

**MATERIAL SAFETY DATA SHEET:** According to EC-directive 2001/58/EC**Vulcanization Agent OT33****HS Code: 38249999.90****1. 化学品及企业标示(CHEMICAL PRODUCT AND COMPANY IDENTIFICATION)**

产品标签名/ Product label name	不溶性硫磺 OT33 (聚合硫磺) Insoluble sulfur OT33 (Polymeric Sulfur) 深圳市华起达实业有限责任公司 Meyors Chemical INC Limited
供应商/ Supplier	深圳市罗湖区中兴路, 外贸集团大厦 2610-2611 室 RM 2610-2611 Foreign Trade Building, Zhong Xing Road Shen Zhen. China TEL:+86-755-82184166 FAX:+86-755-82187033
紧急电话/ Emergency telephone	+86-755-82190130
产品用途/ Intended use	橡胶硫化剂/ Rubber Vulcanisation Agent
日期/Date	2019-9-29

2. 成分/组成信息(COMPOSITION/INFORMATION ON INGREDIENTS)

化学名/ Chemical name	聚合硫磺/ Polymeric Sulfur Polymeric Sulfur 9035-99-8,
CAS 编号/ CAS NO.	Rhombic Sulfur 7704-34-9 High pressure and hydrotreated naphthenic oil 64742-52-5
产品描述/ Chemical description	黄色不飞扬粉末/ Non-rised yellow powder
TSCA NO.编码/ TSCA NO.	无/ none
EINECS 号码/ EINECS NO.	无/ none
其他信息/ Other information	(S ₈) _n

3. 危险性鉴定(HAZARDS IDENTIFICATION)

根据 EEC 的危险物质指示和危险准备指示没有危害性分类。	Not classified as hazardous according to the EEC Dangerous Substance Directive and Dangerous Preparation Directive.
空气中可能会散布粉尘。	Dust explosion possible in the presence of air.
散布在空气中的粉尘易燃。	Dust suspended in air ignites easily.
燃烧硫磺会发出有毒气体。	Burning sulfur emits highly toxic gases.

4. 急救措施(FIRST AID MEASURES)

症状和效果/ 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.
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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.

粉尘可能吸入呼吸道，从而导致支气管炎。

摄取：产品的特性会导致胃胀，恶心或呕吐。

急救/ First aid

通常情况/ General

In all cases of doubt, or when symptoms persist, seek medical attention.

任何可疑情况，或有任何症状出现，请马上找医生咨询。

吸入/ Inhalation

Move to fresh air. If symptoms persist, seek medical advice.

呼吸新鲜空气。如果有持续症状，请马上就医。

皮肤/ Skin

Wash immediately with soap and water. Launder clothes before reuse立即用肥皂和清水冲洗。衣物重新使用前必须洗净。

Rinse thoroughly with plenty of water. Eyelids should be held away from the eyeball to ensure thorough rinsing. Seek medical advice if irritation develops.

眼睛/ Eye

翻开眼睑用清水冲洗干净。

确保洗除残渣。如果出现愤怒症状请就医。

摄取/ Ingestion

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

请漱口，喝水，询医。

医生建议/ Advice to physician

Symptomatic treatment is advised.

有症状时就医。。

5. 消防措施(FIRE-FIGHTING MEASURES)

灭火媒介/ Extinguishing media

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

不适用的灭火媒介

大量水，喷物，水雾，泡沫，干粉灭火器，CO₂

/ Unsuitable extinguishing media

waterjet.

水注（流）

特殊危险/ 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.

易燃粉末。空气中可能会弥漫粉尘。燃烧几乎无火焰。在燃烧时产生电磁和腐蚀性浓烟。

分解腐烂危险/燃烧产品/

Hazardous decomposition/ combustion products

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

硫的氧化物：可能导致慢性肺部肿瘤。

保护设备/ Protective equipment

Wear self contained breathing apparatus.

需佩戴空气呼吸器。

Evacuate all non-essential personnel.

Because of dangers of toxic effects, warn people to shelter indoors.

其他信息/ Other information

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.

疏散无关人员。

由于毒害危险，警告人们呆在室内。关闭门窗，停止通风。

靠近下风口

使用时避免粉尘挥发到空气中

安全的做法是移除敞开的容器，或用大量的冷水。

避免消防水接触下水道，土地或水源。

使用后彻底洗净设备。

6. 泄露应急处理(ACCIDENTAL RELEASE MEASURES)

个人防范/ 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.

