



Revision Date 20-May-2026

# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:  
US OSHA Hazard Communication Standard (29 CFR 1910.1200) and Canada WHMIS  
which includes the amended Hazardous Products Act (HPA) and the Hazardous Products  
Regulation (HPR)

Version 3

## 1. Identification

### Product identifier

**Product Name** Spray Nine® Mold & Mildew Stain Remover 32 fl.oz.

### Other means of identification

**Product Code** 15045

**Synonyms** None

### Recommended use of the chemical and restrictions on use

**Recommended Use** Liquid cleaner

**Restrictions on use** No information available

### Details of the supplier of the safety data sheet

**Manufacturer Address**  
ITW Permatex, Inc.  
6875 Parkland Blvd.  
Solon, Ohio 44139 USA  
Telephone: 1-87-Permatex  
(866) 732-9502

**May Also Be Distributed by:**  
ITW Permatex Canada  
101-2360 Bristol Circle  
Oakville, ON Canada L6H 6M5  
Telephone: (800) 924-6994

**E-mail address** mail@permatex.com

### Emergency telephone number

**Company Phone Number** 866-732-9502

**24 Hour Emergency Phone Number** Chem-Tel: 800-255-3924  
International Emergency:  
00+1+ 813-248-0585  
Contract Number: MIS0003453

**24-hour emergency phone number** No information available

## 2. Hazard(s) identification

### Classification

|                                   |             |
|-----------------------------------|-------------|
| Skin corrosion/irritation         | Category 2  |
| Serious eye damage/eye irritation | Category 2A |

### Label elements



#### Warning

##### Hazard statements

Causes skin irritation.  
Causes serious eye irritation.

##### Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling.  
Wear protective gloves, protective clothing, eye protection and face protection.

##### Precautionary Statements - Response

Specific treatment (see supplemental first aid instructions on this label).

##### Eyes

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 and attention.

##### Skin

IF ON SKIN: Wash with plenty of water and soap.  
If skin irritation occurs: Get medical advice and attention.  
Take off contaminated clothing and wash it before reuse.

1.0008 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.  
4.6008 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.  
4.6008 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).  
4.6008 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).  
4.6008 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

##### Other Information

Harmful to aquatic life.

### 3. Composition/information on ingredients

#### Substance

Not applicable.

#### Mixture

| Chemical name                                               | CAS No.    | Weight-% | Hazardous Material<br>Information Review<br>Act registry number<br>(HMIRA registry #) | Date HMIRA filed and<br>date exemption<br>granted (if applicable) |
|-------------------------------------------------------------|------------|----------|---------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| ETHOXYLATED C9-C11<br>ALCOHOLS                              | 68439-46-3 | 1-5%     | -                                                                                     | -                                                                 |
| Sodium metasilicate                                         | 6834-92-0  | 0.1-1%   | -                                                                                     | -                                                                 |
| SODIUM HYDROXIDE                                            | 1310-73-2  | 0.1-1%   | -                                                                                     | -                                                                 |
| ALKYL DIMETHYL ETHYL<br>BENZYL AMMONIUM<br>CHLORIDE C12-C14 | 68391-01-5 | 0.1-1%   | -                                                                                     | -                                                                 |
| ALKYL DIMETHYL BENZYL<br>AMMONIUM CHLORIDE<br>C12-C18       | 85409-23-0 | 0.1-1%   | -                                                                                     | -                                                                 |

## 4. First-aid measures

### Description of first aid measures

|                                    |                                                                                                                                                                                                                                                                                     |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General advice                     | Show this safety data sheet to the doctor in attendance.                                                                                                                                                                                                                            |
| Inhalation                         | Remove to fresh air. Get medical attention immediately if symptoms occur.                                                                                                                                                                                                           |
| Eye contact                        | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists. |
| Skin contact                       | Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.                                                                                                                                              |
| Ingestion                          | Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician.                                                                                                                                                                       |
| Self-protection of the first aider | Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).                                                                                                                                                                                       |

