

SAFETY DATA SHEET

Issuing Date 19-May-2015

Revision Date 15-Dec-2022

Revision Number 1

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

GHS product identifier

Product Name PSR-9000 FXT Green, PSR-9000 FXT Amber, PSR-9000 FXT White, PSR-9000 FXT Black, PSR-9000 FXT Clear

Other means of identification

Product Code(s) 400413, 400431, 800017, 800018, 800031

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)

Acute Oral Toxicity	Category 4
Germ Cell Mutagenicity	Category 1B
Carcinogenicity	Category 2
Reproductive Toxicity	Category 1B
Flammable liquids	Category 4


GHS Label elements, including precautionary statements

Emergency Overview

Signal Word Danger

Hazard Statements

- May cause genetic defects
- Suspected of causing cancer
- May damage fertility or the unborn child
- Combustible liquid.



Appearance Varies
Physical State Liquid.
Odor Mild Solvent

Precautionary Statements

Prevention

- 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

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.

Hazard Not Otherwise Classified (HNOC)

Not applicable

Other information

Harmful to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %	Trade secret
Titanium dioxide	13463-67-7	0-20	*
1-Propanone, 2-methyl-1-[4-(methylthio)phenyl]-2-(4-morpholinyl)-	71868-10-5	5-10	*
Barium sulfate	7727-43-7	0-10	*
Dipropylene glycol monomethyl ether	34590-94-8	0.5-10	*
Naphtha (petroleum), heavy aromatic	64742-94-5	0-5	*
Melamine	108-78-1	1-5	*
Carbon black	1333-86-4	0-1	*

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

4. FIRST AID MEASURES

Description of necessary first-aid measures

General Advice

Immediate medical attention is required.

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 skin with soap and water. Remove and wash contaminated clothing before re-use. If symptoms persist, call a physician.
Inhalation	Move to fresh air. If symptoms persist, call a physician.
Ingestion	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Drink plenty of water. Consult a physician if necessary
Protection of First-aiders	Use personal protective equipment. Avoid contact with skin, eyes and clothing.

Most important symptoms/effects, acute and delayed

Most Important Symptoms/Effects No information available.

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

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media No information available.

Specific Hazards Arising from the Chemical

Combustible liquid. Vapors may travel to source of ignition and flash back. Thermal decomposition can lead to release of irritating gases and vapors. 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.

Explosion Data

Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	Yes.

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 Avoid contact with the skin and the eyes. Use personal protective equipment. Keep people away from and upwind of spill/leak. Remove all sources of ignition. 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. Dispose of contents/container to an approved waste disposal plant. 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 Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Do not breathe vapors or spray mist. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). 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. Keep away from heat, sparks and open flame. No smoking.

Conditions for safe storage, including any incompatibilities

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

Incompatible Products Strong oxidizing agents.

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
Barium sulfate 7727-43-7	TWA: 5 mg/m ³ inhalable fraction, particulate matter containing no asbestos and <1% crystalline silica	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 10 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust
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* S*	IDLH: 600 ppm TWA: 100 ppm TWA: 600 mg/m ³ STEL: 150 ppm STEL: 900 mg/m ³
Carbon black 1333-86-4	TWA: 3.5 mg/m ³	TWA: 3.5 mg/m ³ (vacated) TWA: 3.5 mg/m ³	IDLH: 1750 mg/m ³ TWA: 3.5 mg/m ³ TWA: 0.1 mg/m ³ Carbon black in presence of Polycyclic aromatic hydrocarbons PAH
Naphthalene 91-20-3	TWA: 10 ppm S*	TWA: 10 ppm TWA: 50 mg/m ³ (vacated) TWA: 10 ppm (vacated) TWA: 50 mg/m ³ (vacated) STEL: 15 ppm (vacated) STEL: 75 mg/m ³	IDLH: 250 ppm TWA: 10 ppm TWA: 50 mg/m ³ STEL: 15 ppm STEL: 75 mg/m ³
Xylene 1330-20-7	STEL: 150 ppm TWA: 100 ppm	TWA: 100 ppm TWA: 435 mg/m ³ (vacated) TWA: 100 ppm (vacated) TWA: 435 mg/m ³ (vacated) STEL: 150 ppm (vacated) STEL: 655 mg/m ³	-
1,2,4-trimethylbenzene 95-63-6	TWA: 25 ppm	(vacated) TWA: 25 ppm (vacated) TWA: 125 mg/m ³	TWA: 25 ppm TWA: 125 mg/m ³

Immediately Dangerous to Life or Health. ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value. OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits. NIOSH IDLH:

Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

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 Impervious clothing. Impervious gloves.
Respiratory Protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

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

Physical State	Liquid	Appearance	Varies.
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	86 °C	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	No data available	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 material: may burn but does not ignite readily.	
Explosive Properties	No data available	
Oxidizing Properties	No data available	

Other information

VOC Content (%)	33
VOC (g/l)	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. Heat, flames and sparks.

Incompatible materials

Strong oxidizing agents.

Hazardous decomposition products

Carbon oxides. Nitrogen oxides (NOx).

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	There is no data available for this product.
Ingestion	Harmful if swallowed.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Titanium dioxide	> 10000 mg/kg (Rat)	-	-
Dipropylene glycol monomethyl ether	= 5230 mg/kg (Rat)	= 9500 mg/kg (Rabbit)	-
Naphtha (petroleum), heavy aromatic	> 5000 mg/kg (Rat)	> 2 mL/kg (Rabbit)	> 590 mg/m ³ (Rat) 4 h
Naphthalene	= 1110 mg/kg (Rat) = 490 mg/kg (Rat)	= 1120 mg/kg (Rabbit) > 20 g/kg (Rabbit)	> 340 mg/m ³ (Rat) 1 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

Sensitization No information available.
Mutagenic Effects May cause genetic defects.

