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# Safety Data Sheet

## SECTION 1 Identification of the chemical and supplier

**Chemical Name:** triphenyl phosphine

**Synonyms:** -

**CAS No.:** 603-35-0

**EC No.:** 210-036-0

**Molecular Formula:** C<sub>18</sub>H<sub>15</sub>P

**Recommended Uses:** Please consult manufacturer.

**Restrictions on Use:** Please consult manufacturer.

**Name of the company:** Shandong Hongchuan  
Chemical Co., Ltd

**Address of the company:** 417# Meiyuan

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## SECTION 2 Hazards identification

### | Emergency overview

Solid. Irritating to skin. SENSITISATION by skin contact. Serious irritating to eyes. Irritating to respiratory system. Danger of serious damage to health by prolonged exposure.

### | Hazard classification according to GHS

According to series standards of GB 30000-2013: Rules for classification and labelling of chemicals. (Please refer to 16th chapter of SDS), hazard classification as following: Skin Corrosion/Irritation, Category 2; Skin Sensitization, Category 1; Serious Eye Damage/Irritation, Category 2A; Specific Target Organ Toxicity-Single Exposure : Criteria for respiratory tract irritation, Category 3; Specific Target Organ Toxicity-Repeated Exposure, Category 1.

### | Label elements

#### Hazard pictograms



**Signal word:** **Danger**

**Hazard statements:** Causes skin irritation, May cause an allergic skin reaction, Causes serious eye irritation, May cause respiratory irritation, Causes damage to organs through prolonged or repeated exposure.

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## Precautionary statements

**Prevention:** Do not breathe dust/fume/gas/mist/vapours/spray. Wash ... thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection

**Response:** Call a POISON CENTER/doctor, if you feel unwell. Get medical advice/attention if you feel unwell. And wash it before reuse. **IF INHALED:** Remove person to fresh air and keep comfortable for breathing. If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. **IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**Storage:** Store locked up. Store in a well-ventilated place. Keep container tightly closed.

**Disposal:** Dispose of contents/container in accordance with local/regional/national/international regulations.

## Hazard description

### Physical and chemical hazards

No information available

### Health hazards

Inhalation of dusts or fumes, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress. Inhalation of the product may produce adverse health effects or irritation of the respiratory tract following discomfort. Accidental ingestion of the product may be harmful to the health of the individual. The product may cause an allergic skin reaction following direct contact with the skin. The product can cause skin irritation following direct contact with the skin. Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. This product may cause serious eye irritation. Severe inflammation may be expected with pain following direct contact with the eye. This product may cause temporary discomfort following direct contact with the eye.

### Environmental hazards

Please refer to 12th chapter of SDS.

## SECTION 3 Composition/information on ingredients

√Substance Mixture

Component	Concentration/Range	CAS No.
Triphenylphosphine	> = 99.0	603-35-0

## SECTION 4 First aid measures

### Description of first aid measures

**General advice:** Immediate medical attention is required. Show this safety data sheet (SDS) to the doctor in attendance.

**Skin contact:** Take off contaminated clothing and shoes immediately. Wash off with plenty of water for at least 15 minutes and consult a physician if felt uncomfortable.

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**Eye contact:** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician if felt uncomfortable.

**Inhalation:** Move victim into fresh air. If breathing is difficult, give oxygen. Do not use mouth to mouth resuscitation if victim ingested or inhaled the substance. If not breathing, give artificial respiration and consult a physician immediately.

**Ingestion:** Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately.

**Advice for protecting the rescuer:** Remove all sources of ignition and increase ventilation. Avoid contact with skin and eyes. Avoid inhalation of dusts. Use personal protective equipment including respirator .

**Special note to the doctor:** Treat symptomatically. Symptoms may be delayed.

## **SECTION 5 Firefighting measures**

### **| Hazard characteristics**

Fire exposed containers may vent contents through pressure relief valves . May expansion or decompose explosively when heated or involved in fire. Containers may explode when heated.

### **| Extinguishing method and media**

Suitable extinguishing media: dry chemical, carbon dioxide, water spray, alcohol-resistant foam.

Unsuitable extinguishing media: Do not use a solid water stream as it may scatter or spread fire.

