# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
US - OSHA Hazard Communication Standard (29 CFR 1910.1200)

**Issuing Date** 19-May-2015 **Revision Date** 13-Dec-2022 **Revision Number 2**

## 1. Identification

**Product identifier**

**Product Name** PSR-4000 BN, PSR-4000 BN (DG), PSR-4000 BN (HV), PSR-4000 BN Black, PSR-4000 BN Blue, PSR-4000 BN Clear, PSR-4000 BN Red, PSR-4000 BN White, PSR-4000 BN Yellow, PSR-4000 HG (DG)

**Other means of identification**

**Product Code(s)** 400060, 400061, 400062, 400088, 400064, 400205, 400063, 400091, 400409, 400562, 800104, 800105

**Synonyms** None

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

**Recommended use** Solder mask part A

**Restrictions on use** For professional use only

**Details of the supplier of the safety data sheet**

**Supplier Address**
Taiyo America, Inc.
2675 Antler Drive
Carson City, NV 89701
TEL: 775-885-9959 (M-F, 8 AM - 4 PM, Pacific Time Zone)

**Email** SDSinfo@taiyo-america.com

**Emergency telephone number**

**Emergency Telephone Number** 1-800-255-3924 (USA) 1-813-248-0585 (International)

## 2. Hazard(s) identification

**Classification**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

| | |
|---|---|
| Serious eye damage/eye irritation | Category 2A |
| Germ cell mutagenicity | Category 1B |
| Carcinogenicity | Category 1B |
| Reproductive toxicity | Category 1B |
| Flammable liquids | Category 4 |

**Hazards not otherwise classified (HNOC)**
Not applicable.

**Label elements**

**Danger**

**Hazard statements**
Combustible liquid.
Causes serious eye irritation.
May cause genetic defects.
May cause cancer.
May damage fertility or the unborn child.

**Precautionary Statements - Prevention**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves/clothing and eye/face protection.
Wash face, hands and any exposed skin thoroughly after handling.
Keep away from flames and hot surfaces. - No smoking.

**Precautionary Statements - Response**
IF exposed or concerned: Get medical advice/attention.
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/attention.
In case of fire: Use dry chemical, CO2, water spray or alcohol-resistant foam to extinguish.
**Precautionary Statements - Storage**
Store locked up.
Store in a well-ventilated place. Keep cool.

**Precautionary Statements - Disposal**
Dispose of contents/container to an approved waste disposal plant.

**Other information**
Harmful to aquatic life with long lasting effects. Harmful to aquatic life.

## 3. Composition/information on ingredients

**Substance**

Not applicable.

**Mixture**

| Chemical name | CAS No | Weight-% | Trade secret |
|---|---|---|---|
| Quartz | 14808-60-7 | 10 - 30 | * |
| 2-(2-ethoxyethoxy)ethyl acetate | 112-15-2 | 10 - 30 | * |
| Titanium dioxide | 13463-67-7 | 0 - 15 | * |
| Iron manganese oxide ((Fe,Mn)2O3) | 75864-23-2 | 0 - 10 | * |
| 1-Propanone, 2-methyl-1-[4-(methylthio)phenyl]-2-(4-morpholinyl)- | 71868-10-5 | 3 - 7 | * |
| Barium sulfate | 7727-43-7 | 0 - 5 | * |

| | | | |
|---|---|---|---|
| (2-methoxymethylethoxy)propanol | 34590-94-8 | 1 - 5 | * |
| Silicon dioxide | 7631-86-9 | 0 - 5 | * |
| Copper phthalocyanine monochloride | 12239-87-1 | 0 - 1 | * |
| C.I. Pigment red 48, calcium salt | 7023-61-2 | 0 - 1 | * |
| Petroleum naphtha, light aromatic | 64742-95-6 | 0.1 - 1 | * |

*The exact percentage (concentration) of composition has been withheld as a trade secret.