### Most important symptoms and effects, both acute and delayed

|                     |                                                                                        |
|---------------------|----------------------------------------------------------------------------------------|
| Symptoms            | Erythema (skin redness). May cause redness and tearing of the eyes. Burning sensation. |
| Effects of Exposure | No information available.                                                              |

### Indication of any immediate medical attention and special treatment needed

|                    |                        |
|--------------------|------------------------|
| Note to physicians | Treat symptomatically. |
|--------------------|------------------------|

## 5. Fire-fighting measures

|                                                                |                                                                                                                                    |
|----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Suitable Extinguishing Media                                   | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.                            |
| Large Fire                                                     | CAUTION: Use of water spray when fighting fire may be inefficient.                                                                 |
| Unsuitable extinguishing media                                 | Do not scatter spilled material with high pressure water streams.                                                                  |
| Specific hazards arising from the chemical                     | No information available.                                                                                                          |
| Explosion data                                                 |                                                                                                                                    |
| Sensitivity to mechanical impact                               | None.                                                                                                                              |
| Sensitivity to static discharge                                | None.                                                                                                                              |
| Special protective equipment and precautions for fire-fighters | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protective equipment. |

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

|                      |                                                                                                                        |
|----------------------|------------------------------------------------------------------------------------------------------------------------|
| Personal precautions | Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. |
| Other information    | Refer to protective measures listed in Sections 7 and 8.                                                               |

### Methods and material for containment and cleaning up

|                                 |                                                                                                                                            |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Methods for containment         | Prevent further leakage or spillage if safe to do so.                                                                                      |
| Methods for cleaning up         | Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly. |
| Prevention of secondary hazards | Clean contaminated objects and areas thoroughly observing environmental regulations.                                                       |

## 7. Handling and storage

### Precautions for safe handling

|                         |                                                                                                                                                                                                                             |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Advice on safe handling | Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Conditions for safe storage, including any incompatibilities

|                    |                                                                          |
|--------------------|--------------------------------------------------------------------------|
| Storage Conditions | Keep containers tightly closed in a dry, cool and well-ventilated place. |
|--------------------|--------------------------------------------------------------------------|

## 8. Exposure controls/personal protection

### Control Parameters

#### Exposure Limits

| Chemical name                 | ACGIH TLV                    | OSHA PEL                                                           | NIOSH                                                      |
|-------------------------------|------------------------------|--------------------------------------------------------------------|------------------------------------------------------------|
| SODIUM HYDROXIDE<br>1310-73-2 | Ceiling: 2 mg/m <sup>3</sup> | TWA: 2 mg/m <sup>3</sup><br>(vacated) Ceiling: 2 mg/m <sup>3</sup> | Ceiling: 2 mg/m <sup>3</sup><br>IDLH: 10 mg/m <sup>3</sup> |

| Chemical name                 | Alberta                        | British Columbia               | Ontario                        | Quebec                         |
|-------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| SODIUM HYDROXIDE<br>1310-73-2 | Ceiling: 2 mg/m <sup>3</sup> ; | Ceiling: 2 mg/m <sup>3</sup> ; | Ceiling: 2 mg/m <sup>3</sup> ; | Ceiling: 2 mg/m <sup>3</sup> ; |

| Chemical name    | Manitoba                       | New Brunswick                  | Newfoundland and<br>Labrador   | Nova Scotia                    |
|------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| SODIUM HYDROXIDE | Ceiling: 2 mg/m <sup>3</sup> ; | Ceiling: 2 mg/m <sup>3</sup> ; | Ceiling: 2 mg/m <sup>3</sup> ; | Ceiling: 2 mg/m <sup>3</sup> ; |

| Chemical name    | Nunavut                        | Prince Edward Island           | Saskatchewan                   | Yukon                          |
|------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| SODIUM HYDROXIDE | Ceiling: 2 mg/m <sup>3</sup> ; | Ceiling: 2 mg/m <sup>3</sup> ; | Ceiling: 2 mg/m <sup>3</sup> ; | Ceiling: 2 mg/m <sup>3</sup> ; |

