

SAFETY DATA SHEET

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Revision Number 1

This document complies with the US OSHA Hazard Communication Standard (29 CFR 1910.1200), Canada WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR), and Mexico's NMX-R-019-SC-2011.

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

GHS product identifier

Product Name PSR-4000 SW01TA

Other means of identification

Product Code(s) 810000

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Solder Mask

Uses advised against No information available

Supplier's details

Initial Supplier
Canadian address required

Supplier Address
Taiyo America, Inc.
2675 Antler Drive
Carson City, NV 89701
TEL: 775-885-9959

Emergency telephone number

Emergency Telephone Number 775-885-9959

2. HAZARDS IDENTIFICATION

Classification

This product is considered hazardous according to the criteria set within the US OSHA Hazard Communication Standard (29 CFR 1910.1200), Canada WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR), and Mexico's NMX-R-019-SC-2011.

Skin Sensitization	Category 1
Reproductive Toxicity	Category 2
Flammable liquids	Category 4

Label Elements

Warning



Hazard Statements

May cause an allergic skin reaction
 Suspected of damaging fertility or the unborn child
 Combustible liquid.

Physical and Health Hazards Not Otherwise Classified

Not applicable.

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.
- Keep away from heat/sparks/open flames/hot surfaces - No smoking.

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.

Fire

- In case of fire: Use CO2, dry chemical, or foam for extinction.

Storage

- Store locked up.
- Store in a well-ventilated place. Keep cool.

Disposal

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

Other information

Harmful to aquatic life with long lasting effects.

67.33% of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Titanium dioxide	13463-67-7	40.18	-	-
Dipropylene glycol monomethyl ether	34590-94-8	25.35	-	-
Talc	14807-96-6	2.99	-	-
Silicon dioxide	7631-86-9	2.72	-	-
Aluminum hydroxide	21645-51-2	1-5	-	-
Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide	75980-60-8	1.2	-	-
Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)-	162881-26-7	0.48	-	-

4. FIRST AID MEASURES

Description of necessary first-aid measures

Eye Contact	Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing. If symptoms persist, call a physician.
Skin Contact	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. If symptoms persist, call a physician.
Ingestion	Do NOT induce vomiting. Rinse mouth. Drink plenty of water. If symptoms persist, call a physician.

Most important symptoms/effects, acute and delayed

Most Important Symptoms/Effects Itching. Rashes. May cause allergic skin reaction.

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

Notes to Physician May cause sensitization by skin contact. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Dry powder. Dry chemical, CO ₂ , water spray or regular foam.
Unsuitable Extinguishing Media	No information available.
Specific Hazards Arising from the Chemical	Combustible liquid. Vapors may travel to source of ignition and flash back. Burning produces obnoxious and toxic fumes. Risk of ignition. In the event of fire and/or explosion do not breathe fumes. Keep product and empty container away from heat and sources of ignition. May cause sensitization by skin contact.
Explosion Data	
Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	Yes.
Protective Equipment and Precautions for Firefighters	Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Ensure adequate ventilation. In case of insufficient ventilation wear suitable respiratory equipment. Remove all sources of ignition. Evacuate personnel to safe areas. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Keep people away from and upwind of spill/leak. Take precautionary measures against static discharges. Pay attention to flashback.

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. 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 Use personal protective equipment. Dam up. Take up with sand or other noncombustible absorbent material and place into containers for later disposal. 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. Take precautionary measures against static discharges. In case of insufficient ventilation, wear suitable respiratory equipment. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Use only in area provided with appropriate exhaust ventilation. Keep away from heat, sparks and open flame. No smoking. Do not take internally. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage

Keep in properly labeled containers. Keep away from heat and sources of ignition. Keep out of the reach of children. Keep containers tightly closed in a dry, cool and well-ventilated place.

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
Titanium dioxide 13463-67-7	TWA: 10 mg/m ³	TWA: 15 mg/m ³ total dust (vacated) TWA: 10 mg/m ³ total dust	IDLH: 5000 mg/m ³
Dipropylene glycol monomethyl ether 34590-94-8	STEL: 150 ppm TWA: 100 ppm S*	TWA: 100 ppm TWA: 600 mg/m ³ (vacated) TWA: 100 ppm (vacated) TWA: 600 mg/m ³ (vacated) STEL: 150 ppm (vacated) STEL: 900 mg/m ³ (vacated) S*	IDLH: 600 ppm TWA: 100 ppm TWA: 600 mg/m ³ STEL: 150 ppm STEL: 900 mg/m ³
Talc 14807-96-6	TWA: 2 mg/m ³	(vacated) TWA: 2 mg/m ³	IDLH: 1000 mg/m ³ containing no asbestos and <1% quartz TWA: 2 mg/m ³
Silicon dioxide 7631-86-9	10 mg/m ³	20 mppcf TWA; ((80)/(%) SiO ₂) mg/m ³	IDLH: 3000 mg/m ³ TWA: 6 mg/m ³
Aluminum hydroxide 21645-51-2	TWA: 1 mg/m ³ respirable particulate matter	-	-

Appropriate engineering controls

Engineering Measures

Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection

Goggles.

