

SECTION 1: Identification of the substance/mixture and of the company

Product Identifier

Product Name: PowerCure TPO-L
 Chemical Name: 2, 4, 6-trimethylbenzoylphenyl phosphinate
 CAS-No.: 119344-86-4
 EC-No.: 438-340-0

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

Relevant applications identified For industrial use

Details of the supplier of the safety data sheet

Company Tintoll Performance Materials Co.,Ltd.
 4F, Building 01, Xincheng Technology Park, No. 69 Olympic Avenue, Nanjing, China
 Email: SDS@TinToll.com

Emergency Telephone Number: +86-25-8468-0091

SECTION 2: Hazardous identification

Reproductive toxicity

Category 2

Hazardous to the aquatic environment, long-term (chronic)

Category 1

GHS Label elements, including precautionary statements



Pictogram

Signal word Warning

Hazard statement(s)

H361

Suspected of damaging fertility or the unborn child (Specific effect: developmental toxicity) (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).

H410

Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

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P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection/hearing protection.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P391	Collect spillage.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard description

Physical and chemical hazards

Data conclusive but not sufficient for classification.

Health hazards

Suspected of damaging fertility or the unborn child (Specific effect: developmental toxicity) (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).

Environment hazards

Very toxic to aquatic life with long lasting effects.

SECTION 3: Composition/information on ingredients

Component	CAS NO.	EC NO.	Concentration
2-Dimethylamino-2-(4-methyl-benzyl)-1-(4-morpholin-4-yl-phenyl)-butan-1-one	119344-86-4	438-340-0	≤98.5%

SECTION 4: First aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

Eye contact

Immediately flood the eye with plenty of water for at least 15 minutes, holding the eye open. Remove contact lenses if possible. Obtain medical attention.

Skin contact

Take off contaminated clothing and shoes immediately. Wash thoroughly with soap and water. Consult a physician if feel uncomfortable.

Ingestion

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Never give anything by mouth to an unconscious person. Rinse mouth immediately and then drink plenty of water, seek medical attention.

Inhalation

Remove from exposure, taking care to avoid inhaling vapours. Keep warm rest. Obtain medical attention if symptoms appear.

Protecting of first-aiders

Ensure that medical personnel are aware of the substance involved. Take precautions to protect themselves and prevent spread of contamination.

Most important symptoms and effects, both acute and delayed

See section 11.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

Symptoms may be delayed.

SECTION 5: Firefighting measures**Extinguishing media****Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Such as dry powder, foam.

Unsuitable extinguishing media

High volume water jet.

Special hazards arising from the substance or mixture

Combustible solid which burns but propagates flame with difficulty; it is estimated that most organic dusts are combustible (circa 70%) - according to the circumstances under which the combustion process occurs, such materials may cause fires and / or dust explosions.

Combustion of vapor and liquid may produce carbon monoxide, carbon dioxide and other hazardous gases.

Organic powders when finely divided over a range of concentrations regardless of particulate size or shape and suspended in air or some other oxidizing medium may form explosive dust-air mixtures and result in a fire or dust explosion (including secondary explosions).

Advice for firefighters

Alert Fire Brigade and tell them location and nature of hazard.

Wear self-contained breathing apparatus for firefighting if necessary.

Fire-extinguishing work is done from the windward and the suitable fire-extinguishing method according to the surrounding situation is used.

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In case of fire in the surroundings, keep containers cool by spraying with water.

Eliminate all ignition sources if safe to do so.

Uninvolved persons should evacuate to a safe place.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment.

Remove all sources of ignition. Ensure adequate ventilation. Take precautionary measures against static discharges.

For personal protection see section 8.

Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Use personal protective equipment. Avoid breathing vapors and contacting with skin and eyes.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Keep in suitable, closed containers for disposal.

SECTION 7: Handling and storage

Precautions for handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

Keep away from heat/sparks/open flames/ hot surfaces.

For precautions see section 2.2.

Precautions for storage

Keep containers tightly closed in a dry, cool and well-ventilated place.

Keep away from heat/sparks/open flames/ hot surfaces.

Store away from incompatible materials such as oxidizing agents and other incompatible materials.

Store away from foodstuff containers.

SECTION 8: Exposure Controls/Personal Protection

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Control parameters

Component	Country/Region	Limit value - Eight hours		Limit value - Short term	
		ppm	mg/m ³	ppm	mg/m ³
2-Dimethylamino-2-(4-methyl-benzyl)-1-(4-morpholin-4-yl-phenyl)-butan-1-one	Australia	-	-	-	-
	Denmark	-	-	-	-
	Germany (AGS)	-	-	-	-
CAS No.:119344-86-4	Ireland	-	-	-	-
	South Korea	-	-	-	-
	USA(OSHA)	--	-	-	-

Biological limit values

No information available.

Monitoring methods

EN 14042 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

Engineering controls

Handle in accordance with good industrial hygiene and safety practice.

Ensure adequate ventilation, especially in confined areas.

