SAFETY DATA SHEET

Issuing Date 24-May-2015 **Revision Date** 15-Jun-2015 **Revision Number** 1

Section 1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Code(s) 800071

Product Name **PSR-4000 LEW1 (US)**

Contains Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)-

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Solder mask part A

Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

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

For further information, please contact

E-mail Address No information available.

1.4. Emergency telephone number

Emergency Telephone Number 775-885-9959

Europe	112

Section 2. Hazards identification

2.1. - Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Chronic Aquatic Toxicity	Category 3

Physical Hazards

None

2.2. Label Elements

Signal Word **Warning**

Hazard Statements
H412 - Harmful to aquatic life with long lasting effects
EUH208 - May produce an allergic reaction

Precautionary Statements
P273 - Avoid release to the environment

2.3. Other information
Contains Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)-

Section 3. Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Chemical Name	EC-No	CAS-No	Weight %	EU - GHS Substance Classification	REACH No.
Titanium dioxide	236-675-5	13463-67-7	30-60		No data available
Dipropylene glycol monomethyl ether	Present	34590-94-8	10-30		No data available
Talc	238-877-9	14807-96-6	1-5		No data available
Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide	278-355-8	75980-60-8	< 3	Repr. 2 (H361f)	No data available
Naphtha (petroleum), heavy aromatic	Present	64742-94-5	0.1-1	Asp. Tox. 1 (H304) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	No data available
Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)-	423-340-5	162881-26-7	<1	Skin Sens. 1 (H317) Aquatic Chronic 4 (H413)	No data available

For the full text of the H-Statements mentioned in this Section, see Section 16

Section 4. First aid measures

4.1. Description of first-aid measures

General Advice 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.

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. Consult a physician if necessary.

Ingestion Do NOT induce vomiting. Rinse mouth. Drink plenty of water. If symptoms persist, call a physician.

Inhalation Move to fresh air. If breathing is difficult, give oxygen. If symptoms persist, call a physician.

Protection of First-aiders Use personal protective equipment.

4.2. Most important symptoms and effects, both acute and delayed

Most Important Symptoms/Effects No information available.

4.3. Indication of immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

Section 5. Fire-fighting measures

5.1. Extinguishing media

Suitable Extinguishing Media

Water spray. Carbon dioxide (CO_2). Dry chemical. Dry powder.

Extinguishing media which must not be used for safety reasons
No information available.

5.2. Special hazards arising from the substance or mixture

Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases
Combustible material. Vapors may travel to source of ignition and flash back.

5.3. Advice for firefighters

Special protective equipment for fire-fighters
As in any fire, wear self-contained breathing apparatus and full protective gear.

Section 6. Accidental release measures

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

6.2. 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.

6.3. Methods and materials for containment and 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.

6.4. Reference to other sections
See Section 12 for additional information.

Section 7. Handling and storage

7.1. Precautions for Safe Handling
Handling
Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Do not breathe vapors or spray mist. Use only in area provided with appropriate exhaust ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Keep away from heat, sparks and open flame. No smoking. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Do not take internally.

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

7.2. Conditions for safe storage, including any incompatibilities
Keep out of the reach of children. Keep away from heat and sources of ignition. Keep in properly labeled containers. Keep containers tightly closed in a dry, cool and well-ventilated place.

7.3. Specific end use(s)
Exposure Scenario
No information available.

Other Guidelines
No information available.

Section 8. Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Chemical Name	EU	The United Kingdom	France	Spain	Germany
Titanium dioxide 13463-67-7		STEL: 30 mg/m³ STEL: 12 mg/m³ TWA: 10 mg/m³ TWA: 4 mg/m³	TWA: 10 mg/m³	TWA: 10 mg/m³	
Dipropylene glycol monomethyl ether 34590-94-8	S* TWA 50 ppm TWA 308 mg/m³	STEL: 150 ppm STEL: 924 mg/m³ TWA: 50 ppm TWA: 308 mg/m³ Skin	TWA: 50 ppm TWA: 308 mg/m³	S* TWA: 50 ppm TWA: 308 mg/m³	TWA: 50 ppm TWA: 310 mg/m³ Ceiling / Peak: 50 ppm Ceiling / Peak: 310 mg/m³
Talc 14807-96-6		STEL: 3 mg/m³ TWA: 1 mg/m³		TWA: 2 mg/m³	
Component	**Italy**	**Portugal**	**The Netherlands**	**Finland**	**Denmark**
Titanium dioxide 13463-67-7 (30-60)		TWA: 10 mg/m³			TWA: 6 mg/m³
Dipropylene glycol monomethyl ether 34590-94-8 (10-30)	TWA: 50 ppm TWA: 308 mg/m³ Skin	STEL: 150 ppm TWA: 100 ppm	TWA: 300 mg/m³	TWA: 50 ppm TWA: 310 mg/m³ Skin	TWA: 50 ppm TWA: 309 mg/m³ Skin
Talc 14807-96-6 (1-5)		TWA: 2 mg/m³	TWA: 0.25 mg/m³	TWA: 0.5 fiber/cm3 TWA: 5 mg/m³	TWA: 0.3 fiber/cm3
Chemical Name	**Austria**	**Switzerland**	**Poland**	**Norway**	**Ireland**
Titanium dioxide 13463-67-7	STEL 10 mg/m³ TWA: 5 mg/m³	TWA: 3 mg/m³	STEL: 30 mg/m³ TWA: 10.0 mg/m³	TWA: 5 mg/m³ STEL: 10 mg/m³	TWA: 10 mg/m³ TWA: 4 mg/m³
Dipropylene glycol monomethyl ether 34590-94-8	Skin STEL 100 ppm STEL 614 mg/m³ TWA: 50 ppm TWA: 307 mg/m³	STEL: 50 ppm STEL: 300 mg/m³ TWA: 50 ppm TWA: 300 mg/m³	STEL: 480 mg/m³ TWA: 240 mg/m³	TWA: 50 ppm TWA: 300 mg/m³ Skin STEL: 75 ppm STEL: 375 mg/m³	TWA: 50 ppm TWA: 308 mg/m³ Skin
Talc 14807-96-6	TWA: 2 mg/m³	TWA: 2 mg/m³	TWA: 4.0 mg/m³ TWA: 1.0 mg/m³	TWA: 6 mg/m³ TWA: 2 mg/m³ STEL: 12 mg/m³ STEL: 4 mg/m³	TWA: 10 mg/m³ TWA: 0.8 mg/m³