### Appropriate engineering controls

|                      |                                                     |
|----------------------|-----------------------------------------------------|
| Engineering controls | Showers<br>Eyewash stations<br>Ventilation systems. |
|----------------------|-----------------------------------------------------|

### Individual protection measures, such as personal protective equipment

|                     |                                                     |
|---------------------|-----------------------------------------------------|
| Eye/face protection | Wear safety glasses with side shields (or goggles). |
| Hand protection     | Wear suitable gloves.                               |

|                                       |                                                                                                                                                                          |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Skin and body protection</b>       | Wear suitable protective clothing. Long sleeved clothing.                                                                                                                |
| <b>Respiratory protection</b>         | No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. |
| <b>General hygiene considerations</b> | Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes or clothing.                             |

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

|                       |                          |
|-----------------------|--------------------------|
| <b>Physical state</b> | Liquid                   |
| <b>Appearance</b>     | Yellow Liquid            |
| <b>Color</b>          | Yellow                   |
| <b>Odor</b>           | Citrus                   |
| <b>Odor threshold</b> | No information available |

| <u>Property</u>                       | <u>Values</u>     | <u>Remarks • Method</u> |
|---------------------------------------|-------------------|-------------------------|
| <b>pH</b>                             | 12.0-12.8         | Low free alkalinity     |
| <b>Melting point / freezing point</b> | No data available |                         |
| <b>Boiling point / boiling range</b>  | 100 °C / 212 °F   |                         |
| <b>Flash point</b>                    | > 95 °C / 203 °F  | Tag Closed Cup          |
| <b>Evaporation rate</b>               | < 1               | Butyl acetate = 1       |
| <b>Flammability (solid, gas)</b>      | No data available |                         |
| <b>Flammability Limit in Air</b>      |                   |                         |
| Upper flammability limit:             | No data available |                         |
| Lower flammability limit:             | No data available |                         |
| <b>Vapor pressure</b>                 | 18 mm Hg          |                         |
| <b>Vapor density</b>                  | >1                | Air = 1                 |
| <b>Relative density</b>               | 1.02 g/ml         |                         |
| <b>Water solubility</b>               | Soluble in water  |                         |
| <b>Solubility(ies)</b>                | No data available |                         |
| <b>Partition coefficient</b>          | No data available |                         |
| <b>Autoignition temperature</b>       | No data available |                         |
| <b>Decomposition temperature</b>      | No data available |                         |
| <b>Kinematic viscosity</b>            | No data available |                         |
| <b>Dynamic viscosity</b>              | No data available |                         |
| <b>Particle characteristics</b>       |                   |                         |
| Particle Size                         | No data available |                         |
| Particle Size Distribution            | No data available |                         |

### Other information

|                             |                          |
|-----------------------------|--------------------------|
| <b>Explosive properties</b> | No information available |
| <b>Oxidizing properties</b> | No information available |
| <b>Softening point</b>      | No information available |
| <b>Molecular weight</b>     | No information available |
| <b>VOC content</b>          | <0.5%                    |
| <b>Density</b>              | No information available |
| <b>Bulk density</b>         | No information available |

## 10. Stability and reactivity

|                                           |                                           |
|-------------------------------------------|-------------------------------------------|
| <b>Reactivity</b>                         | No information available.                 |
| <b>Chemical stability</b>                 | Stable under normal conditions.           |
| <b>Possibility of hazardous reactions</b> | None under normal processing.             |
| <b>Conditions to avoid</b>                | None known based on information supplied. |

**Incompatible materials** Strong acids. Strong bases. Strong oxidizing agents.

**Hazardous decomposition products** None known based on information supplied.

## 11. Toxicological information

### Information on likely routes of exposure

#### Product Information

|                     |                                                                                                                                                               |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhalation</b>   | Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract.                                                  |
| <b>Eye contact</b>  | Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain. |
| <b>Skin contact</b> | Specific test data for the substance or mixture is not available. Causes skin irritation. (based on components).                                              |
| <b>Ingestion</b>    | Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.             |