## 4. First-aid measures

**Description of first aid measures**

**General advice** Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.

**Inhalation** Remove to fresh air.

**Eye contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

**Skin contact** Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

**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** Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Wear personal protective clothing (see section 8). Avoid contact with skin, eyes or clothing.

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

**Symptoms** May cause redness and tearing of the eyes. Burning sensation.

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

**Note to physicians** Treat symptomatically.

## 5. Fire-fighting measures

**Suitable Extinguishing Media** Dry chemical. Carbon dioxide (CO2). Water spray. Alcohol resistant foam.

**Unsuitable extinguishing media** None known based on information supplied.

**Specific hazards arising from the chemical** Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray.

**Explosion data**

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** Yes.

**Special protective equipment and precautions for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Take precautionary measures against static discharges. Do not touch or walk through spilled material. Avoid contact with skin, eyes or clothing.

**Other information** Refer to protective measures listed in Sections 7 and 8.

**Methods and material for containment and cleaning up**

**Methods for containment** Stop leak if you can do it without risk. Do not touch or walk through spilled material. Dike far ahead of liquid spill for later disposal.

**Methods for cleaning up** Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

## 7. Handling and storage

**Precautions for safe handling**

**Advice on safe handling** Use personal protection equipment. Do not breathe vapor or mist. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Use with local exhaust ventilation. 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. Remove contaminated clothing and shoes.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Store locked up. Keep out of the reach of children.

## 8. Exposure controls/personal protection

**Control parameters**

**Exposure Limits** The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

| Chemical name | ACGIH TLV | OSHA PEL | NIOSH |
|---|---|---|---|
| Quartz<br>14808-60-7 | TWA: 0.025 mg/m$^3$<br>respirable particulate matter | TWA: 50 µg/m$^3$<br>(vacated) TWA: 0.1 mg/m$^3$<br>respirable dust<br>: (250)/(%SiO2 + 5) mppcf<br>TWA respirable fraction<br>: (10)/(%SiO2 + 2) mg/m$^3$ | IDLH: 50 mg/m$^3$ respirable dust<br>TWA: 0.05 mg/m$^3$<br>respirable dust |

| | | | |
|---|---|---|---|
| | | TWA respirable fraction | |
| Titanium dioxide<br>13463-67-7 | TWA: 0.2 mg/m$^3$ nanoscale respirable particulate matter<br>TWA: 2.5 mg/m$^3$ finescale respirable particulate matter | TWA: 15 mg/m$^3$ total dust<br>(vacated) TWA: 10 mg/m$^3$ total dust | IDLH: 5000 mg/m$^3$<br>TWA: 2.4 mg/m$^3$ CIB 63 fine<br>TWA: 0.3 mg/m$^3$ CIB 63 ultrafine, including engineered nanoscale |
| Iron manganese oxide ((Fe,Mn)2O3)<br>75864-23-2 | TWA: 1 mg/m$^3$ Fe<br>TWA: 0.02 mg/m$^3$ Mn respirable particulate matter<br>TWA: 0.1 mg/m$^3$ Mn inhalable particulate matter | (vacated) TWA: 1 mg/m$^3$ Fe<br>(vacated) Ceiling: 5 mg/m$^3$<br>Ceiling: 5 mg/m$^3$ Mn | IDLH: 500 mg/m$^3$ Mn<br>TWA: 1 mg/m$^3$ Fe<br>TWA: 1 mg/m$^3$ Mn<br>STEL: 3 mg/m$^3$ Mn |
| Barium sulfate<br>7727-43-7 | TWA: 5 mg/m$^3$ inhalable particulate matter, particulate matter containing no asbestos and <1% crystalline silica | TWA: 15 mg/m$^3$ total dust<br>TWA: 5 mg/m$^3$ respirable fraction<br>(vacated) TWA: 10 mg/m$^3$ total dust<br>(vacated) TWA: 5 mg/m$^3$ respirable fraction | TWA: 10 mg/m$^3$ total dust<br>TWA: 5 mg/m$^3$ respirable dust |
| (2-methoxymethylethoxy)propanol<br>34590-94-8 | TWA: 50 ppm | TWA: 100 ppm<br>TWA: 600 mg/m$^3$<br>(vacated) TWA: 100 ppm<br>(vacated) TWA: 600 mg/m$^3$<br>(vacated) STEL: 150 ppm<br>(vacated) STEL: 900 mg/m$^3$<br>(vacated) S*<br>S* | IDLH: 600 ppm<br>TWA: 100 ppm<br>TWA: 600 mg/m$^3$<br>STEL: 150 ppm<br>STEL: 900 mg/m$^3$ |
| Silicon dioxide<br>7631-86-9 | - | - | IDLH: 3000 mg/m$^3$<br>TWA: 6 mg/m$^3$ |
| Copper phthalocyanine monochloride<br>12239-87-1 | TWA: 1 mg/m$^3$ Cu dust and mist | - | IDLH: 100 mg/m$^3$ Cu dust and mist<br>TWA: 1 mg/m$^3$ Cu dust and mist |

