

MATERIAL SAFETY DATA SHEET

: According to EC-directive 2001/58/EC

Vulcanizing agent IS OT33AS

HS Code:38249999.90

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product label name	Insoluble sulfur OT33 (Polymeric Sulfur) Qingdao YLSCH Industry&Trade Co.,Ltd
Supplier	Room 501,2-3 Unit. No.8,Zhengzhou Road, Qingdao,China. TEL: +86 18661665800
Emergency telephone	TEL: +86 18661665800
Intended use	Rubber Vulcanizing agent

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	Insoluble sulfur OT33 (Polymeric Sulfur) Polymeric Sulfur 9035-99-8
CAS NO.	Rhombic Sulfur 7704-34-9 High pressure and hydrotreated naphthenic oil 64742-52-5
Chemical description	Non-rised yellow powder
TSCA NO.	none
EINECS NO.	none
Other information	(S ₈) _n

3. HAZARDS IDENTIFICATION

Not classified as hazardous according to the EEC Dangerous Substance Directive and Dangerous Preparation Directive. Dust explosion possible in the presence of air. 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 product produces characteristic stomach breath 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

Remove all contaminated clothing immediately. Wash off with plenty of soap and water.

Seek medical advice if irritation develops. Launder 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.

Ingestion

Rinse mouth, give water to drink. Seek medical advice.

Advice to physician

Symptomatic treatment is advised.

5. FIRE-FIGHTING MEASURES

Extinguishing media

Large quantities of water, waterspray, water mist, foam, dry chemical powder, CO₂, sand.

Unsuitable extinguishing media

Waterjet

Combustible powder. Dust explosion possible in the presence of air.

Special exposure hazards

Burns with nearly invisible flame. Emits toxic and corrosive fumes under fire conditions.

Hazardous decomposition/ combustion products

Sulfur oxides (SO_x): May cause delayed pulmonary oedema.

Protective equipment

Wear self-contained breathing apparatus.

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.

Other information

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 watercourses.

Thoroughly clean equipment after use.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

For personal protection see Section 8.

Avoid dispersing the dust into clouds.

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

Environmental precautions

Do not flush into public watercourses. Avoid discharge into the environment.

Collect as much as possible in a clean container for (preferable) reuse or

Methods for cleaning up

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	<p>Keep away from sources of ignition - No smoking! Use non-sparking handtools. Avoid dispersing the dust into clouds.</p> <p>Carry out industrial operations in closed piping circuits and equipment. Use electrically conductive materials for piping circuits and equipment.</p> <p>Avoid contact with eyes.</p> <p>Good industrial practice in housekeeping and personal hygiene should be followed.</p> <p>Dust/air mixtures may ignite violently upon exposure to sparks or sources of ignition.Dust explosion class (VDI 2263): St 1.</p>
Fire and explosion prevention	<p>Avoid dust accumulation. Avoid dispersing the dust into clouds.</p> <p>Eliminate all sources of ignition, and do not generate flames or sparks.</p> <p>Prevent electrostatic discharges. Use grounded equipment.</p> <p>Totally or partially inert closed equipment to reduce oxygen content below 7%. Minimize vertical drop distance in chutes and hoppers to prevent generation of dust clouds and static electrical charge.</p>
Storage requirements	<p>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.</p>

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls	<p>Avoid dust generation. Ensure good ventilation and local exhaustion of the working area.</p>
Exposure limits	<p>No exposure limits have been established for this material.</p> <p>The following data are applicable to the ingredient(s) listed below.</p>
Name: Insoluble sulfur OT33 (Polymeric Sulfur)	OES-TWA 10.0 mg/m3 (total inhalable dust))
Personal protection	
Respiratory	<p>Avoid breathing dust. In case of dust formation use dust mask.</p> <p>In case of decomposition, face mask with type E-P2 cartridge.</p>
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 ≥	----	Flash point	----
Flammability	----	Loss on drying%(Max)	0.50
Explosive properties		Auto ignition temperature	> 330 ° C
Oxidizing properties	----	Vapour pressure	<0.01 mBar (20°C)
Density	----	Bulk density	400-600 kg/m ³
Solubility in water	Insoluble in water	Solubility in other solvents	Partly soluble
pH value	----	Partition coefficient	----
Mooney Viscosity	----	Relative vapour density	----
Residues (150um)% Max	0.50	Explosion limits	Lower Explosion Limit:30 g/m ³ Upper Explosion Limit:> 2000g/m ³ .
Strength of grain(N)	----	Copper content % Max	----
Insoluble Sulfur Content%(On total S) ≥	90	Element Sulfur content%	67.0±1.0

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
Hazardous decomposition products	Sulfur oxides (SO _x).

11. TOXICOLOGICAL INFORMATION

Name	Insoluble sulfur OT33 (Polymeric Sulfur)
Acute toxicity	
Oral LD50	rat: >2000 mg/kg.
Dermal LD50	rabbit: >2000 mg/kg.
Inhalation LC50	rat: > 9.23 mg/l.
Irritation	
Skin	rabbit: Non-irritating
Eye	rabbit: Non-irritating
Respiratory	rabbit: Non-irritating
Sensitization	Patch testing (Human experience): Not sensitizing
Genotoxicity	Not mutagenic (in vitro)
Other toxicological information	Chronic toxicity: NOEL (No Observable Effect Level) (rat, oral): 500 mg/kg.

12. ECOLOGICAL INFORMATION

Name	Insoluble sulfur OT33 (Polymeric Sulfur)
Ecotoxicity	
Fish	96h-LC50 (Danio rerio): 866 mg/l.
Daphnia	24h-EC0 (Daphnia magna): > 10.000mg/l.
Biodegradability	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 YLSCH 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 No.	----	UN number	----

Proper Shipping Name Insoluble sulfur OT33 (Polymeric Sulfur)
Other information Documentation justifying the non-dangerous goods properties is available on request.

Sea transport (IMDG-code/ IMO)

Correct technical name	----	IMDG Class	
UN Number		Packaging group	
EMS Number	----		
Other information		Documentation justifying the non-dangerous goods properties is available on request.	

Air transport (ICAO-TI/ IATA-DGR)

ICAO-TI/IATA-DGR Class	----	UN number	----
Packing group			

Correct technical name Insoluble sulfur OT33 (Polymeric Sulfur)
Other information Documentation justifying the non-dangerous goods properties is available on request.

15.REGULATORY INFORMATION

Chemical description	Insoluble sulfur OT33 (Polymeric Sulfur)
Labelling according to EC directives	
EC-number	See section 2
Classification based on	Tests
R(isk) phrase(s)	None
S(afety) phrase(s)	None

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.

YLSCH