

# SAFETY DATA SHEET

Issuing Date 24-May-2015

Revision Date 11-Jan-2023

Revision Number 3

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

### GHS product identifier

Product Name PSR-4000 LDI (US), PSR-4000 LDI (US) Black, PSR-4000 LDI (US) Red, PSR-4000 LDI (US) Blue, PSR-4000 LDI (US) Clear

### Other means of identification

Product Code(s) 800013, 800039, 800027, 800082, 800038

Synonyms None

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

Recommended Use Solder mask part A

Uses advised against No information available

### Supplier's details

#### Supplier Address

Taiyo America, Inc.  
2675 Antler Drive  
Carson City, NV 89701  
TEL: 775-885-9959 (M-F 8-4 PDT)

Email SDSinfo@taiyo-america.com

### Emergency telephone number

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

## 2. HAZARDS IDENTIFICATION

### Classification

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

Skin Sensitization	Category 1
Reproductive Toxicity	Category 1B

### GHS Label elements, including precautionary statements

#### Emergency Overview

Signal Word Danger

#### Hazard Statements

- Causes mild skin irritation
- May cause an allergic skin reaction
- May damage fertility or the unborn child



**Appearance** Various **Physical State** Viscous liquid. **Odor** Mild Solvent

**Precautionary Statements**

**Prevention**

- Avoid breathing dust/fume/gas/mist/vapors/spray.
- Contaminated work clothing should not be allowed out of the workplace.
- Wear protective gloves.
- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Use personal protective equipment as required.

**General Advice**

- If exposed or concerned: Get medical attention/advice
- Specific treatment (see supplemental first aid instructions on this label)

**Skin**

- IF ON SKIN: Wash with plenty of soap and water.
- If skin irritation or rash occurs: Get medical advice/attention.
- Wash contaminated clothing before reuse.

**Storage**

- Store locked up.

**Disposal**

- Dispose of contents/container to an approved waste disposal plant.

**Hazard Not Otherwise Classified (HNOC)**

Not applicable

**Other information**

Toxic to aquatic life with long lasting effects

97.0276% of the mixture consists of ingredient(s) of unknown toxicity.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS-No	Weight %	Trade secret
Barium sulfate	7727-43-7	10-30	*
Iron manganese oxide ((Fe,Mn)2O3)	75864-23-2	0-15	*
Dipropylene glycol monomethyl ether	34590-94-8	0.10	*
Talc	14807-96-6	1-5	*
Silicon dioxide	7631-86-9	1-5	*
Trimethylolpropane triacrylate	15625-89-5	1-5	*
1-Propanone,	71868-10-5	0.1-1	*
2-methyl-1-[4-(methylthio)phenyl]-2-(4-morpholinyl)-			
Titanium dioxide	13463-67-7	0-0.5	*

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

**4. FIRST AID MEASURES**

**Description of necessary first-aid measures**

<b>General Advice</b>	If symptoms persist, call a physician. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing.
<b>Eye Contact</b>	Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a physician.
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Consult a physician if necessary.
<b>Inhalation</b>	Move to fresh air. If symptoms persist, call a physician. If breathing is difficult, give oxygen.
<b>Ingestion</b>	Rinse mouth. Do NOT induce vomiting. Drink plenty of water. If symptoms persist, call a physician.
<b>Protection of First-aiders</b>	Use personal protective equipment. Avoid contact with skin, eyes and clothing.

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

**Most Important Symptoms/Effects** May cause allergic skin reaction.

**Indication of immediate medical attention and special treatment needed, if necessary**

**Notes to Physician** Treat symptomatically.

**5. FIRE-FIGHTING MEASURES**

**Suitable Extinguishing Media**

Water spray. Carbon dioxide (CO<sub>2</sub>). Dry powder. Dry chemical.

**Unsuitable Extinguishing Media** No information available.

**Specific Hazards Arising from the Chemical**

No information available.

**Explosion Data**

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**6. ACCIDENTAL RELEASE MEASURES**

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

**Personal Precautions** Use personal protective equipment. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.

**Environmental Precautions**

**Environmental Precautions** Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. Prevent entry into waterways, sewers, basements or confined areas. Avoid release to the environment. See Section 12 for additional Ecological Information.

**Methods and materials for containment 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. Clean contaminated surface thoroughly.

**7. HANDLING AND STORAGE**

**Precautions for safe handling**

**Handling** Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not breathe vapors or spray mist. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Do not take internally.