Ensure that eyewash stations and safety showers are close to the workstation location .

Personal protection equipment

General requirement



Eye protection

Tightly fitting safety goggles (approved by EN 166(EU) or NIOSH (US)).

Hand protection

Protective gloves (such as butyl rubber) , approved by EN 374(EU).

Respiratory protection

Use appropriate respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. Recommended Filter type: low boiling organic solvent, Type AX, Brown, conforming to EN371.

Skin and body protection

Wear fire/flame resistant/retardant clothing and antistatic boots.

SECTION 9: Physical and Chemical Properties**Information on basic physical and chemical properties**

Appearance	Pale yellow solid
Odor	Light
Odor Threshold	No data available
pH	No data available
Melting point/freezing point	87-96°C at 101.3 kPa
Initial boiling point and boiling range	Not available. The substance decomposed before boiling.
Flash point	178 °C at 1013 hPa (closed cup)
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower explosive limits	No data available
Vapor pressure	1.3E-10 Pa at 25 °C (calculated)
Vapor density	No data available
Relative density	1.16 (20 °C)
Water solubility	1.9 mg/L (20 °C, pH 6.8)
n-octanol/water partition coefficient	log Kow (log Pow): 4.1 at 25 °C at pH 8.1
Auto-ignition temperature	No data available
Decomposition temperature	> 270 °C
Viscosity	Not applicable

SECTION 10: Stability And Reactivity**Stability and reactivity****Reactivity**

No information available.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reaction

Dust explosion hazard.

Conditions to avoid Incompatible materials.

Avoid dust formation. Avoid deposition of dust. Avoid sources of ignition. Avoid electro-static discharge.
Avoid light.

Incompatible materials

Strong oxidizing agents, strong acids, strong bases.

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. – Carbon monoxide and nitrogen oxide.

SECTION 11: Toxicological Information

Toxicological information

LD50(oral)	LD50 - Rat - >2000 mg/kg bw
LD50(dermal)	LD50 - Rat - >2000 mg/kg bw
LC50(inhalation)	No data available.
LD50 (Intraperitoneal)	Not classified.
Skin corrosion/irritation	Not classified.
Serious eye damage/irritation	Not classified.
Respiratory or skin sensitization	Not classified.
Germ cell mutagenicity	Not classified.
Carcinogenicity	IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Reproductive toxicity	Suspected of damaging fertility or the unborn child (Specific effect:developmental toxicity) (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).
STOT-single exposure	Not classified.
STOT-repeated exposure	Not classified.
Aspiration hazard	Not classified.

SECTION 12: Ecological Effects

Ecological information

Acute (short-term) toxicity:	
Toxicity to Fish LC50 (96h)	>100 mg/L
Toxicity to Invertebrates	EC50 (48h) >100 mg/L
Toxicity to Algae/aquatic plants	EC50 (72h) >100 mg/L
Chronic (long-term) toxicity:	
Toxicity to Fish	NOEC = 31 µg/L
Toxicity to Invertebrates	NOEC = 64 µg/L
Toxicity to Algae/aquatic plants	NOEC >= 100 mg/L(72h)

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Persistence and degradability	The substance is not readily biodegradable.
Bioaccumulative potential	BCF (aquatic species): 758 dimensionless The test substance is not bioaccumulative according to PBT-criteria.
Mobility in soil	Koc at 20 °C: 3 431; LogKoc: 3.5 These values indicate that the test substance is immobile and remains preferably in soil - adsorption to solid soil phase is expected.
Results of PBT and vPvB assessment	The substance is not PBT / vPvB.
Other adverse effects	Very toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

Disposal considerations

Waste chemicals

Before disposal should refer to the relevant national and local laws and regulation. Recommend the use of incineration disposal.

Contaminated packaging

Containers may still present chemical hazard when empty. Keep away from hot and ignition source of fire. Return to supplier for recycling if possible.

Disposal recommendations

Refer to section 13.1 and 13.2.

SECTION 14: Transport Information

DOT (US)

Not dangerous goods

IMDG

UN number: 3077

Class: 9

Packing group: III

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

(2-Dimethylamino-2-(4-methyl-benzyl)-1-(4-morpholin-4-yl-phenyl)-butan-1-one)

IATA

UN number: 3077

Class: 9

Packing group: III

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

(2-Dimethylamino-2-(4-methyl-benzyl)-1-(4-morpholin-4-yl-phenyl)-butan-1-one)

Environmental hazards

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Marine pollutant: YES

Special precautions for user

See section 2.2

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

IBC08

SECTION 15:Regulatory Information

International chemical inventory

EINECS/ELINCS	Listed
TSCA	Listed
DSL	Listed
IECSC	Listed
NZLoC	Listed
PICCS	Listed
KECI	Listed
ENCS	Listed
AIC	Listed

SECTION 16:Other Information

Further information

It must be recognized that the physical and chemical properties of any product may not be fully understood and that new, possibly hazardous products may arise from reactions between chemicals. The information given in this data sheet is based on our present knowledge and shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.