

## 1. Identification of the chemical and supplier

### 1.1 Product identifier

Product name	JRCure 1819
Synonyms	Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide
CAS NO.	162881-26-7
EC NO.	423-340-5
Molecular formula	C <sub>26</sub> H <sub>27</sub> O <sub>3</sub> P

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

Relevant identified uses	Used for Photoinitiator etc.
Uses advised against	No information available.

### 1.3 Details of the supplier of the Safety Data Sheet

Name of the company	TIANJIN JIURI NEW MATERIALS CO., LTD
Address of the company	C-5/6, Vision Hill, No.1 Gonghua Road, Huayuan Hi-tech Park, Tianjin, China.
Postcode	300384
Telephone number	+86-22-23811185
Fax number	+86-22-87186899
E-mail address	Carrie Wu (rui.wu@jiurichem.com)

### 1.4 Emergency phone number


Emergency phone Number	+86-22-58330700
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## 2. Hazards identification

### 2.1 Hazard classification according to GHS

Skin sensitisation	Category 1A
Hazardous to the aquatic environment, long-term hazard	Category 4

### 2.2 Label elements

Hazard pictograms	
Signal word	Warning

### 2.3 Hazard statements

H317	May cause an allergic skin reaction.
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<b>H413</b>	May cause long lasting harmful effects to aquatic life.
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## 2.4 Precautionary statements

### ◆ Prevention

<b>P261</b>	Avoid breathing dust/fume/gas/mist/vapours/spray.
<b>P272</b>	Contaminated work clothing should not be allowed out of the workplace.
<b>P273</b>	Avoid release to the environment.
<b>P280</b>	Wear protective gloves/protective clothing/eye protection/face protection.

### ◆ Response

<b>P302+P352</b>	IF ON SKIN: Wash with plenty of soap and water.
<b>P321</b>	Specific treatment (see ... on this label).
<b>P333+P317</b>	If skin irritation or rash occurs: Get medical help.
<b>P362+P364</b>	Take off contaminated clothing and wash it before reuse.

### ◆ Storage

<b>Storage</b>	Not applicable.
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### ◆ Disposal

<b>P501</b>	Dispose of contents/container in accordance with local/regional/national/ international regulations.
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## 2.5 Hazard description

<b>Physical and chemical hazards</b>	Data conclusive but not sufficient for classification.
<b>Health hazards</b>	The material may cause an allergic skin reaction.
<b>Environment hazards</b>	May cause long lasting harmful effects to aquatic life.

## 3. Composition/Information on Ingredients

Component	CAS NO.	EC NO.	Concentration percent %
Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	162881-26-7	423-340-5	≥98.5

## 4. First Aid Measures

### 4.1 Description of First Aid Measures

<b>General advice</b>	Immediate medical attention is required. Show this safety data sheet (SDS) to the doctor in attendance.
<b>Eye contact</b>	Wash affected eyes for at least 15 minutes under running water with eyelids held open.
<b>Skin contact</b>	Wash thoroughly with soap and water.
<b>Ingestion</b>	Rinse mouth immediately and then drink plenty of water, seek medical attention.
<b>Inhalation</b>	If difficulties occur after dust has been inhaled, remove to fresh air and seek medical



	attention.
<b>Protecting of first-aiders</b>	Ensure that medical personnel are aware of the substance involved. Take precautions to protect themselves and prevent spread of contamination.

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

1	See section 11.
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#### 4.3 Indication of any immediate medical attention and special treatment needed

1	Treat symptomatically.
2	Symptoms may be delayed.

### 5. Fire Fighting Measures

#### 5.1 Extinguishing media

<b>Suitable extinguishing media</b>	Dry powder, foam.
<b>Unsuitable extinguishing media</b>	Carbon dioxide.

#### 5.2 Specific hazards arising from the substance or mixture

1	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.
2	Slight fire hazard when exposed to heat or flame. In case of fire, the following can be released: Oxides of carbon, phosphorus oxides, harmful vapours.
3	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).

#### 5.3 Advice for firefighters

1	As in any fire, wear self-contained breathing apparatus and full protective gear.
2	Fire-extinguishing work is done from the windward and the suitable fire-extinguishing method according to the surrounding situation is used.
3	Uninvolved persons should evacuate to a safe place.
4	In case of fire in the surroundings, keep containers cool by spraying with water. Eliminate all ignition sources if safe to do so.