Carcinogenicity This product contains titanium dioxide which is classified as a possible carcinogen when present as respirable dust. This is not relevant for this product since it is a liquid. This product contains carbon black which is classified as a possible carcinogen when present as respirable dust. This is not relevant for this product since it is not in a respirable form. The table below indicates whether each agency has listed any ingredient as a carcinogen. May cause cancer.

Chemical Name	ACGIH	IARC	NTP	OSHA
Titanium dioxide		Group 2B	-	-
Melamine		Group 3		
Carbon black	A3	Group 2B	-	X

ACGIH: (American Conference of Governmental Industrial Hygienists)
A3 - Animal Carcinogen

IARC: (International Agency for Research on Cancer)
Group 2B - Possibly Carcinogenic to Humans
Group 3 - Not Classifiable as to its Carcinogenicity to Humans

NTP: (National Toxicity Program)
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA: (Occupational Safety & Health Administration)
X - Present

Reproductive Toxicity May damage fertility or the unborn child
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Chronic Toxicity Avoid repeated exposure. Repeated contact may cause allergic reactions in very susceptible persons.
Target Organ Effects Respiratory system. Eyes. Central nervous system (CNS). Lungs.
Aspiration Hazard No information available.

Numerical measures of toxicity - Product

The following values are calculated based on chapter 3.1 of the GHS document:
LD50 Oral 1722 mg/kg; Acute toxicity estimate

12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic life with long lasting effects.

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)
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)
Melamine 108-78-1	EC50 96 h: = 940 mg/L (Scenedesmus pannonicus)	LC50 96 h: > 3000 mg/L (Poecilia reticulata)	EC50 > 10000 mg/L 30 min	EC50 48 h: > 2000 mg/L (Daphnia magna)
Carbon black 1333-86-4				EC50 24 h: > 5600 mg/L (Daphnia magna)

Naphthalene 91-20-3	EC50 72 h: = 0.4 mg/L (Skeletonema costatum)	LC50 96 h: 5.74 - 6.44 mg/L flow-through (Pimephales promelas) LC50 96 h: = 1.6 mg/L flow-through (Oncorhynchus mykiss) LC50 96 h: 0.91 - 2.82 mg/L static (Oncorhynchus mykiss) LC50 96 h: = 1.99 mg/L static (Pimephales promelas) LC50 96 h: = 31.0265 mg/L static (Lepomis macrochirus)	LC50 48 h: = 2.16 mg/L (Daphnia magna) EC50 48 h: = 1.96 mg/L Flow through (Daphnia magna) EC50 48 h: 1.09 - 3.4 mg/L Static (Daphnia magna)
Xylene 1330-20-7	EC50 72 h: = 11 mg/L (Pseudokirchneriella subcapitata)	LC50 96 h: = 13.4 mg/L flow-through (Pimephales promelas) LC50 96 h: 2.661 - 4.093 mg/L static (Oncorhynchus mykiss) LC50 96 h: 13.5 - 17.3 mg/L (Oncorhynchus mykiss) LC50 96 h: 13.1 - 16.5 mg/L flow-through (Lepomis macrochirus) LC50 96 h: = 19 mg/L (Lepomis macrochirus) LC50 96 h: 7.711 - 9.591 mg/L static (Lepomis macrochirus) LC50 96 h: 23.53 - 29.97 mg/L static (Pimephales promelas) LC50 96 h: = 780 mg/L semi-static (Cyprinus carpio) LC50 96 h: > 780 mg/L (Cyprinus carpio) LC50 96 h: 30.26 - 40.75 mg/L static (Poecilia reticulata)	EC50 48 h: = 3.82 mg/L (water flea) LC50 48 h: = 0.6 mg/L (Gammarus lacustris)
1,2,4-trimethylbenzene 95-63-6		LC50 96 h: 7.19 - 8.28 mg/L flow-through (Pimephales promelas) LC50 96 h: = 7.72 mg/L flow-through (Pimephales promelas)	EC50 48 h: = 6.14 mg/L (Daphnia magna)

Persistence and Degradability No information available.

Bioaccumulation

Chemical Name	Log Pow
Dipropylene glycol monomethyl ether	-0.064
Naphtha (petroleum), heavy aromatic	2.9 - 6.1
Melamine	1.14

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.

US EPA Waste Number U140
U165
U239

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
Xylene - 1330-20-7		Included in waste stream: F039		U239

14. TRANSPORT INFORMATION

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

DOT Not regulated

IATA Not regulated.

IMDG/IMO Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA Complies
 EINECS Complies
 ELINCS 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	20-30	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard No
 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
Carbon black	1333-86-4	Carcinogen
Naphthalene	91-20-3	Carcinogen
3H-Pyrazol-3-one, 4,4'-[(3,3'-dichloro[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[2,4-dihydro-5-methyl-2-phenyl-	3520-72-7	Carcinogen
Ethylbenzene	100-41-4	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
Barium sulfate	X	X	X		
Dipropylene glycol monomethyl ether	X	X	X	X	X
Melamine	X	X	X		
Carbon black	X	X	X	X	X
Naphthalene	X	X	X	X	
Xylenes (o-, m-, p- isomers)	X	X	X	X	X
Silica gel		X	X		
1,2,4 Trimethylbenzene	X	X	X	X	X
Isobutyl alcohol	X	X	X		X
Ethylbenzene	X	X	X	X	X
Phosphoric acid	X	X	X		X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION

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

*Indicates a chronic health hazard.

Prepared By Product Stewardship
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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