对于个人防范请参照第 8 部分。

避免粉尘挥发到空气中。

消除所有火源，不要产生火焰或火花。

环境预防/ Environmental precautions

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

不要倒入公共水源中。避免流入环境之中。

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.

清洁处理方法/ Methods for cleaning up

收集尽可能多的清洁用容器（最好能重复使用）用来处理事故。不要使用发刷和塑料刷。用大量的水冲洗残留物。最好参看第 13 部分对于溢出物的处理。

7. 操作处置与储存(HANDLING AND STORAGE)

操作处置/ Handling

Keep away from sources of ignition - No smoking! Use non-sparking handtools. Avoid dispersing the dust into clouds.

Carry out industrial operations 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.

远离火源——不准吸烟！使用不产生火花的工具。避免粉尘挥发到空气中。

实现工业操作管道循环和设备的封闭性。对循环管道和设备使用电导材



火灾爆炸处理/

Fire and explosion prevention

料。

避免接触眼睛。

好的操作规则和个人卫生习惯应该遵循。

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.

Prevent electrostatic discharges. Use grounded equipment. 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.

粉尘/空气 混合物可能会引起猛烈的爆炸。

粉尘爆炸等级(VDI 2263): St 1。

避免粉尘堆积。避免粉尘挥发到空气中。消除火源，同时避免产生火焰或火花。防止静电的产生。使用接地设备。完全或部分地关闭设备使氧含量低于 7%。在斜道和单足跳时减少落差。阻止空气中粉尘和静电的产生。

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.

储存要求/ Storage requirements

远离热源和火源储存。远离会起反应的产品（最好参看第 10 部分）。如果不用请保持储存产品的袋子或容器封闭。不要放在阳光直射的地方。

8. 接触控制/个体防护(EXPOSURE CONTROLS/PERSONAL PROTECTION)

工程学控制/ Engineering controls

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

避免粉尘产生。确保当地工作场所通风。

暴露限制/ Exposure limits

No exposure limits have been established for this material.

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

无限制。其它数据请参看下面。

名称/ Name: 聚合硫磺/ Polymeric Sulfur

OES-TWA 10.0 mg/m³ (total inhalable dust))

个体防护/ Personal protection

呼吸器/ Respiratory

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

避免吸入粉尘。在产生粉尘的情况下请佩戴防尘面罩。在腐烂分解情况下，佩戴 E-P2 型面罩。

手/ Hand

Wear suitable gloves.

佩戴相应的长手套。

眼/ Eye

Wear safety goggles.



佩戴防护眼罩。

皮肤和身体/ Skin and body

Wear suitable protective clothing.

穿戴相应的保护服装。

9. 物理和化学特性(PHYSICAL AND CHEMICAL PROPERTIES)

外观/ Appearance	Non-rised yellow powder 黄色不飞扬粉末	颜色/ Colour	Yellow 黄色
气味/ Odour	----	沸点/ Boiling point	444.6℃
熔点/ Melting point	----	闪点/ Flash point	----
易燃性/ Flammability	----	加热减量≤ Loss on drying%≤	0.50
爆炸性/ Explosive properties	----	自燃温度/ Auto ignition temperature	> 330 °C
氧化性/ Oxidizing properties	----	蒸汽压/ Vapour pressure	<0.01 mBar (20℃)
比重/ Density	----	体积密度/ Bulk density	400-600 kg/m ³
溶解性/ Solubility in water	Insoluble in water 不溶于水	在其它溶剂中的溶解性 Solubility in other solvents	Partly soluble. 部分溶解
PH 值/ pH value	----	分解系数/ Partition coefficient	----
Residues (150µm)% Max 筛余物(150µm)%Max	0.50	相对蒸汽密度/ (air=1) Relative vapour density	----
粘性/ Viscosity	----	爆炸极限/ Explosion limits	Lower Explosion Limit/ 下限 (LEL): 30 g/m ³ , Upper Explosion Limit / 上限(UEL): 2000 g/m ³ .
Insoluble Sulfur Content% (Occupied totals) ≥ 不溶性硫磺含量(占总硫元素) ≥	90	Element Sulfur content% 元素硫含量	67.0±1.0