### 6. Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

1	Remove all sources of ignition. Ensure adequate ventilation. Take precautionary measures against static discharges.
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|---|--|
| 2 | Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal. |
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## 6.2 Environmental precautions

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|---|---|
| 1 | Prevent further leakage or spillage if safe to do so. |
| 2 | Do not let product enter drains.                      |

## 6.3 Methods and materials for containment and cleaning up

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|---|--|
| 1 | Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.                                       |
| 2 | Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal. |
| 3 | Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.         |

## 7. Handling and storage

### 7.1 Precautions for handling

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| 1 | Handling is performed in a well ventilated place.          |
| 2 | Wear suitable protective equipment.                        |
| 3 | Avoid contact with skin and eyes. Avoid formation of dust. |
| 4 | Keep away from heat/sparks/open flames/ hot surfaces.      |

### 7.2 Precautions for storage

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| 1 | Store in original containers.                                    |
| 2 | Keep containers securely sealed.                                 |
| 3 | Store in a cool, dry area protected from environmental extremes. |
| 4 | Store away from incompatible materials and foodstuff containers. |

## 8. Exposure controls/personal protection

### 8.1 Control parameters

#### ◆Occupational Exposure limit values

Component	Country/Region	Limit value - Eight hours		Limit value - Short term	
		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Phenyl bis(2,4,6-trimethylbenzoyl)- phosphine oxide CAS NO.: 162881-26-7	Australia	-	-	-	-
	Denmark	-	-	-	-
	Germany (AGS)	-	-	-	-
	Ireland	-	-	-	-
	South Korea	-	-	-	-

	USA(OSHA)	-	-	-	-
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## ◆Biological limit values

<b>Biological limit values</b>	No information available.
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## ◆Monitoring methods

1	EN14042 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents .
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## 8.2 Engineering controls

1	Ensure adequate ventilation, especially in confined areas.
2	Ensure that eyewash stations and safety showers are close to the workstation location.
3	Use explosion-proof electrical/ventilating/lighting/equipment.

## 8.3 Personal protection equipment

<b>General requirement</b>	
<b>Eye protection</b>	Tightly fitting safety goggles (approved by EN166(EU) or NIOSH(US)).
<b>Hand protection</b>	Protective gloves(such as butyl rubber),approved by EN374(EU).
<b>Respiratory protection</b>	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.
<b>Skin and body protection</b>	Wear fire/flame resistant/retardant clothing and antistatic boots.

## 9. Physical and chemical properties

## Physical and chemical properties

<b>Appearance</b>	Pale yellow powder
<b>Odor</b>	Not available
<b>Odor threshold</b>	Not available
<b>pH</b>	Not available
<b>Melting point/freezing point</b>	127.0-135.0°C at 101.3 kPa
<b>Initial boiling point and boiling range</b>	The test substance decomposed at $\geq 168$ °C, no boiling point was observed.
<b>Flash point</b>	Not available
<b>Evaporation rate</b>	Not available



<b>Flammability(solid, gas)</b>	Non flammable
<b>Upper/lower explosive limits</b>	Not available
<b>Vapor pressure</b>	<0.0000002 Pa at 20 °C
<b>Vapor density</b>	Not available
<b>Relative density</b>	1.19 at 20 °C
<b>Water solubility</b>	< 0.1 mg/L at 20 °C at pH 7.5
<b>n-octanol/water partition coefficient</b>	log Kow (log Pow): 5.8 at 22 °C at pH 8.3
<b>Auto-ignition temperature</b>	No self-ignition up to melting point of test substance.
<b>Decomposition temperature</b>	>= 168 °C at 1013 hPa
<b>Viscosity</b>	Not available

## 10. Stability and reactivity

### Stability and reactivity

<b>Reactivity</b>	The substance is stable under recommended storage and handling conditions.
<b>Chemical stability</b>	Stable at room temperature in closed containers under normal storage and handling conditions.
<b>Possibility of hazardous reaction</b>	Dust explosion hazard.
<b>Conditions to avoid</b>	Incompatible materials. Avoid electro-static discharge. High temperatures. Proximity to sources of ignition.
<b>Incompatible materials</b>	Strong acids, strong bases, strong oxidizing agents.
<b>Hazardous decomposition products</b>	Hazardous decomposition products formed under fire conditions. - Carbon monoxide, phosphorus oxide, harmful vapours.

## 11. Toxicological information

<b>LD<sub>50</sub>(oral)</b>	LD50 - Rat - >2000 mg/kg
<b>LD<sub>50</sub>(dermal)</b>	LD50 - Rat- >2000 mg/kg
<b>LC<sub>50</sub>(inhalation)</b>	LC50 - Rat - No information available
<b>Skin corrosion/irritation</b>	Not classified
<b>Serious eye damage/irritation</b>	Not classified
<b>Respiratory or skin sensitization</b>	May cause an allergic skin reaction.
<b>Germ cell mutagenicity</b>	Not classified
<b>Carcinogenicity</b>	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.
<b>Reproductive toxicity</b>	Not classified
<b>STOT-single exposure</b>	Not classified
<b>STOT-repeated exposure</b>	Not classified

