



**CHAOYANG MINGYU CHEMICAL INDUSTRY CO.,LTD**  
ADD : TWENTY JIAZI TOWN CHAOYANG CITY LIAONING  
PRO.,CHINA,  
TEL&FAX: 86-421-8611088, E-mail:myhg2006@163.com

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## **Material Safety Data Sheet**

### **1. CHEMICAL PRODUCT AND SUPPLIER IDENTIFICATION**

Product name:Insoluble Sulfur (Polymeric Sulfur)  
Trade name:Tian qi  
Rubber Vulcanizing Agent :IS-HD-OT20  
Manufacturer:CHAOYANG MINGYU CHEMICAL INDUSTRY CO.,LTD.  
Factory add:Twenty jiazi Town,Chaoyang City,Liaoning Pro.,China  
Tel&Fax: 86-421-8611088

### **2.COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical name:Polymeric Sulfur  
CAS NO.:Polymeric Sulfur 9035-99-8,  
Chemical description:Non-rised yellow powder  
TSCA NO.:none  
EINECS NO.:none  
Other information:S8,Sx

### **3.HAZARDS IDENTIFICATION**

Not classified as hazardous according to the EEC Dangerous Substance Directive and Dangerous Preparation Directive.

Dust suspended in air ignites easily.

Burning sulfur emits highly toxic gases.

### **4.FIRST AID MEASURES**

Symptoms and effects

- Dust may be irritating to the respiratory tract and cause symptoms of bronchitis.
- Ingestion:The produces characteristic stomach break odour,nausea or vomiting
- Eye:Particulates of the material may cause mechanical irritation.
- Skin:In case of prolonged contact:Slight irritation.In case of repeated contact:Risk of dermatitis.

First aid

- General:In all cases of doubt,or when symptoms persist,seek medical attention.
- Inhalation:Move to fresh air.If symptoms persist,seek medical advice.
- Skin:Wash immediately with soap and water.Laundry clothes before reuse.
- Eye:Rinse thoroughly with plenty of water.Eyelids should be held away from the eyeball to ensure thorough rinsing.Seek medical advice if irritation develops.
- Advice to physician

### **5.FIRE-FIGHTING MEASURES**



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Extinguishing media: Large quantities of water, waterspray, water mist, foam, dry chemical powder, CO<sub>2</sub>, sand

Unsuitable extinguishing media: waterjet.

Special exposure hazards: Combustible powder. Dust explosion possible in the presence of air. Burns with nearly invisible flame. Emits toxic and corrosive fumes under fire conditions.

Hazardous decomposition/combustion products: Sulfur oxides (SOX): May cause delayed pulmonary oedema.

Protective equipment: Wear self contained breathing apparatus.

Other information

- Evacuate all non-essential personnel.
- Because of dangers of toxic effects, warn people to shelter indoors. Close doors and windows and stop ventilation.
- Approach down wind.
- Avoid dispersing the dust into clouds when using extinguishing means.
- If safe to do so, remove the exposed containers, or cool with large quantities of water.
- Do not allow run-off from fire fighting to enter drains or water courses.
- Thoroughly clean equipment after use.

## **6. ACCIDENTAL RELEASE MEASURES**

Personal precautions: For personal protection see Section 8.

Environmental precautions:

Avoid dispersing the dust into clouds.

Eliminate all sources of ignition, and do not generate flames or sparks.

Do not flush into public water courses. Avoid discharge into the environment.

Methods for cleaning up: Collect as much as possible in a clean container for (preferable) reuse or disposal. Do not use hair-brooms and plastic-brooms. Rinse remnant with plenty of water. Refer to section 13 for disposal of spilled material.

## **7. HANDLING AND STORAGE**

Handling

- Keep away from sources of ignition - No smoking! Use non-sparking handtools.

Avoid dispersing the dust into clouds.

- Carry out industrial operation in closed piping circuits and equipment.

Use electrically conductive materials for piping circuits and equipment. Avoid contact with eyes.

Good industrial practice in housekeeping and personal hygiene should be followed.

Fire and explosion prevention

- Dust/air mixtures may ignite violently upon exposure to sparks or sources of ignition.
- Dust explosion class (VDI 2263): St 1.
- Avoid dust accumulation. Avoid dispersing the dust into clouds.
- Eliminate all sources of ignition, and do not generate flames or sparks.



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- Prevent electrostatic discharges. Use grounded equipment. Totally or partially inert closed equipment to oxygen content below 7%.
- Minimize vertical drop distance in chutes and hoppers to prevent generation of dust clouds and static electrical charge.

#### Storage requirements

Store away from sources of heat and ignition. Store away from reactive products (refer to sec.10). Keep the original package or container closed if not in use. Protect from direct sunlight. 12 months with the common storing condition. Recommend use of date is within 6 months. The reversion rate is less than 1% year when stored in closed containers below 20°C.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Engineering controls

- Avoid dust generation
- Ensure good ventilation and local exhaustion of the working area.