Skin and Body Protection

Lightweight protective clothing. Impervious gloves.

Respiratory Protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid.	Appearance	Light blue.
Odor	Mild Solvent.	Odor Threshold	No information available.
<u>Property</u>	<u>Values</u>	<u>Remarks/ - Method</u>	
pH	No data available	None known	
Melting Point/Range	No data available	None known	
Boiling Point/Boiling Range	No data available	None known	
Flash Point	78 °C / 172.4 °F	None known	
Evaporation rate	No data available	None known	
Flammability (solid, gas)	No data available	None known	
Flammability Limits in Air			
upper flammability limit	No data available		
lower flammability limit	No data available		
Vapor Pressure	No data available	None known	
Vapor Density	No data available	None known	
Specific Gravity	1.653	None known	
Water Solubility	No data available	None known	
Solubility in other solvents	No data available	None known	
Partition coefficient: n-octanol/water	No data available	None known	
Autoignition Temperature	No data available	None known	
Decomposition Temperature	No data available	None known	
Viscosity	No data available	None known	
Flammable Properties	Combustible liquid.		
Explosive Properties	No data available		
Oxidizing Properties	No data available		
<u>Other information</u>			
VOC Content (%)	No data available		
VOC (g/l)	429.6		

10. STABILITY AND REACTIVITY

<u>Reactivity</u>	No data available.
<u>Chemical stability</u>	Stable under recommended storage conditions.
<u>Possibility of hazardous reactions</u>	None under normal processing.
<u>Hazardous Polymerization</u>	Hazardous polymerization does not occur.
<u>Conditions to avoid</u>	Incompatible products. Heat, flames and sparks.
<u>Incompatible materials</u>	Strong oxidizing agents. Strong acids. Strong bases.
<u>Hazardous decomposition products</u>	Carbon dioxide (CO ₂). Carbon monoxide (CO).

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	Avoid breathing vapors or mists.
Eye Contact	Contact with eyes may cause irritation.
Skin Contact	May cause allergic skin reaction.
Ingestion	There is no data available for this product.

Numerical measures of toxicity - Product

Unknown acute toxicity 67.33% 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 6611 mg/kg; Acute toxicity estimate
LD50 Dermal 12243 mg/kg; Acute toxicity estimate

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Titanium dioxide	> 10000 mg/kg (Rat)	-	-
Dipropylene glycol monomethyl ether	= 5400 µL/kg (Rat)	= 9500 mg/kg (Rabbit)	-
Silicon dioxide	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	>2.2 mg/L (Rat) 4 h
Naphtha (petroleum), heavy aromatic	> 5000 mg/kg (Rat)	> 2 mL/kg (Rabbit)	> 590 mg/m ³ (Rat) 4 h

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

Respiratory or Skin Sensitization May cause sensitization of susceptible persons. May cause sensitization by skin contact.
Germ Cell Mutagenicity No information available.
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen. 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
Titanium dioxide		Group 2B	-	-
Talc		Group 3		X
Silicon dioxide		Group 3		

IARC: (International Agency for Research on Cancer)

Group 2B - Possibly Carcinogenic to Humans

Group 3 - Not Classifiable as to its Carcinogenicity to Humans

Reproductive Toxicity Contains a known or suspected reproductive toxin. Suspected of damaging fertility or the unborn child.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Target Organ Effects Respiratory system. Eyes. Central nervous system (CNS). Central vascular system (CVS). Lungs.

Aspiration Hazard No information available.

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)
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

Mobility No information available.

Other Adverse Effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods Dispose of in accordance with local regulations.

Contaminated Packaging Do not re-use empty containers.

14. TRANSPORT INFORMATION

Note: According to 49 CRF §173.150(f)(1), this material should be reclassified as NA1993, Combustible Liquid, NOS if it is shipped in bulk.

DOT Not regulated

TDG Not regulated

MEX Not regulated

IATA Not regulated

IMDG/IMO Not regulated

15. REGULATORY INFORMATION

International Regulations

Ozone depleting substances Not applicable

Persistent Organic Pollutants Not applicable

Hazardous Waste Not applicable

The Rotterdam Convention (Prior Not applicable

Informed Consent)

International Convention for the Not applicable

Prevention of Pollution from Ships

(MARPOL)

International Inventories

TSCA Complies

DSL Not determined

EINECS Complies

ELINCS Complies

Legend

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

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

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 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

Acute Health Hazard Yes

Chronic Health Hazard Yes

Fire Hazard Yes

Sudden Release of Pressure Hazard No

Reactive Hazard 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

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
Titanium dioxide	X	X	X		X
Dipropylene glycol monomethyl ether	X	X	X	X	X
Talc	X	X	X	X	X
Silicon dioxide	X	X	X		

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION

NFPA Health Hazard 2 Flammability 2 Instability 0 Physical and Chemical Hazards -

HMIS Health Hazard 2* Flammability 2 Physical Hazard 0 Personal Protection X

*Indicates a chronic health hazard.

Prepared By Product Stewardship
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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