, 7 days a week, 365 days a year +1 703 527 3887 (INTERNATIONAL) +1 800 424 9300 (NORTH AMERICA)

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Europe

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

This substance is classified as not hazardous according to regulation (EC) 1272/2008 [CLP].

2.2. Label elements

| Signal word None | |
|---------------------------------------------|----------------------------------------------------------------------------|
| Hazard statements None | |
| Precautionary Statements - EU (§28 None. | 3, 1272/2008) |
| 2.3. Other hazards | |
| Other hazards | May produce an allergic reaction. |
| PBT & vPvB | The product does not contain any substance(s) classified as PBT or vPvB. |
| Endocrine Disruptor Information | This product does not contain any known or suspected endocrine disruptors. |

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Chemical nature

Mixture.

| Chemical name | Weight-% | CAS No. | EC No. (Index No.) | Classification according | REACH |
|---------------|----------|------------|--------------------|---------------------------------------------------------------------------------------|-----------------------------|
| | | | | to Regulation (EC) No. 1272/2008 [CLP] | registration number |
| glycerol | 30-60 | 56-81-5 | 200-289-5 | No data available | No information available |
| sodium azide | <0.02 | 26628-22-8 | 247-852-1 | Acute Tox. 2 (H300) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) (EUH032) | No information available |

Full text of H- and EUH-phrases: see section 16 .

Acute Toxicity Estimate

No information available

Candidate List of Substances of Very High Concern for Authorization Information

This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59).

SECTION 4: First aid measures

4.1. Description of first aid measures

| Inhalation | Move to fresh air. | |
|-------------|----------------------------------------------------------------|--|
| Eye contact | Rinse thoroughly with plenty of water, also under the eyelids. | |

| Skin contact | Wash skin with soap and water. | | | |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| Ingestion | Clean mouth with water and afterwards drink plenty of water. | | | |
| 4.2. Most important sympton | ms and effects, both acute and delayed | | | |
| Symptoms | Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. | | | |
| Effects of Exposure | No information available. | | | |
| 4.3. Indication of any immed | diate medical attention and special treatment needed | | | |
| Note to physicians | Treat symptomatically. | | | |

SECTION 5: Firefighting measures

5.1. Extinguishing media

| Suitable Extinguishing Media | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. | | | |
|----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| Unsuitable extinguishing media | Do not scatter spilled material with high pressure water streams. | | | |
| 5.2. Special hazards arising from the substance or mixture | | | | |
| Specific hazards arising from the chemical | No information available. | | | |
| 5.3. Advice for firefighters | | | | |
| Special protective equipment and precautions for fire-fighters | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. | | | |

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

| Personal precautions | Avoid contact with skin, eyes and clothing. Use personal protective equipment. For personal protection see section 8. | | |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------|--|--|
| For emergency responders | Use personal protection recommended in Section 8. | | |
| 6.2. Environmental precautions | | | |
| Environmental precautions | See Section 12 for additional Ecological Information. | | |
| 6.3. Methods and material for conta | inment and cleaning up | | |
| Methods for containment | Prevent further leakage or spillage if safe to do so. | | |
| Methods for cleaning up | Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. | | |
| Prevention of secondary hazards | Clean contaminated objects and areas thoroughly observing environmental regulations. | | |

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

| 7.1. Precautions for safe handling | |
|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Advice on safe handling | Handle in accordance with good industrial hygiene and safety practice. Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. |
| General hygiene considerations | Handle in accordance with good industrial hygiene and safety practice. |
| 7.2. Conditions for safe storage, inc | cluding any incompatibilities |
| Storage Conditions | Keep container tightly closed in a dry and well-ventilated place. |
| | |
| 7.3. Specific end use(s) | |

Specific use(s) Use as a laboratory reagent.