Aspiration hazard

Not classified

## 12. Ecological information

### Ecological information

<b>Acute (short-term) toxicity:</b>	
<b>Toxicity to Fish</b>	LC50 (96h) > 90 µg/L
<b>Toxicity to Invertebrates</b>	EC50 (48h) > 1175 µg/L
<b>Toxicity to Algae/aquatic plants</b>	EC50 (72h) > 260 µg/L
<b>Chronic (long-term) toxicity:</b>	
<b>Toxicity to Fish</b>	NOEC:Not available
<b>Toxicity to Invertebrates</b>	NOEC:>= 8.1 µg/L
<b>Toxicity to Algae/aquatic plants</b>	NOEC:>= 260 µg/L(72h)
<b>Persistence and degradability</b>	Under test conditions no biodegradation observed
<b>Bioaccumulative potential</b>	BCF (aquatic species): 5 dimensionless The test substance is not bioaccumulative according to PBT-criteria.
<b>Mobility in soil</b>	Log Koc at 20 °C: 3.85 A log Koc of that value indicates that the tested substance is likely to bind to soils and sediments.
<b>Results of PBT and vPvB assessment</b>	The substance is not PBT / vPvB.
<b>Other adverse effects</b>	May cause long lasting harmful effects to aquatic life.

## 13. Disposal considerations

### Disposal considerations

<b>Waste chemicals</b>	Before disposal should refer to the relevant national and local laws and regulation. Recommend the use of incineration disposal.
<b>Contaminated packaging</b>	Containers may still present chemical hazard when empty. Keep away from hot and ignition source of fire. Return to supplier for recycling if possible.
<b>Disposal recommendations</b>	Refer to section 13.1 and 13.2.

## 14. Transport information

<b>UN number</b>	Not regulated
<b>UN proper shipping name</b>	Not regulated
<b>Transport hazard class</b>	Not regulated
<b>Packing group</b>	Not regulated
<b>Environmental hazards</b>	No
<b>Special precautions for user</b>	See section 2.2
<b>Transport in bulk according to</b>	

Annex II of MARPOL 73/78 and the IBC Code	Not regulated
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## 15. Regulatory information

### 15.1 International chemical inventory

EINECS	Listed
TSCA	Listed
DSL	Listed
IECSC	Listed
NZLOC	Listed
PICCS	Listed
KECI	Listed

## 16. Other information

### 16.1 Information on revision

Creation Date	2020/11/06
Revision Date	2022/07/27
Reason for revision	Modified according to the requirements of UN GHS (sixth revision).

### 16.2 Reference

[1]IPCS: The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>

[2]IARC, website: <http://www.iarc.fr/>

[3]OECD: The Global Portal to Information on Chemical Substances, website:

[http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)

[4]CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

[5]NLM: ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

[6]EPA: Integrated Risk Information System, website: <http://cfpub.epa.gov/iris/>

[7]U.S. Department of Transportation: ERG, website: <http://www.phmsa.dot.gov/hazmat/library/erg>

[8]Germany GESTIS-database on hazard substance, website: <http://gestis-en.itrust.de/>.

### 16.3 Abbreviations and acronyms

CAS –Chemical Abstracts Service

TSCA- United States Toxic Substances Control Act Inventory

EINECS-European Inventory of Existing Commercial Chemical Substances

DSL- Canadian Domestic Substances List

PICCS- Philippines Inventory of Chemicals and Chemical Substances

NZIOC- New Zealand Inventory of Chemicals

IECSC- China Inventory of Existing Chemical Substance

KECI- Existing and Evaluated Chemical Substances

PC-STEL- Short term exposure limit

PC-TWA- Time Weighted Average

DNEL- Derived No Effect Level

IARC- International Agency for Research on Cancer

RPE- Respiratory Protective Equipment

PNEC–Predicted No Effect Concentration

LC<sub>50</sub>- Lethal Concentration 50%

LD<sub>50</sub>- Lethal Dose 50%



## Safety Data Sheet

# JRCure 1819

Version: V1.0.0.1

Creation Date: 2020/11/06

Revision Date: 2022/07/27

Record Number: ghs-0044

\* According to UN GHS (the 6th revise dedition)



**NOEC**- No Observed Effect Concentration

**PBT** - Persistent, Bioaccumulative, Toxic

**BCF**- Bioconcentration factor(BCF)

**CMR**- Carcinogens, mutagens or substances toxic to reproduction

**EC<sub>50</sub>**- Effective Concentration 50%

**POW** -Partition coefficient Octanol: Water

**vPvB**- very Persistent, very Bioaccumulative

### 16.4 Disclaimer

This Safety Data Sheet (SDS) was prepared according to UNGHS (the 6th revised edition). The data included was derived from international authoritative data base and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information. However, due to the diversity of information sources and the limitations of our knowledge, this document is only for user's reference. Users should make their independent judgment of suitability of this information for their particular purposes. We do not assume responsibility for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.