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

**Storage** Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children.

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

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Control parameters**

**Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Barium sulfate 7727-43-7	TWA: 5 mg/m <sup>3</sup> inhalable fraction, particulate matter containing no asbestos and <1% crystalline silica	TWA: 15 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction (vacated) TWA: 10 mg/m <sup>3</sup> total dust (vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction	TWA: 10 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable dust
Iron manganese oxide ((Fe,Mn)2O3) 75864-23-2	TWA: 1 mg/m <sup>3</sup> Fe TWA: 0.2 mg/m <sup>3</sup> Mn	(vacated) TWA: 1 mg/m <sup>3</sup> Fe (vacated) Ceiling: 5 mg/m <sup>3</sup> Ceiling: 5 mg/m <sup>3</sup> Mn	IDLH: 500 mg/m <sup>3</sup> Mn TWA: 1 mg/m <sup>3</sup> Fe TWA: 1 mg/m <sup>3</sup> Mn STEL: 3 mg/m <sup>3</sup> Mn
Dipropylene glycol monomethyl ether 34590-94-8	STEL: 150 ppm TWA: 100 ppm S*	TWA: 100 ppm TWA: 600 mg/m <sup>3</sup> (vacated) TWA: 100 ppm (vacated) TWA: 600 mg/m <sup>3</sup> (vacated) STEL: 150 ppm (vacated) STEL: 900 mg/m <sup>3</sup> (vacated) S*	IDLH: 600 ppm TWA: 100 ppm TWA: 600 mg/m <sup>3</sup> STEL: 150 ppm STEL: 900 mg/m <sup>3</sup>
Talc 14807-96-6	TWA: 2 mg/m <sup>3</sup>	(vacated) TWA: 2 mg/m <sup>3</sup>	IDLH: 1000 mg/m <sup>3</sup> containing no asbestos and <1% quartz TWA: 2 mg/m <sup>3</sup>
Silicon dioxide 7631-86-9	10 mg/m <sup>3</sup>	20 mppcf TWA; ((80)/(% SiO2) mg/m <sup>3</sup> )	IDLH: 3000 mg/m <sup>3</sup> TWA: 6 mg/m <sup>3</sup>
Titanium dioxide 13463-67-7	TWA: 10 mg/m <sup>3</sup>	TWA: 15 mg/m <sup>3</sup> total dust (vacated) TWA: 10 mg/m <sup>3</sup> total dust	IDLH: 5000 mg/m <sup>3</sup>

**Appropriate engineering controls**

**Engineering Measures** Showers  
Eyewash stations  
Ventilation systems

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

**Eye/Face Protection** Safety glasses with side-shields.  
**Skin and Body Protection** Long sleeved clothing. Protective gloves.  
**Respiratory Protection** In case of inadequate ventilation wear respiratory protection. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.

**Hygiene Measures**

When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing. Keep away from food, drink and animal feeding stuffs. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Information on basic physical and chemical properties**

<b>Physical State</b>	Viscous liquid.	<b>Appearance</b>	Various.
<b>Odor</b>	Mild Solvent.	<b>Odor Threshold</b>	No information available.

<u>Property</u>	<u>Values</u>	<u>Remarks/ - Method</u>
<b>pH</b>	No data available	None known
<b>Melting Point/Range</b>	No data available	None known
<b>Boiling Point/Boiling Range</b>	No data available	None known
<b>Flash Point</b>	100 °C	None known
<b>Evaporation rate</b>	No data available	None known
<b>Flammability (solid, gas)</b>	No data available	None known
<b>Flammability Limits in Air</b>		
<b>upper flammability limit</b>	No data available	
<b>lower flammability limit</b>	No data available	
<b>Vapor Pressure</b>	No data available	None known
<b>Vapor Density</b>	No data available	None known
<b>Specific Gravity</b>	No data available	None known
<b>Water Solubility</b>	No data available	None known
<b>Solubility in other solvents</b>	No data available	None known
<b>Partition coefficient: n-octanol/water</b>	No data available	None known
<b>Autoignition Temperature</b>	No data available	None known
<b>Decomposition Temperature</b>	No data available	None known
<b>Viscosity</b>	No data available	None known
<b>Flammable Properties</b>	Combustible material: may burn but does not ignite readily.	
<b>Explosive Properties</b>	No data available	
<b>Oxidizing Properties</b>	No data available	

**Other information**

<b>VOC Content (%)</b>	29
<b>VOC (g/l)</b>	395

**10. STABILITY AND REACTIVITY**

**Reactivity**

No data available.

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of hazardous reactions**

None under normal processing.

**Hazardous Polymerization**

Hazardous polymerization does not occur.

**Conditions to avoid**

Incompatible products.

**Incompatible materials**

Strong oxidizing agents. Strong acids. Strong bases.

**Hazardous decomposition products**

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Sulfur oxides.