Risk Management Methods (RMM) No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

| Chemical name | | European Union | | | |
|----------------------------|---------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------------------------------|--|
| sodium azide 26628-22-8 | | TWA 0.1 mg/m ³ STEL 0.3 mg/m ³ S* | | | |
| Chemical name | Austria | Belgium | Bulgaria | Croatia | |
| glycerol 56-81-5 | - | TWA 10 mg/m ³ | - | TWA 10 mg/m ³ | |
| sodium azide 26628-22-8 | H* STEL 0.3 mg/m ³ TWA 0.1 mg/m ³ | TWA 0.1 mg/m ³ D* Maximum Limit Value 0.3 mg/m ³ Maximum Limit Value 0.1 mg/m ³ | S* STEL 0.3 mg/m ³ TWA 0.1 mg/m ³ | S* STEL 0.3 mg/m ³ TWA 0.1 mg/m ³ | |
| Chemical name | Cyprus | Czech Republic | Denmark | Estonia | |
| glycerol 56-81-5 | - | - | - | TWA 10 mg/m ³ | |
| sodium azide 26628-22-8 | - | - | TWA 0.1 mg/m ³ STEL 0.3 mg/m ³ H* | A* Sensibilisaatorid STEL 0.3 mg/m ³ TWA 0.1 mg/m ³ | |
| Chemical name | Finland | France | Germany TRGS | Germany DFG | |
| glycerol 56-81-5 | TWA 20 mg/m ³ | TWA 10 mg/m ³ | - | TWA: 200 mg/m ³ Ceiling / Peak: 400 | |

| | | | | mg/m ³ |
|---------------------|--------------------------------------------|----------------------------|-------------------------------|---------------------------------------------------------|
| sodium azide | TWA 0.1 mg/m ³ | TWA 0.1 mg/m ³ | - | TWA: 0.2 mg/m ³ |
| 26628-22-8 | STEL 0.3 mg/m ³ | STEL 0.3 mg/m ³ | | Ceiling / Peak: 0.4 |
| | iho* | P* | | mg/m ³ |
| Chemical name | Greece | Hungary | Italy MDLPS | Italy AIDII |
| glycerol 56-81-5 | TWA 10 mg/m ³ | - | - | - |
| sodium azide | TWA 0.1 ppm | STEL 0.3mg/m ³ | TWA 0.1 mg/m ³ | - |
| 26628-22-8 | TWA 0.3 mg/m ³ | TWA 0.1mg/m ³ | STEL 0.3 mg/m ³ | |
| | STEL 0.1 ppm STEL 0.3 mg/m ³ | | Pelle* | |
| Chemical name | Ireland | Latvia | Lithuania | Luxembourg |
| sodium azide | TWA 0.1 mg/m ³ | TWA 0.1 mg/m ³ | S* | S* |
| 26628-22-8 | STEL 0.3 mg/m ³ | STEL 0.3 mg/m ³ | TWA 0.1 mg/m ³ | STEL 0.3 mg/m ³ |
| | Skin | S* | STEL 0.3 mg/m ³ | TWA 0.1 mg/m^3 |
| Chemical name | Malta | Netherlands | Norway | Poland |
| glycerol 56-81-5 | - | - | - | TWA 10 mg/m ³ |
| sodium azide | - | Huid* | TWA 0.1 mg/m ³ | TWA 0.1 mg/m ³ |
| 26628-22-8 | | STEL 0.3 mg/m ³ | STEL 0.3 mg/m ³ | STEL 0.3 mg/m ³ |
| | | TWA 0.1 mg/m ³ | | |
| Chemical name | Portugal | Romania | Slovakia | Slovenia |
| glycerol 56-81-5 | TWA 10 mg/m ³ | - | TWA 11 mg/m ³ | STEL 400 mg/m ³ TWA 200 mg/m ³ |
| sodium azide | TWA 0.1 mg/m ³ | P* | Ceiling 0.3 mg/m ³ | STEL 0.3 mg/m ³ |
| 26628-22-8 | STEL 0.3 mg/m ³ | STEL 0.3 mg/m ³ | S* | TWA 0.1 mg/m ³ |
| | Ceiling 0.29 mg/m ³ | TWA 0.1 mg/m ³ | TWA 0.1 mg/m ³ | S* |
| | Ceiling 0.11 ppm | | | |
| | C(A4) P* | | | |
| Chemical name | Spain | Sweden | Switzerland | United Kingdom |
| glycerol | TWA 10 mg/m ³ | - | SS-C** | STEL 30 mg/m ³ |
| 56-81-5 | - | | TWA 50 mg/m ³ | TWA 10 mg/m ³ |
| | | | STEL 100 mg/m ³ | - |
| sodium azide | TWA 0.1 mg/m ³ | TLV 0.1 mg/m ³ | TWA 0.2 mg/m ³ | STEL 0.3 mg/m ³ |
| 26628-22-8 | STEL 0.3 mg/m ³ | Binding STEL 0.3 | STEL 0.4 mg/m ³ | TWA 0.1 mg/m ³ |
| | S* | mg/m³ | | Skin |

Biological occupational exposure limits

This product, as supplied, contains materials that do not have reportable biological exposure limits or are not subject to the reporting requirements of the local jurisdiction.