### **| Fire precautions and measures**

As in any fire, wear self-contained breathing apparatus ( MSHA/NIOSH approved or equivalent) and full protective gear. Fight fire from a safe distance, with adequate cover. Prevent fire extinguishing water from contaminating surface water or the ground water system.

## **SECTION 6 Accidental release measures**

### **| Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Use personal protective equipment. Avoid breathing vapours, mist, gas or dust.

### **| Environmental precautions**

Prevent further leakage or spillage if safe to do so. Discharge into the environment must be avoided.

### **| Methods and materials for containment and cleaning up**

Absorb spilled material in dry sand or inert absorbent. In case of large amount of spillage, contain a spill by bunding. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

## **SECTION 7 Handling and storage**

### **| Precautions for handling**

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Handling is performed in a well ventilated place. Wear suitable protective equipment. Avoid contact with skin and eyes. Keep away from heat/sparks/open flames/ hot surfaces. Take precautionary measures against static discharges.

### **| Precautions for storage**

Keep containers tightly closed . Keep containers in a dry, cool and well-ventilated place. Keep away from heat/sparks/open flames/ hot surfaces. Store away from incompatible materials and foodstuff containers.

## **SECTION 8 Exposure controls/personal protection**

### **| Control parameters**

#### **Occupational Exposure limit values**

No information available.

#### **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. GBZ/T 160.1~GBZ/T 160.81-2004 Determination of toxic substances in workplace air ( Series standard ) .

### **| Engineering controls**

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting/equipment. Set up emergency exit and necessary risk-elimination area.

### **| Respiratory protection**

If exposure limits are exceeded or if irritation or other symptoms are experienced, use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges.

### **| Eye protection**

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

### **| Skin and body protection**

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

### **| Hand protection**

Wear protective gloves ( such as butyl rubber ) , passing the tests according to EN 374(EU),US F739 or AS/NZS 2161.1 standard.

### **| Other protection**

Smoking, eating and drinking water is forbidden in the workplace. After work, shower and change clothes. To maintain good health habits.

## **SECTION 9 Physical and chemical properties**

<b>Appearance:</b> white powder	
<b>pH (Specified the concentration) :</b> No information available	<b>Odor:</b> No information available
<b>Initial boiling point and boiling range(°C):</b> 377	<b>Melting point/freezing point(°C):</b> 80
<b>Vapor density(Air = 1):</b> Not applicable	<b>Density:</b> No information available
<b>Saturated vapor pressure (kPa):</b> Not applicable	<b>Relative density(Water= 1):</b> 1.194
<b>Evaporation rate:</b> Not applicable	<b>Viscosity(mm<sup>2</sup>/s):</b> Not applicable
<b>Flash point(°C):</b> Not applicable	<b>N-octanol/water partition coefficient:</b> No information available
<b>Decomposition temperature(°C):</b> No information available	<b>Auto-ignition temperature(°C):</b> No information available
<b>Upper/lower explosive limits[%(v/v)]:</b> Upper limit : No information available ; Lower limit : No information available	
<b>Solubility:</b> Insoluble in water	<b>Flammability:</b> No information available

## SECTION 10 Stability and reactivity

### | Stability

Stable under proper operation and storage conditions.

### | Incompatible materials

No information available

### | 应 Conditions to avoid

Incompatible materials, heat, flame and spark.

### | Hazardous reactions

No information available

### | Decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11 Toxicological information

### | Acute toxicity

COMPONENT	CAS NO.	LD <sub>50</sub> (ORAL)	LD <sub>50</sub> (DERMAL)	LC <sub>50</sub> (INHALATION)-4H
Triphenylphosphine	603-35-0	700mg/kg(Rat)	> 5000mg/kg(Rabbit)	12.176mg/L(Rat)

### | Carcinogenicity

ID	CAS NO.	COMPONENT	IARC	NTP
1	603-35-0	Triphenylphosphine	Not Listed	Not Listed

#### | **Skin irritation/corrosion**

Causes skin irritation(Category 2)

#### | **Eye irritation/corrosion**

Causes serious eye irritation(Category 2A)

#### | **Skin sensitization**

May cause an allergic skin reaction(Category 1)

#### | **Respiratory sensitization**

No information available

#### | **Germ cell mutagenicity**

No information available

#### | **Reproductive toxicity**

No information available

#### | **STOT-single exposure**

May cause respiratory irritation(Category 3)

#### | **STOT-repeated exposure**

Causes damage to organs through prolonged or repeated exposure(Category 1)

#### | **Aspiration hazard**

No information available

## **SECTION 12 Ecological information**

#### | **Acute aquatic toxicity**

No information available.