#### Exposure limits

- No exposure limits have been established for this material

The following data are applicable to the ingredient(s) listed below.

#### Polymeric Sulfur

- OES-TWA 10.0 mg/m<sup>3</sup> (total inhalable dust)

#### Personal protection

##### Respiratory

- Avoid breathing dust. In case of dust formation use dust mask. In case of decomposition. Face mask with type E-P2 cartridge.

##### Hand

- Wear suitable gloves.

##### Eye

- Wear safety goggles.

##### Skin and body

- Wear suitable protective clothing.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Non-rised yellow powder
Colour	yellow
Odour	—
Boiling point	444.6°C
Melting point	90-135°C
Flash point	—
Flammability	—



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Loss on drying%(Max):	0.50
Explosive properties	——
Auto ignition temperature	> 330°C
Oxidizing properties	——
Vapour pressure	<0.01mBar(20°C)
Specific gravity	1.6-1.70kg/m <sup>3</sup> (20°C)
Bulk density	500-900 kg/m <sup>3</sup>
Solubility in water	Insoluble in water
Solubility in other solvents	Partly soluble
PH value	——
Partition coefficient	——
Residues(63um)%Max	0.5
Relative vapour density	——
Viscosity	——
Explosion limits	Lower Explosion Limit
Upper Explosion Limit	
Insoluble Sulfur Content %(On total S)	90
Element Sulfur content % min	80

## 10. STABILITY AND REACTIVITY

### Stability

·Stable under recommended storage and handling conditions (see Section 7)

### Conditions to avoid

·Heat,sources of heat,naked flames,sparks,direct sunlight

### Materials to avoid

·oxidants,amines,sodas,

### Hazardous decomposition products

·Sulfur oxides(SOX)

## 11. TOXICOLOGICAL INFORMATION

Name: Insoluble sulfur

### Acute toxicity

- Oral LD50           rat: >2000mg/kg.
- Dermal LD50       rabbit:>2000mg/kg.
- Inhalation LD50   rat: >9.23mg/l

### Irritation

- Skin           rabbit:Non-irritating
- Eye           rabbit :Non-irritating
- Respiratory   rabbit :Non-irritating
- Sensitization Patch testing (Human experience):Not sensitizing.



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·Genotoxicity Not mutagenic(in vitro)  
Other toxicological information Chronic toxicity:NOEL(No Observable Effect Level)(rat,oral):500mg/kg

## 12.ECOLOGICAL INFORMATION

Name: Insoluble sulfur

Ecotoxicity

·Fish 96h-LC50(Danio rerio): 866mg/l

·Daphnia 24h-ECO(Daphnia magna) : >10.000mg/kg.

Bioaccumulation Assimilation and consumption in proteic synthesis

## 13. DISPOSAL CONSIDERATIONS

Product

·Small quantities:According to local regulations.(most probably controlled incineration).The incinerator must be equipped with a system for the neutralization of SOx..

·Large quantities:Consult Meyors Chemical for special advice.

Contaminated packaging

·According to local regulations.

## 14. TRANSPORT INFORMATION

Land transport(ADR/RID)

·ADR class \_\_\_\_\_

·RID class \_\_\_\_\_

·ADR/RID packing group \_\_\_\_\_

·Hazard Identification No. \_\_\_\_\_

·Substance Identification \_\_\_\_\_

·UN NO. \_\_\_\_\_

·Proper Shipping Name \_\_\_\_\_

Other information Documentation justifying the non-dangerous goods properties is available on request.

Sea transport(IMDG-code/IMO)

Correct technical name \_\_\_\_\_

IMDG Class \_\_\_\_\_

UN NO. \_\_\_\_\_

Packing group \_\_\_\_\_

EMS NO. \_\_\_\_\_

Other information Documentation justifying the non-dangerous goods properties is available on request.



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Air transport (ICAO-TI/IATA-DGR)

ICAO-TI/IATA-DGR class ——

UN NO. ——

Packing group ——

Other information Documentation justifying the non-dangerous goods properties is available on request.

## **15.REGULATORY INFORMATION**

Chemical description Insoluble sulfur

Labelling according to EC directives

EC-number See Section 2

Classification based on Test

R(isk) phrase(s) none

S(afety)phrase(s) none

Wassergef.hrdungsklasse(WGK)1(VwVwS Anhang4,Nr.3)

## **16.OTHER INFORMATION**

This information only concerns the above mentioned product and does not need to be valid if used with other product(s) or in any process. The information is to our best present knowledge correct and complete and is given in good faith but without warranty. It remains the user's own responsibility to make sure that the information is appropriate and complete for his special use of this product.

Updated on Jan 1<sup>st</sup>2012