Derived No Effect Level (DNEL) - Workers No information available

Derived No Effect Level (DNEL) - General Public No information available.

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering controls Showers, eyewash stations, and ventilation systems.

Personal Protective Equipment

Eye/face protection Safety glasses with side-shields.

| Hand protection | Impervious gloves. |
|---------------------------------|------------------------------------------------------------------------------------------------------------------|
| Skin and body protection | Wear protective gloves and protective clothing. |
| Respiratory protection | When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. |
| Thermal hazards | No information available. |
| Environmental exposure controls | No information available. |

SECTION 9: Physical and chemical properties

| <u>9.1. Information on basic physical a</u> Appearance Physical state Color Odor Odor Odor Threshold | nd chemical properties Clear Liquid Colorless No information available No information available | |
|------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|------------------|
| Property_ | Values | Remarks • Method |
| Melting point/freezing point | No information available | None known |
| Boiling point or initial boiling point | No information available | None known |
| and boiling range | | |
| Flammability | No data available | None known |
| Lower and upper explosion | | None known |
| limit/flammability limit | | |
| Lower explosion limit | No data available | |
| Upper explosion limit | No data available | |
| Flash point | No data available | None known |
| Autoignition temperature | No data available | None known |
| Decomposition Temperature VALUE | | None known |
| SADT (°C) | No data available | None known |
| рН | 7.5 | @ 20 °C |
| pH (as aqueous solution) | No data available | None known |
| Viscosity | No data available | None known |
| Viscosity, dynamic | No data available | None known |
| Solubility | No data available | None known |
| Water solubility | No data available | None known |
| Partition coefficient n-octanol/water | r No data available | None known |
| (log value) | | |
| Vapor pressure | No data available | None known |
| Density and/or relative density | No data available | None known |
| Bulk Density | No data available | |
| Liquid Density | No data available | |
| Relative vapor density | No data available | None known |
| Particle characteristics | | |
| Particle Size | No information available | |
| Particle Size Distribution | No information available | |
| 0.2 Other information | | |

9.2. Other information

9.2.1. Information with regard to physical hazard classes No information available

9.2.2. Other safety characteristics

No information available

SECTION 10: Stability and reactivity

10.1. Reactivity

| Reactivity | No information available. |
|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10.2. Chemical stability | |
| Stability | Stable under normal conditions. |
| Explosion Data Sensitivity to mechanical impact Sensitivity to static discharge | None. None. |
| 10.3. Possibility of hazardous reaction | ons |
| Possibility of hazardous reactions | None under normal processing. |
| 10.4. Conditions to avoid | |
| Conditions to avoid | Extremes of temperature and direct sunlight. Over a period of time, sodium azide may react with copper, lead, brass, or solder in plumbing systems to form an accumulation of the HIGHLY EXPLOSIVE compounds of lead azide & copper azide. |
| 10.5. Incompatible materials | |
| Incompatible materials | Strong oxidizing agents. Strong acids. |
| 10.6. Hazardous decomposition proc | <u>ducts</u> |

Hazardous Decomposition Products Nitrogen oxides (NOx).

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Information on likely routes of exposure

| Inhalation Eye contact Skin contact Ingestion | Avoid breathing vapors or mists. Avoid contact with eyes. Avoid contact with skin. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. |
|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Symptoms related to the physical, of | chemical and toxicological characteristics |
| Symptoms | Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. |

Acute toxicity No information available.