**Appropriate engineering controls**

**Engineering controls**

Showers
Eyewash stations
Ventilation systems.

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

**Eye/face protection**

Tight sealing safety goggles.

**Hand protection**

Wear suitable gloves.

**Skin and body protection**

Wear suitable protective clothing.

**Respiratory protection**

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**Environmental exposure controls**

Avoid release to the environment. Prevent further leakage or spillage if safe to do so.

**General hygiene considerations**

Do not eat, drink or smoke when using this product. Contaminated work clothing must not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection.

## 9. Physical and chemical properties

**Information on basic physical and chemical properties**

| | |
|---|---|
| **Appearance** | |
| **Physical state** | Liquid |
| **Color** | Varies |
| **Odor** | Mild solvent |
| **Odor threshold** | No data available |

| Property | Values | Remarks • Method |
|---|---|---|
| **pH** | | No data available |
| **Melting point / freezing point** | | No data available |
| **Initial boiling point and boiling range** | | No data available |
| **Flash point** | 74 °C / 165.2 °F | Seta Closed Cup |
| **Evaporation rate** | | No data available |
| **Flammability** | | No data available |
| **Flammability Limit in Air** | | |
| **Upper flammability or explosive limits** | | No data available |
| **Lower flammability or explosive limits** | | No data available |
| **Vapor pressure** | | No data available |
| **Vapor density** | | No data available |
| **Relative density** | 1.35 | |
| **Water solubility** | | No data available |
| **Solubility(ies)** | | No data available |
| **Partition coefficient** | | No data available |
| **Autoignition temperature** | | No data available |
| **Decomposition temperature** | | No data available |
| **Kinematic viscosity** | | No data available |
| **Dynamic viscosity** | | No data available |

**Other information**

| | |
|---|---|
| **Explosive properties** | No information available |
| **Oxidizing properties** | No information available |
| **Softening point** | No information available |
| **Molecular weight** | No information available |
| **VOC Content (%)** | 26 |
| **Liquid Density** | No information available |
| **Bulk density** | No information available |

## 10. Stability and reactivity

**Reactivity** None under normal use conditions.

**Chemical stability** Stable under normal conditions.

**Possibility of hazardous reactions** None under normal processing.

**Conditions to avoid** Heat, flames and sparks.

**Incompatible materials** None known based on information supplied.

**Hazardous decomposition products** Carbon monoxide. Carbon dioxide (CO2). Sulfur oxides.

## 11. Toxicological information

**Information on likely routes of exposure**

**Product Information**

**Inhalation** Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract.

**Eye contact** Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.

**Skin contact** Specific test data for the substance or mixture is not available. May cause irritation. Prolonged contact may cause redness and irritation.