## 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure****Product Information**

**Inhalation** There is no data available for this product.  
**Eye Contact** There is no data available for this product.  
**Skin Contact** May cause allergic skin reaction  
**Ingestion** There is no data available for this product.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Naphtha (petroleum), heavy aromatic	> 5000 mg/kg ( Rat )	> 2 mL/kg ( Rabbit )	> 590 mg/m <sup>3</sup> ( Rat ) 4 h
Dipropylene glycol monomethyl ether	= 5230 mg/kg ( Rat )	= 9500 mg/kg ( Rabbit )	-
Silicon dioxide	> 5000 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	>2.2 mg/L ( Rat ) 4 h
Trimethylolpropane triacrylate	> 5000 mg/kg ( Rat )	= 5000 mg/kg ( Rabbit )	-

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

**Symptoms** No information available.

**Delayed and immediate effects and also chronic effects from short and long term exposure**

**Sensitization** May cause sensitization of susceptible persons. May cause sensitization by skin contact.  
**Mutagenic Effects** No information available.  
**Carcinogenicity** This product contains titanium dioxide in a non-respirable form. Inhalation of titanium dioxide is unlikely to occur from exposure to this product.

Chemical Name	ACGIH	IARC	NTP	OSHA
Silicon dioxide		Group 3		
Titanium dioxide		Group 2B		X

**IARC: (International Agency for Research on Cancer)**

Group 2B - Possibly Carcinogenic to Humans

Group 3 - Not Classifiable as to its Carcinogenicity to Humans

**OSHA: (Occupational Safety & Health Administration)**

X - Present

**Reproductive Toxicity** Contains a known or suspected reproductive toxin. 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 (CNS). Blood. Gastrointestinal tract (GI).  
**Aspiration Hazard** No information available.

**Numerical measures of toxicity - Product**

**Acute Toxicity** 97.0276% of the mixture consists of ingredient(s) of unknown toxicity.

*The following values are calculated based on chapter 3.1 of the GHS document:*

**LD50 Oral** 6121 mg/kg; Acute toxicity estimate

**LD50 Dermal** 86979 mg/kg; Acute toxicity estimate

**Inhalation**

**dust/mist** 22 mg/L; Acute toxicity estimate  
**Vapor** 89 mg/L; Acute toxicity estimate

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

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

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Naphtha (petroleum), heavy aromatic 64742-94-5	EC50 72 h: = 2.5 mg/L (Skeletonema costatum)	LC50 96 h: = 19 mg/L static (Pimephales promelas) LC50 96 h: = 2.34 mg/L (Oncorhynchus mykiss) LC50 96 h: = 1740 mg/L static (Lepomis macrochirus) LC50 96 h: = 45 mg/L flow-through (Pimephales promelas) LC50 96 h: = 41 mg/L (Pimephales promelas)		EC50 48 h: = 0.95 mg/L (Daphnia magna)
Dipropylene glycol monomethyl ether 34590-94-8		LC50 96 h: > 10000 mg/L static (Pimephales promelas)		LC50 48 h: = 1919 mg/L (Daphnia magna)
Talc 14807-96-6		LC50 96 h: > 100 g/L semi-static (Brachydanio rerio)		
Silicon dioxide 7631-86-9	EC50 72 h: = 440 mg/L (Pseudokirchneriella subcapitata)	LC50 96 h: = 5000 mg/L static (Brachydanio rerio)		EC50 48 h: = 7600 mg/L (Ceriodaphnia dubia)

**Persistence and Degradability** No information available.

**Bioaccumulation**

Chemical Name	Log Pow
Dipropylene glycol monomethyl ether	-0.064

**Other Adverse Effects**

No information available.

**13. DISPOSAL CONSIDERATIONS**

**Waste Disposal Methods** Dispose of in accordance with federal, state, and local regulations

**Contaminated Packaging** Do not re-use empty containers.

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Naphthalene - 91-20-3	U165	Included in waste streams: F024, F025, F034, F039, K001, K035, K060, K087, K145		U165

**14. TRANSPORT INFORMATION**

**Note:** Not regulated in quantities less than 5 liter per individual container. See IATA SP A197, IMDG 2.10.2.7 and ADR SP 375.