Numerical measures of toxicity No information available

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---------------|---------------------|--------------------------|----------------------|
| glycerol | = 27200 mg/kg (Rat) | > 10 g/kg (Rabbit) | > 5.85 mg/L (Rat)4 h |
| sodium azide | = 27 mg/kg (Rat) | = 20 mg/kg (Rabbit) = 50 | - |
| | | mg/kg (Rat) | |

| Delayed and immediate effects as well as chronic effects from short and long-term exposure | | | |
|--------------------------------------------------------------------------------------------|-------------------------------------------------------------------|--|--|
| Skin corrosion/irritation | Based on available data, the classification criteria are not met. | | |
| Serious eye damage/eye irritation | Based on available data, the classification criteria are not met. | | |
| Respiratory or skin sensitization | Based on available data, the classification criteria are not met. | | |
| Germ cell mutagenicity | Based on available data, the classification criteria are not met. | | |
| Carcinogenicity | Based on available data, the classification criteria are not met. | | |
| Reproductive toxicity | Based on available data, the classification criteria are not met. | | |
| STOT - single exposure | Based on available data, the classification criteria are not met. | | |
| STOT - repeated exposure | Based on available data, the classification criteria are not met. | | |
| Aspiration hazard | Based on available data, the classification criteria are not met. | | |
| 11.2.1. Endocrine disrupting properties | | | |
| Endocrine disrupting properties | Based on available data, the classification criteria are not met. | | |
| 11.2.2. Other information | | | |

Other adverse effects

No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity

The environmental impact of this product has not been fully investigated.

| Chemical name | Algae/aquatic plants | Fish | Toxicity to microorganisms | Crustacea |
|---------------|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-------------------------------|-----------------------------------------------|
| glycerol | - | LC50 51 - 57 mL/L (Oncorhynchus mykiss) 96 h | - | - |
| sodium azide | EC50 0.35 mg/L (Pseudokirchneriella subcapitata) 96 h | LC50 0.8 mg/L (Oncorhynchus mykiss) 96 h LC50 0.7 mg/L (Lepomis macrochirus) 96 h | | LC100 1 mg/L (Orconectes rusticus) 96 h |

| LC50 5.46 mg/L (Pimephales promelas) | |
|-----------------------------------------|--|
| 96 h | |

12.2. Persistence and degradability

Persistence and degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulation

No information available.

| Chemical name | Partition coefficient |
|---------------|-----------------------|
| glycerol | -1.75 |

12.4. Mobility in soil

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment Based on available data, the classification criteria are not met.

12.6. Endocrine disrupting properties

Endocrine disrupting properties Based on available data, the classification criteria are not met.

12.7. Other adverse effects

| Other adverse effects No | information available. |
|--------------------------|------------------------|
|--------------------------|------------------------|

PMT or vPvM properties Based on available data, the classification criteria are not met.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

| Waste from residues/unused products | Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Contaminated packaging | Do not reuse empty containers. |

SECTION 14: Transport information

IATA14.1UN number or ID numberNot regulated14.2UN proper shipping nameNot regulated14.3Transport hazard class(es)Not regulated14.4Packing groupNot regulated14.5Environmental hazardsNot applicable14.6Special precautions for userNone

| IMDG14.1UN number or ID number14.2UN proper shipping name14.3Transport hazard class(es)14.4Packing group14.5Environmental hazards14.6Special precautions for userSpecial precautions for user14.7Maritime transport in bulkaccording to IMO instruments | Not regulated Not regulated Not regulated Not regulated Not applicable None No information available |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| RID14.1UN number or ID number14.2UN proper shipping name14.3Transport hazard class(es)14.4Packing group14.5Environmental hazards14.6Special precautions for userSpecial precautions for user | Not regulated Not regulated Not regulated Not regulated Not applicable None |
| ADR 14.1 UN number or ID number 14.2 UN proper shipping name 14.3 Transport hazard class(es) 14.4 Packing group 14.5 Environmental hazards 14.6 Special precautions for user Special precautions for user | Not regulated Not regulated Not regulated Not regulated Not applicable None |
| ADN 14.1 UN number or ID number 14.2 UN proper shipping name 14.3 Transport hazard class(es) 14.4 Packing group 14.5 Environmental hazard 14.6 Special precautions for user Special provisions | Not regulated Not regulated Not regulated Not regulated Not applicable None |

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Chemical Prohibition Ordinance (ChemVerbotsV) Not applicable

TRGS 905

Not applicable

| Ordinance on the Incentive Tax on Volatile Organic Compounds (OVOC) SR 814.018 | Not applicable |
|--------------------------------------------------------------------------------|----------------|
| Storage of Hazardous Material | Not applicable |
| WPO (GSchV) SR 814.201; WPA (GSchG) SR 814.20 | Not applicable |
| Major Accidents Ordinance SR 814.012 | Not applicable |

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents

at work.