**Ingestion** 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** May cause redness and tearing of the eyes.

**Acute toxicity**

**Numerical measures of toxicity**

**Component Information**

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---|---|---|---|
| 2-(2-ethoxyethoxy)ethyl acetate<br>112-15-2 | = 11 g/kg ( Rat ) | = 15100 mg/kg ( Rabbit ) | - |
| Titanium dioxide<br>13463-67-7 | > 10000 mg/kg ( Rat ) | - | = 5.09 mg/L ( Rat ) 4 h |
| 1-Propanone, 2-methyl-1-[4-(methylthio)phenyl ]-2-(4-morpholinyl)-<br>71868-10-5 | - | > 2000 mg/kg ( Rat ) | - |
| Barium sulfate<br>7727-43-7 | = 307000 mg/kg ( Rat ) | - | - |
| (2-methoxymethylethoxy)propanol<br>34590-94-8 | = 5.35 g/kg ( Rat ) | = 9500 mg/kg ( Rabbit ) | - |
| Silicon dioxide<br>7631-86-9 | = 7900 mg/kg ( Rat ) | > 5000 mg/kg ( Rabbit ) | - |
| C.I. Pigment red 48, calcium salt<br>7023-61-2 | > 5000 mg/kg ( Rat ) | > 2500 mg/kg ( Rat ) | - |
| Petroleum naphtha, light aromatic<br>64742-95-6 | = 8400 mg/kg ( Rat ) | > 2000 mg/kg ( Rabbit ) | = 3400 ppm ( Rat ) 4 h |

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

**Skin corrosion/irritation** May cause skin irritation.

**Serious eye damage/eye irritation** Classification based on data available for ingredients. Causes serious eye irritation.

**Respiratory or skin sensitization** No information available.

**Germ cell mutagenicity** Contains a known or suspected mutagen. Classification based on data available for ingredients. May cause genetic defects.

**Carcinogenicity** Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Chemical name | ACGIH | IARC | NTP | OSHA |
|---|---|---|---|---|
| Quartz<br>14808-60-7 | A2 | Group 1 | Known | X |
| Titanium dioxide<br>13463-67-7 | A3 | Group 2B | - | X |
| Silicon dioxide<br>7631-86-9 | - | Group 3 | - | - |

**Legend**

**ACGIH (American Conference of Governmental Industrial Hygienists)**
A2 - Suspected Human Carcinogen
A3 - Animal Carcinogen
**IARC (International Agency for Research on Cancer)**
Group 1 - Carcinogenic to Humans
Group 2B - Possibly Carcinogenic to Humans
Group 3 - Not Classifiable as to Carcinogenicity in Humans
**NTP (National Toxicology Program)**
Known - Known Carcinogen
**OSHA (Occupational Safety and Health Administration of the US Department of Labor)**
X - Present

**Reproductive toxicity** Contains a known or suspected reproductive toxin. Classification based on data available for ingredients. May damage fertility or the unborn child.

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Target organ effects** Liver. Kidney. Respiratory system. Eyes. Skin. Central nervous system. Blood. Gastrointestinal tract (GI). Lungs.

**Aspiration hazard** No information available.

**Other adverse effects** No information available.

**Interactive effects** No information available.

## 12. Ecological information

**Ecotoxicity** Harmful to aquatic life with long lasting effects.

| Chemical name | Algae/aquatic plants | Fish | Toxicity to microorganisms | Crustacea |
|---|---|---|---|---|
| 1-Propanone, 2-methyl-1-[4-(methylthio)phenyl]-2-(4-morpholinyl)-<br>71868-10-5 | - | LC50: =9mg/L (96h, Danio rerio) | - | - |

| | | | | |
|---|---|---|---|---|
| (2-methoxymethylethoxy)propanol<br>34590-94-8 | - | LC50: >10000mg/L (96h, Pimephales promelas) | - | LC50: =1919mg/L (48h, Daphnia magna) |
| Silicon dioxide<br>7631-86-9 | EC50: =440mg/L (72h, Pseudokirchneriella subcapitata) | LC50: =5000mg/L (96h, Brachydanio rerio) | - | EC50: =7600mg/L (48h, Ceriodaphnia dubia) |
| C.I. Pigment red 48, calcium salt<br>7023-61-2 | - | LC50: >100mg/L (96h, Danio rerio) | - | - |
| Petroleum naphtha, light aromatic<br>64742-95-6 | - | LC50: =9.22mg/L (96h, Oncorhynchus mykiss) | - | EC50: =6.14mg/L (48h, Daphnia magna) |