### Symptoms related to the physical, chemical and toxicological characteristics

**Symptoms** Redness. May cause redness and tearing of the eyes.

### Acute toxicity

#### Numerical measures of toxicity

#### The following ATE values have been calculated for the mixture

|                                      |                 |
|--------------------------------------|-----------------|
| <b>ATEmix (oral)</b>                 | 39,831.50 mg/kg |
| <b>ATEmix (dermal)</b>               | 99,999.00 mg/kg |
| <b>ATEmix (inhalation-gas)</b>       | 99,999.00 ppm   |
| <b>ATEmix (inhalation-vapor)</b>     | 99,999.00 mg/L  |
| <b>ATEmix (inhalation-dust/mist)</b> | 99,999.00 mg/L  |

- 1.0008 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
- 4.6008 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
- 4.6008 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
- 4.6008 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
- 4.6008 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

#### Component Information

| Chemical name                                                          | Oral LD50            | Dermal LD50             | Inhalation LC50 |
|------------------------------------------------------------------------|----------------------|-------------------------|-----------------|
| ETHOXYLATED C9-C11 ALCOHOLS<br>68439-46-3                              | = 1400 mg/kg ( Rat ) | -                       | -               |
| Sodium metasilicate<br>6834-92-0                                       | = 1153 mg/kg ( Rat ) | -                       | -               |
| SODIUM HYDROXIDE<br>1310-73-2                                          | = 325 mg/kg ( Rat )  | = 1350 mg/kg ( Rabbit ) | -               |
| ALKYL DIMETHYL ETHYL BENZYL<br>AMMONIUM CHLORIDE C12-C14<br>68391-01-5 | = 850 mg/kg ( Rat )  | = 2300 mg/kg ( Rabbit ) | -               |
| ALKYL DIMETHYL BENZYL<br>AMMONIUM CHLORIDE C12-C18<br>85409-23-0       | -                    | = 2300 mg/kg ( Rabbit ) | -               |

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

|                                          |                                                                                                                                                                   |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Skin corrosion/irritation</b>         | Classification based on data available for ingredients. Causes skin irritation.                                                                                   |
| <b>Serious eye damage/eye irritation</b> | Classification based on data available for ingredients. Causes serious eye irritation.                                                                            |
| <b>Respiratory or skin sensitization</b> | No information available.                                                                                                                                         |
| <b>Germ cell mutagenicity</b>            | No information available.                                                                                                                                         |
| <b>Carcinogenicity</b>                   | Based on available data, the classification criteria are not met.<br><br>The table below indicates whether each agency has listed any ingredient as a carcinogen. |
| <b>Reproductive toxicity</b>             | No information available.                                                                                                                                         |
| <b>STOT - single exposure</b>            | No information available.                                                                                                                                         |
| <b>STOT - repeated exposure</b>          | No information available.                                                                                                                                         |
| <b>Aspiration hazard</b>                 | No information available.                                                                                                                                         |

## 12. Ecological information

**Ecotoxicity** Harmful to aquatic life.

| Chemical name                    | Algae/aquatic plants | Fish                                          | Toxicity to microorganisms | Crustacea |
|----------------------------------|----------------------|-----------------------------------------------|----------------------------|-----------|
| Sodium metasilicate<br>6834-92-0 | -                    | LC50: =210mg/L (96h,<br>Brachydanio rerio)    | -                          | -         |
| SODIUM HYDROXIDE<br>1310-73-2    | -                    | LC50: =45.4mg/L (96h,<br>Oncorhynchus mykiss) | -                          | -         |

**Persistence and degradability** No information available.

**Bioaccumulative potential**

**Component Information**

**Other adverse effects** No information available.

## 13. Disposal considerations

### 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.

**US EPA Waste Number** Waste designations and classifications should be determined by the end user based on the application for which the product was used.