Authorizations and/or restrictions on use:

This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants

Not applicable

Ozone-depleting substances (ODS) Regulation (EU) 2024/590 Not applicable.

Explosives Precursors Marketing and Use (2019/1148) Not applicable

| International inventories | |
|---------------------------|--------------------------------------------------|
| TSCA 8(b) | Contact supplier for inventory compliance status |
| DSL/NDSL | Contact supplier for inventory compliance status |
| EINECS/ELINCS | Contact supplier for inventory compliance status |
| ENCS | Contact supplier for inventory compliance status |
| IECSC | Contact supplier for inventory compliance status |
| KECL | Contact supplier for inventory compliance status |
| PICCS | Contact supplier for inventory compliance status |
| AIIC | Contact supplier for inventory compliance status |
| NZIoC | Contact supplier for inventory compliance status |
| TCSI | Contact supplier for inventory compliance status |

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

- EINECS/ELINCS European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
- ENCS Japan Existing and New Chemical Substances
- **IECSC** China Inventory of Existing Chemical Substances
- KECL Korean Existing and Evaluated Chemical Substances
- **PICCS** Philippines Inventory of Chemicals and Chemical Substances
- AIIC Australian Inventory of Industrial Chemicals
- **NZIOC** New Zealand Inventory of Chemicals
- **TCSI** Taiwan Chemical Substance Inventory

15.2. Chemical safety assessment

Chemical Safety Assessment No information available

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of any hazard and/or precautionary statements referred to under Sections 2-15

H228 - Flammable solid

- H370 Causes damage to organs if inhaled
- H370 Causes damage to organs in contact with skin

H372 - Causes damage to organs through prolonged or repeated exposure if inhaled

| АССІН | American Conference of Governmental Industrial Hygienists |
|-----------|---------------------------------------------------------------------------------------------------------|
| AIDII | Italian Association of Industrial Hygienists |
| ADN | Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |
| | (Europe) |
| ADR | Agreement concerning the International Carriage of Dangerous Goods by Road (Europe) |
| AIIC | Australian Inventory of Industrial Chemicals |
| ATE | Acute Toxicity Estimate |
| ASTM | American Society for the Testing of Materials |
| bar | Biological Reference Values for Chemical Compounds in the Work Area |
| ВАТ | Biological tolerance values for occupational exposure |
| BEL | Biological exposure limits |
| bw | Body weight |
| Ceiling | Maximum limit value |
| CLP | Classification, Labelling and Packaging Regulation; Regulation (EC) No 1272/2008 |
| CMR | Carcinogen, Mutagen or Reproductive Toxicant |
| DFG | German Research Foundation |
| DOT | Department of Transportation (United States) |
| DSL | Domestic Substances List (Canada) |
| ECHA | European Chemicals Agency |
| EC Number | European Community number |
| EmS | Emergency Schedule |
| ENCS | Existing and New Chemical Substances (Japan) |
| EPA | Environmental Protection Agency |
| EWC | European Waste Codes |
| GHS | Globally Harmonized System |
| IARC | International Agency for Research on Cancer |
| ΙΑΤΑ | International Air Transport Association |
| IBC | International Code for the Construction and Equipment of Ships carrying Dangerous |
| | Chemicals in Bulk |
| ICAO | International Civil Aviation Organization |
| IECSC | Inventory of Existing Chemical Substances in China |
| IMDG | International Maritime Dangerous Goods |
| IMO | International Maritime Organization |
| ISO | International Organization for Standardization |
| KECI | Korean Existing Chemicals Inventory |
| LC50 | Lethal Concentration to 50% of a test population |
| LD50 | Lethal Dose to 50% of a test population (Median Lethal Dose) |
| MAL | Measuring Technical Hygienic Air Needs |
| MARPOL | International Convention for the Prevention of Pollution from Ships |
| MDLPS | Ministry of Labor and Social Policy |
| n.o.s. | Not Otherwise Specified |
| NOAEC | No Observed Adverse Effect Concentration |
| NOAEL | No Observed Adverse Effect Level |
| NOELR | No Observable Effect Loading Rate |
| NZIoC | New Zealand Inventory of Chemicals |
| OECD | Organization for Economic Cooperation and Development |
| OEL | Occupational exposure limits |
| РВТ | Persistent, Bioaccumulative and Toxic substance |
| PICCS | Philippines Inventory of Chemicals and Chemical Substances |
| РМТ | Persistent, Mobile and Toxic |
| PPE | Personal protective equipment |
| QSAR | Quantitative Structure Activity Relationship |
| REACH | Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH) Regulation (EC 1907/2006) |
| RID | Agreement concerning the International Carriage of Dangerous Goods by Rail (Europe) |
| SADT | Self-Accelerating Decomposition Temperature |