**Persistence and degradability** No information available.

**Bioaccumulation**

**Component Information**

| Chemical name | Partition coefficient |
|---|---|
| 2-(2-ethoxyethoxy)ethyl acetate<br>112-15-2 | 0.74 |
| 1-Propanone, 2-methyl-1-[4-(methylthio)phenyl]-2-(4-morpholinyl)-<br>71868-10-5 | 3.09 |
| (2-methoxymethylethoxy)propanol<br>34590-94-8 | 0.35 |
| C.I. Pigment red 48, calcium salt<br>7023-61-2 | -0.75 |

**Other adverse effects** No information available.

## 13. Disposal considerations

**Waste treatment methods**

**Waste from residues/unused products** Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.

**Contaminated packaging** Do not reuse empty containers.

**California Hazardous Waste Status** This product contains one or more substances that are listed with the State of California as a hazardous waste.

## 14. Transport information

**DOT** According to 49 CFR §173.150(f)(2), this material should reclassified as NA1993, Combustible Liquid, NOS if it is shipped in bulk

**IATA** Not regulated

**IMDG** Not regulated

## 15. Regulatory information

**International Inventories**

Contact supplier for inventory compliance status

**US Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

| Chemical name | SARA 313 - Threshold Values % |
|---|---|
| 2-(2-ethoxyethoxy)ethyl acetate - 112-15-2 | 1.0 |
| Iron manganese oxide ((Fe,Mn)2O3) - 75864-23-2 | 1.0 |
| (2-methoxymethylethoxy)propanol - 34590-94-8 | 1.0 |
| Copper phthalocyanine monochloride - 12239-87-1 | 1.0 |

**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 contains the following substances which are regulated 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 |
|---|---|---|---|---|
| Copper phthalocyanine monochloride 12239-87-1 | - | 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.

**US State Regulations**

**California Proposition 65**

This product contains the following Proposition 65 chemicals:

| Chemical name | California Proposition 65 |
|---|---|
| Quartz - 14808-60-7 | Carcinogen |
| Titanium dioxide - 13463-67-7 | Carcinogen |

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

| Chemical name | New Jersey | Massachusetts | Pennsylvania |
|---|---|---|---|
| Quartz 14808-60-7 | X | X | X |
| 2-(2-ethoxyethoxy)ethyl acetate 112-15-2 | X | - | X |
| Titanium dioxide | X | X | X |

| | | | |
|---|---|---|---|
| 13463-67-7 | | | |
| Iron manganese oxide ((Fe,Mn)2O3) 75864-23-2 | X | - | X |
| Barium sulfate 7727-43-7 | X | X | X |
| (2-methoxymethylethoxy)propanol 34590-94-8 | X | X | X |
| Silicon dioxide 7631-86-9 | - | X | X |
| Copper phthalocyanine monochloride 12239-87-1 | X | - | X |
| Green/Blue Pigments | X | - | X |
| C.I. Pigment Blue 15 147-14-8 | X | - | X |

**U.S. EPA Label Information**

**EPA Pesticide Registration Number** Not applicable

## 16. Other information

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **NFPA** | **Health hazards** 2 | **Flammability** 2 | **Instability** 0 | **Special hazards** - |
| **HMIS** | **Health hazards** 2 * | **Flammability** 2 | **Physical hazards** 0 | **Personal protection** X |

*Chronic Hazard Star Legend* ** = Chronic Health Hazard*

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

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

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

**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)
EPA (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)
Japan GHS Classification
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)
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

| | |
|---|---|
| **Issuing Date** | 19-May-2015 |
| **Revision Date** | 13-Dec-2022 |
| **Revision Note** | Updated Contact Information |

**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.**

**End of Safety Data Sheet**