**DOT** Not regulated

**TDG**

**UN-Number** UN3082  
**Proper Shipping Name** Environmentally hazardous substance, liquid, n.o.s.

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<b>Hazard Class</b>	9
<b>Packing Group</b>	III
<b>Description</b>	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Naphtha (petroleum), heavy aromatic), 9, III, Marine Pollutant

**MEX**

<b>UN-Number</b>	UN3082
<b>Proper Shipping Name</b>	Environmentally hazardous substance, liquid, n.o.s.
<b>Hazard Class</b>	9
<b>Packing Group</b>	III
<b>Description</b>	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Naphtha (petroleum), heavy aromatic), 9, III

**ICAO**

<b>UN-Number</b>	UN3082
<b>Proper shipping name</b>	Environmentally hazardous substance, liquid, n.o.s.
<b>Hazard Class</b>	9
<b>Packing Group</b>	III
<b>Description</b>	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Naphtha (petroleum), heavy aromatic), 9, III

**IATA**

<b>UN-Number</b>	UN3082
<b>Proper Shipping Name</b>	Environmentally hazardous substance, liquid, n.o.s.
<b>Hazard Class</b>	9
<b>Packing Group</b>	III
<b>ERG Code</b>	9L
<b>Description</b>	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Naphtha (petroleum), heavy aromatic), 9, III

**IMDG/IMO**

<b>UN-Number</b>	UN3082
<b>Proper Shipping Name</b>	Environmentally hazardous substance, liquid, n.o.s.
<b>Hazard Class</b>	9
<b>Packing Group</b>	III
<b>EmS No.</b>	F-A, S-F
<b>Description</b>	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Naphtha (petroleum), heavy aromatic), 9, III, Marine Pollutant

**RID**

<b>UN-Number</b>	UN3082
<b>Proper Shipping Name</b>	Environmentally hazardous substance, liquid, n.o.s.
<b>Hazard Class</b>	9
<b>Packing Group</b>	III
<b>Classification Code</b>	M6
<b>Description</b>	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Naphtha (petroleum), heavy aromatic), 9, III

**ADR**

<b>UN-Number</b>	UN3082
<b>Proper Shipping Name</b>	Environmentally hazardous substance, liquid, n.o.s.
<b>Hazard Class</b>	9
<b>Packing Group</b>	III
<b>Classification Code</b>	M6
<b>Tunnel Restriction Code</b>	(E)
<b>Description</b>	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Naphtha (petroleum), heavy aromatic), 9, III, (E)

**ADN**

<b>UN-No</b>	UN3082
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<b>Proper Shipping Name</b>	Environmentally hazardous substance, liquid, n.o.s.
<b>Hazard Class</b>	9
<b>Packing Group</b>	III
<b>Classification Code</b>	M6
<b>Special Provisions</b>	274, 335, 601
<b>Description</b>	UN3082, Environmentally hazardous substance, liquid, n.o.s. (1-Propanone, 2-methyl-1-[4-(methylthio)phenyl]-2-(4-morpholinyl)-, Naphthalene), 9, III
<b>Limited Quantity</b>	5 L

## 15. REGULATORY INFORMATION

### International Inventories

<b>TSCA</b>	Complies
<b>EINECS</b>	Complies
<b>ELINCS</b>	Complies

### Legend

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

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

### U.S. Federal Regulations

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	CAS-No	Weight %	SARA 313 - Threshold Values %
Diethylene glycol monoethyl ether acetate	112-15-2	10-30	1.0

### SARA 311/312 Hazard Categories

<b>Acute Health Hazard</b>	Yes
<b>Chronic Health Hazard</b>	Yes
<b>Fire Hazard</b>	No
<b>Sudden Release of Pressure Hazard</b>	No
<b>Reactive Hazard</b>	No

### 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).

### 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.

### U.S. State Regulations

#### California Proposition 65

This product contains the following Proposition 65 chemicals:

Chemical Name	CAS-No	California Prop. 65
Titanium dioxide	13463-67-7	Carcinogen
Naphthalene	91-20-3	Carcinogen

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

"X" designates that the ingredients are listed on the state right to know list.

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Illinois	Rhode Island
Barium sulfate	X	X	X		

Dipropylene glycol monomethyl ether	X	X	X	X	X
Talc	X	X	X		X
Melamine	X	X	X		
Titanium dioxide	X	X	X	-	X
Phosphoric acid	X	X	X		X
1,2,4 Trimethylbenzene	X	X	X	X	X

**U.S. EPA Label Information**

EPA Pesticide Registration Number Not applicable

**16. OTHER INFORMATION**

<b><u>NFPA</u></b>	Health Hazard 2	Flammability 1	Instability 0	Physical and Chemical Hazards -
<b><u>HMIS</u></b>	Health Hazard 2*	Flammability 1	Physical Hazard 0	Personal Protection X

*\*Indicates a chronic health hazard.*

**Prepared By** Product Stewardship  
 23 British American Blvd.  
 Latham, NY 12110  
 1-800-572-6501

**Issuing Date** 24-May-2015  
**Revision Date** 11-Jan-2023  
**Revision Note** Updated Contact Information

**General Disclaimer**

The information provided on this SDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

**End of Safety Data Sheet**