10. 稳定性和反应性(STABILITY AND REACTIVITY)

稳定性/ Stability	Stable under recommended storage and handling conditions (see section 7). 推荐的稳定储存和搬运条件(请参照第7部分)
应避免的情况/ Conditions to avoid	Heat, sources of heat, naked flames, sparks, direct sunlight 热, 热源, 火焰, 火花, 阳光直射。
应避免的物质/ Materials to avoid	oxidants, amines 氧化剂, 胺类物质。
腐烂分解毒害性产品/ Hazardous decomposition products	Sulfur oxides (SOx). 硫的氧化物。



11. 毒理学资料(TOXICOLOGICAL INFORMATION)

名称/ Name	不溶性硫磺/ Insoluble sulfur
敏感性毒害/ Acute toxicity	
口头的/ Oral LD50	老鼠/ rat: >2000 mg/kg.
皮肤的/ Dermal LD50	兔子/ rabbit: >2000 mg/kg.
吸入/ Inhalation LC50	兔子/ rat: > 9.23 mg/l.
易愤怒/ Irritation	
皮肤/ Skin	rabbit: Non-irritating/ 兔子: 无烦躁或愤怒
眼睛/ Eye	rabbit: Non-irritating/ 兔子: 无烦躁或愤怒
呼吸/ Respiratory	rabbit: Non-irritating/ 兔子: 无烦躁或愤怒
感光性/ Sensitization	Patch testing (Human experience): Not sensitizing. 取样实验 (人体) 表明: 无光敏性。
基因学/ Genotoxicity	Not mutagenic (in vitro)/ 无诱导基因突变物质。
其它毒物学信息/	Chronic toxicity: NOEL (No Observable Effect Level) (rat, oral): 500 mg/kg.
Other toxicological information	慢性毒性: 无明显效果水平: 500 mg/kg.

12. 生态学资料(ECOLOGICAL INFORMATION)

名称/ Name	不溶性硫磺/ Insoluble sulfur
生态学/ Ecotoxicity	
鱼/ fish	96h-LC50 (Danio rerio): 866 mg/l.
水蚤/ daphnia	24h-EC0 (Daphnia magna): >10.000mg/l.
生物体内积累/	Assimilation and consumption in proteic synthesis
Bioaccumulation	蛋白质合成中同化和消耗。

13. 废弃处理(DISPOSAL CONSIDERATIONS)

产品/ 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. 避免流入环境。 小量: 根据当地规定。(大部分被控制焚化)。焚化炉必须装备 Sox 的中和系统。 大量: 请联系美尔化工获取建议。
包装污染/ Contaminated packaging	According to local regulations. 根据当地规定。

14. 运输信息(TRANSPORT INFORMATION)

**陆运/ Land transport (ADR/ RID)**

ADR 等级/ ADR class	----	RID 等级/ RID class	----
ADR/RID 包装组成/	----	危害鉴定号/	----
ADR/RID packing group		Hazard Identification No.	
物质鉴定号/	----	UN 号	----
Substance Identification No.		UN number	
适当海运名称/	----		
Proper Shipping Name			

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

文件证明非危险品，符合要求。

海运/ Sea transport (IMDG-code/ IMO)

正确的技术名称	----	IMDG 等级	----
Correct technical name		IMDG Class	
UN 号码/ UN Number	----	包装组成	----
		Packaging group	
EMS 号/ EMS Number	----		----

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

文件证明非危险品，符合要求。

空运/ Air transport (ICAO-TI/ IATA-DGR)

ICAO-TI/IATA-DGR 等级	----	UN 号	----
ICAO-TI/IATA-DGR Class		UN number	
包装组成	----		
Packing group			

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

文件证明非危险品，符合要求。

15. 法规信息(REGULATORY INFORMATION)

化学品描述/ Chemical description	不溶性硫磺/ Insoluble sulfur
标签根据 EC 指标/ Labelling according to EC directives	
EC 号/ EC-number	See section 2 查看第 2 部分
分级标准/ Classification based on	Tests/ 测试
危险性短语/ R(isk) phrase(s)	None/ 无
安全性短语/ S(afety) phrase(s)	None/ 无
Wassergefährdungsklasse (WGK)	1 (VwVWS Anhang 4, Nr. 3)

16. 其他信息(OTHER INFORMATION)



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