#### | **Chronic aquatic toxicity**

No information available.

#### | **Persistence and degradability**

No information available

#### | **Bioaccumulative potential**

No information available

#### | **Mobility in soil**

No information available

#### | **Other deleterious effect**

No information available.

## SECTION 13 Disposal considerations

### | Disposal methods

Product: If medical advice is needed, have product container or label at hand.

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 considerations

Refer to section 13.1 and 13.2.

## SECTION 14 Transport information

| UN number: 3077

| UN proper shipping name: NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

| Transport hazard class: -

| Packing group: III

| Label

Not applicable

| Marine pollutant (Yes/No): -

| Methods of packing

Packaging as recommended by manufacturer.

| Precautions for transport

Transport vehicles should be equipped with the appropriate variety and quantity of fire equipment and emergency equipment leakage during transport. Before transport, should be preceded by checking whether container integrity, sealing. The transport unit must be placarded and marked in accordance with relevant transporting requirements.

## SECTION 15 Regulatory information

### | Regulatory information

COMPONENT	A	B	C	D	E	F	G	H
Triphenylphosphine	Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed

【A】 Catalog of Hazardous Chemicals(2015 Edition), Notice 5th 2015, China State Administration of Work Safety.

【B】 Catalog of Priority Hazardous Chemicals for Environment Management, Notice 33th 2014, Ministry of Environmental Protection of PRC.

【C】 List of Toxic Chemicals Restricted to be Imported/Exported in China, Notice 85th 2013, Ministry of Environmental Protection of PRC.

【D】 Catalog of Stupeficient and Psychotropic Substances(2013Edition), Notice 230th 2013, China Food and Drug Administration.

【E】 Catalog of Hazardous Chemicals for Priority Management( First and Second batches ), Notice 95th, 2011, Notice 12th

2013, China State Administration of Work Safety.

【F】 List of Ozone Depletion Chemicals Controlled to be Imported/Exported in China ( First to Sixth batches ), Notice from 2000 to 2012 Ministry of Environmental Protection of PRC.

【G】 Dangerous Chemicals Directory Used to Manufacture Exploder(2011 Edition), Notice 25th Nov. 2011, Ministry of Public Security of PRC1.

【H】 Catalog of Highly Toxic Chemicals, Notice 142th 2003, China Ministry of Health.

## SECTION 16 Others

**Latest Revision Date:** 2016/07/01

### | Revision explanation

This Safety Data Sheet (SDS) was prepared according to standards of 《Safety data sheet for chemical products—Content and order of sections》 ( GB/T 16483-2008 ) and 《Guidance on the compilation of safety data sheet for chemical products》( GB/T 17519-2013 ). The result of GHS classification according to 《Guidance on the Catalog of Hazardous Chemicals(2015 Edition) (trial)》 and series standards of 《Rules for classification and labelling of chemicals》 (GB 30000.2-2013~GB 30000.29-2013).

### | 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/>.

### | Abbreviations and acronyms

**CAS** –Chemical Abstracts Service

**PC-STEL**- Short term exposure limit

**DNEL** - Derived No Effect Level

**RPE** - Respiratory Protective Equipment

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

**NOEC** -No Observed Effect Concentration

**PBT** - Persistent, Bioaccumulative, Toxic

**BCF** - Bioconcentration factor (BCF)

**IMDG**-International Maritime Dangerous Goods

**UN**-The United Nations

**NFPA**-National Fire Protection Association

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

**PC-TWA** - Time Weighted Average

**IARC** - International Agency for Research on Cancer

**PNEC** –Predicted No Effect Concentration

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

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

**POW** - Partition coefficient Octanol:Water

**vPvB** - very Persistent, very Bioaccumulative

**ICAO/IATA**-International Civil Aviation Organization/International Air Transportation Association

**ACGIH**-American Conference of Governmental Industrial Hygienists

**OECD**-Organization for Economic Co-operation and Development