Derived No Effect Level No information available
Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering Measures Ensure adequate ventilation, especially in confined areas.
Personal protective equipment
Eye Protection Safety glasses with side-shields.
Skin and Body Protection Lightweight protective clothing.
Hand Protection Impervious gloves.
Respiratory Protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Environmental Exposure Controls Do not allow material to contaminate ground water system.

Section 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical State Viscous liquid **Appearance** White
Odor Mild Solvent

Property	Values	Remarks/ - Method
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
Vapor Pressure	No data available	None known
Vapor Density	No data available	None known
Relative Density	1.66	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	200 ps	None known
Flammable Properties	Combustible material: may burn but does not ignite readily.	
Explosive Properties	No data available	
Oxidizing Properties	No data available	

9.2. Other information

VOC Content (%)	26
VOC (g/l)	480 gm/l
Flammability Limits in Air	No data available

Section 10. Stability and reactivity

10.1. Reactivity
No data available.

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
None under normal processing.

10.4. Conditions to avoid
Incompatible products. Heat, flames and sparks.

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

10.6. Hazardous decomposition products
Carbon dioxide (CO_2). Carbon monoxide (CO). Sulfur oxides.

Section 11. Toxicological information

11.1. Information on toxicological effects

Acute Toxicity

Product Information	Product does not present an acute toxicity hazard based on known or supplied 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	There is no data available for this product.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Titanium dioxide	> 10000 mg/kg (Rat)		> 6820 mg/m^3
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/m³ (Rat) 4 h

Sensitization No information available.
Mutagenic Effects No information available.
Carcinogenic Effects No information available.

Reproductive Toxicity No information available.
Developmental Toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Target Organ Effects Central nervous system (CNS). Eyes. Respiratory system. Skin.
Aspiration Hazard No information available.

Section 12. Ecological information

12.1. Toxicity

Ecotoxicity Effects
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		LC50 96 h: > 10000 mg/L static (Pimephales promelas)		LC50 48 h: = 1919 mg/L (Daphnia magna)
Talc		LC50 96 h: > 100 g/L semi-static (Brachydanio rerio)		
Naphtha (petroleum), heavy aromatic	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)

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential.

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

12.4. Mobility in soil

Adsorbs on soil.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

This product does not contain any known or suspected endocrine disruptors.

Section 13. Disposal considerations

13.1. Waste treatment methods

Waste from Residues / Unused Products	Dispose of in accordance with local regulations.
Contaminated Packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.

Section 14. Transport information

IMDG/IMO

14.1. UN-Number	Not regulated.
14.2. Proper Shipping Name	Not regulated.
14.3. Hazard Class	Not regulated.
14.4. Packing Group	Not regulated.
Description	Not applicable.
14.5. Marine Pollutant	None.
14.6. Special Provisions	None.
14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No information available.

RID

14.1. UN-Number	Not regulated.
14.2. Proper Shipping Name	Not regulated.
14.3. Hazard Class	Not regulated.
14.4. Packing Group	Not regulated.
Description	Not applicable.
14.5. Environmental hazard	None.
14.6. Special Provisions	None.

ADR

14.1. UN-Number	Not regulated.
14.2. Proper Shipping Name	Not regulated.
14.3. Hazard Class	Not regulated.
14.4. Packing Group	Not regulated.
Description	Not applicable.
14.5. Environmental hazard	None.
14.6. Special Provisions	None.

ICAO

14.1. UN-Number	Not regulated.
14.2. Proper shipping name	Not regulated.
14.3. Hazard Class	Not regulated.
14.4. Packing Group	Not regulated.
Description	Not applicable.
14.5. Environmental hazard	None.
14.6. Special Provisions	None.

IATA

14.1. UN-Number	Not regulated.
14.2. Proper Shipping Name	Not regulated.
14.3. Hazard Class	Not regulated.
14.4. Packing Group	Not regulated.
Description	Not applicable.

14.5. Environmental hazard None.
14.6. Special Provisions None.

Section 15. Regulatory information

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

International Inventories

TSCA	Complies
EINECS/ELINCS	Complies
DSL/NDSL	-
PICCS	-
ENCS	-
IECSC	-
AICS	-
KECL	-

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
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
PICCS - Philippines Inventory of Chemicals and Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
AICS - Australian Inventory of Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances

15.2. Chemical Safety Assessment
No information available

Section 16. Other information

Full text of H-Statements referred to under sections 2 and 3
H317 - May cause an allergic skin reaction
H361f - Suspected of damaging fertility
EUH208 - May produce an allergic reaction
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects
H412 - Harmful to aquatic life with long lasting effects
H304 - May be fatal if swallowed and enters airways

Key literature references and sources for data
www.ChemADVISOR.com/

Issuing Date 24-May-2015

Revision Date 15-Jun-2015

Revision Note (M)SDS sections updated: 3.

This safety data sheet complies with the requirements of Commission Regulation (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No. 1907/2006

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