| r | |
|---------|-------------------------------------------------------|
| SAR | Structure-activity relationship |
| SDS | Safety Data Sheet |
| SL | Surface Limit |
| STEL | Short Term Exposure Limit |
| STOT RE | Specific target organ toxicity - Repeated exposure |
| STOT SE | Specific target organ toxicity - Single exposure |
| SVHC | Substance of very high concern |
| TCSI | Taiwan Chemical Substance Inventory |
| TDG | Transport of Dangerous Goods (Canada) |
| TRGS | Technical Rule for Hazardous Substances |
| TSCA | Toxic Substances Control Act (United States) |
| TWA | Time-Weighted Average |
| UN | United Nations |
| VOC | Volatile organic compounds |
| vPvB | Very Persistent and Very Bioaccumulative |
| vPvM | Very Persistent and Very Mobile |
| As | Allergenic substance |
| DS | Dermal Sensitizer |
| Ot | Ototoxicant |
| pOt | Ototoxicant - potential to cause hearing disorders |
| PS | Photosensitizer |
| RS | Respiratory Sensitizer |
| S | Sensitizer |
| poS | Sensitizer - capable of causing occupational asthma |
| Sa | Simple asphyxiant |
| Sd | Skin designation |
| pSd | Skin designation - potential for cutaneous absorption |
| Sdv | Skin designation - vacated |
| Sk | Skin notation |
| dSk | Skin notation - danger of cutaneous absorption |
| pSk | Skin notation - potential for cutaneous absorption |
| | |

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)

U.S. Environmental Protection Agency ChemView Database

European Food Safety Authority (EFSA)

European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)

European Chemicals Agency (ECHA) (ECHA_API)

Environmental Protection Agency

Acute Exposure Guideline Level(s) (AEGL(s))

U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

U.S. Environmental Protection Agency High Production Volume Chemicals

Food Research Journal

Hazardous Substance Database

International Uniform Chemical Information Database (IUCLID)

National Institute of Technology and Evaluation (NITE)

Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

NIOSH (National Institute for Occupational Safety and Health)

National Library of Medicine's ChemID Plus (NLM CIP)

National Library of Medicine's PubMed database (NLM PUBMED)

U.S. National Toxicology Program (NTP)

New Zealand's Chemical Classification and Information Database (CCID)

Organization for Economic Co-operation and Development Environment, Health, and Safety Publications Organization for Economic Co-operation and Development High Production Volume Chemicals Program

Organization for Economic Co-operation and Development Screening Information Data Set

World Health Organization

Revision Date: 2025-05-09

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006 Disclaimer

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<u>EU SDS version information - EGHS</u> UL release: GHS Revision 7 2025 Q1

Full text of any hazard and/or precautionary H228 - Flammable solid H370 - Causes damage to organs if inhaled H370 - Causes damage to organs statements referred to under Sections 2-15 in contact with skin H372 - Causes damage to organs through prolonged or repeated exposure if inhaled

| Classification according to Regulation (EC) No. 1272/2008 [CLP] | Specific concentration limit (SCL) |
|---------------------------------------------------------------------------------------|------------------------------------|
| Acute Tox. 2 (H300) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) (EUH032) | |