## 14. Transport information

|                   |               |
|-------------------|---------------|
| <u>DOT</u>        | Not regulated |
| <u>TDG</u>        | Not regulated |
| <u>MEX</u>        | Not regulated |
| <u>ICAO (air)</u> | Not regulated |
| <u>IATA</u>       | Not regulated |
| <u>IMDG</u>       | Not regulated |

## 15. Regulatory information

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

#### International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

#### International Inventories

|               |                |
|---------------|----------------|
| TSCA          | Complies       |
| DSL/NDSL      | Complies       |
| EINECS/ELINCS | Not determined |
| ENCS          | Not determined |
| IECSC         | Complies       |
| KECI          | Not determined |
| PICCS         | Not determined |
| AICS          | Complies       |
| NZIoC         | Not Determined |

#### **Legend:**

**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 Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing Chemicals Inventory

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

#### US Federal Regulations

##### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

##### **SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate

classifications.

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

| Chemical name                 | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|-------------------------------|-----------------------------|------------------------|---------------------------|----------------------------|
| SODIUM HYDROXIDE<br>1310-73-2 | 1000 lb                     | -                      | -                         | X                          |

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

| Chemical name                 | Hazardous Substances RQs   | Extremely Hazardous Substances RQs | Reportable Quantity (RQ)                  |
|-------------------------------|----------------------------|------------------------------------|-------------------------------------------|
| SODIUM HYDROXIDE<br>1310-73-2 | 1000 lb /<br>kg (final RQ) | -                                  | RQ 1000 lb final RQ<br>RQ 454 kg final RQ |

**US State Regulations**

**California Proposition 65**

This product contains the following Proposition 65 chemicals:

| Chemical name     | California Proposition 65               |
|-------------------|-----------------------------------------|
| ETHANOL - 64-17-5 | *Developmental (in alcoholic beverages) |

**U.S. State Right-to-Know Regulations**

| Chemical name                            | New Jersey | Massachusetts | Pennsylvania |
|------------------------------------------|------------|---------------|--------------|
| WATER<br>7732-18-5                       | -          | -             | X            |
| TETRASODIUM PYROPHOSPHATE<br>7722-88-5   | X          | X             | X            |
| SODIUM HYDROXIDE<br>1310-73-2            | X          | X             | X            |
| ETHANOL<br>64-17-5                       | X          | X             | X            |
| DIPHENYL OXIDE<br>101-84-8               | X          | X             | X            |
| Benzyl Acetate<br>140-11-4               | X          | -             | -            |
| TRISODIUM NITRILOTRIACETATE<br>5064-31-3 | -          | X             | -            |

**U.S. EPA Label Information**

**EPA Pesticide Registration Number** 6659-3

**EPA Statement**

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals.

**16. Other information**

|             |                         |                       |                           |                              |
|-------------|-------------------------|-----------------------|---------------------------|------------------------------|
| <b>NFPA</b> | <b>Health hazards</b> 2 | <b>Flammability</b> 1 | <b>Instability</b> 0      | <b>Special hazards</b> -     |
| <b>HMIS</b> | <b>Health hazards</b> 2 | <b>Flammability</b> 1 | <b>Physical hazards</b> 0 | <b>Personal protection</b> X |

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

**Legend**

SVHC: Substances of Very High Concern for Authorization:  
PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances  
vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances  
STOT: Specific Target Organ Toxicity  
ATE: Acute Toxicity Estimate  
LC50: 50% Lethal Concentration  
LD50: 50% Lethal Dose

**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

|         |                             |      |                                  |
|---------|-----------------------------|------|----------------------------------|
| TWA     | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value         | *    | Skin designation                 |
| +       | Sensitizers                 |      |                                  |

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

U.S. Agency for Toxic Substances and Disease Registry (ATSDR)  
U.S. Environmental Protection Agency ChemView Database  
European Food Safety Authority (EFSA)  
U.S. Environmental Protection Agency  
U.S. EPA 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)  
Japan 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)  
International Organization for Economic Co-operation and Development (OECD) Environment, Health, and Safety Publications  
International Organization for Economic Co-operation and Development (OECD) High Production Volume Chemicals Program  
International Organization for Economic Co-operation and Development (OECD) Screening Information Data Set  
United Nations World Health Organization (WHO)

**Revision Date** 20-May-2026

**Revision Note** No information available.

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.