

**MATERIAL SAFETY DATA SHEET:** According to EC-directive 2001/58/EC**Rubber Accelerator ZMBT(MZ) 15%****HS Code: 38121000.00****1. 化学品及企业标示(CHEMICAL PRODUCT AND COMPANY IDENTIFICATION)**

产品标签名/ Product label name	2-醇基苯骈噻唑锌盐 Zinc 2-mercaptobenzothiazole 深圳市华起达实业有限责任公司 Meyors Chemical INC Limited 深圳市罗湖区中兴路, 外贸集团大厦 2610-2611 室
供应商/ Supplier	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	橡胶硫化促进剂/ Rubber Vulcanization accelerator

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

化学名/ Chemical name	2-醇基苯骈噻唑锌盐 Zinc 2-mercaptobenzothiazole
CAS 编号/ CAS NO.	155-04-4
产品描述/ Chemical description	淡黄色粉末/ light yellow powder
TSCA NO. 编码/ TSCA NO.	无/ none
EINECS 号码/ EINECS NO.	无/ none
其他信息/ Other information	C <sub>14</sub> H <sub>8</sub> N <sub>2</sub> S <sub>4</sub> Zn

**3. 危险性鉴定(HAZARDS IDENTIFICATION)**

经常接触可能会导致皮肤过敏。对水生有机体有危害, 对水生环境可能有长期毒害。	Repeated contact may cause skin sensitization. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
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**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. Repeated contact may cause skin sensitization. 粉尘可能吸入呼吸道, 从而导致支气管炎。 经常接触可能导致皮肤过敏。
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	Remove all contaminated clothing immediately. Wash off with plenty of soap and water. Seek medical advice if irritation develops. Launder clothes before reuse. 立即移走所有被污染的衣物。用肥皂和清水冲洗。 如果出现愤怒、烦躁症状请立即就医。衣物重新使用前需洗涤干净。
眼睛/ 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. 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. 请漱口，喝水。
医生建议/ Advice to physician	No specific recommendations. 无详细建议。

## 5. 消防措施(FIRE-FIGHTING MEASURES)

灭火媒介/ Extinguishing media	waterspray, water mist, foam, dry chemical powder, CO <sub>2</sub> 喷物，水雾，泡沫，干粉灭火器，CO <sub>2</sub>
不适用的灭火媒介 / Unsuitable extinguishing media	waterjet. 水注（流）
特殊危险/ Special exposure hazards	Emits toxic fumes under fire conditions. 在火灾情况下释放的有毒烟气。
分解腐烂危险/燃烧产品/ Hazardous decomposition/ combustion products	Carbon monoxide (CO), Sulfur oxides (SO <sub>x</sub> ), nitrous gases (NO <sub>x</sub> ). 一氧化碳，硫的氧化物，氮的氧化物。
保护设备/ Protective equipment	Wear self contained breathing apparatus. 需配戴空气呼吸器。
其他信息/ Other information	Do not allow run-off from fire fighting to enter drains or water courses. 避免消防水接触下水道，土地或水源。

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

个人防范/ Personal precautions	For personal protection see Section 8. Avoid dust generation. 对于个人防范请参照第 8 部分。避免粉尘的产生。
环境预防/ Environmental precautions	Avoid discharge into the environment. 避免流入环境之中。
清洁处理方法/ Methods for cleaning up	Collect as much as possible in a clean container for (preferable) reuse or disposal. 尽可能的将其收集在清洁的容器里以便回收或集中处理。

## 7. 操作处置与储存(HANDLING AND STORAGE)

操作处置/ Handling	Avoid contact with skin. Avoid dust generation. 避免接触皮肤。避免粉尘。
火灾爆炸处理/ Fire and explosion prevention	No specific recommendations. 没特别要求



**储存要求/ Storage requirements** Store in a dry and cool place.  
储存于干燥与阴凉的地方。

### 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**

**名称/ Name: 2-醇基苯骈噻唑锌盐 Zinc**  
**2-mercaptobenzothiazole** OES-TWA 5.0 mg/m<sup>3</sup>

**个体防护/ Personal protection**

**呼吸器/ Respiratory** Avoid breathing dust. In case of insufficient ventilation, wear suitable respiratory equipment.  
避免吸入粉尘。在通风不畅的情况下请佩戴相应的呼吸器。

**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)

<b>外观/ Appearance</b>	Light yellow powder 淡黄色粉末	<b>颜色/ Colour</b>	Light yellow 淡黄色
<b>气味/ Odour</b>	----	<b>沸点/ Boiling point</b>	----
<b>熔点/ Melting point</b> ≥	200.0°C	<b>闪点/ Flash point</b>	----
<b>易燃性/ Flammability</b>	----	<b>爆炸极限/ Explosion limits</b>	----
<b>爆炸性/ Explosive properties</b>	----	<b>自燃温度/ Auto ignition temperature</b>	----
<b>氧化性/ Oxidizing properties</b>	----	<b>蒸汽压/ Vapour pressure</b>	----
<b>比重/ Density</b>	----	<b>体积密度/ Bulk density</b>	
<b>溶解性/ Solubility in water</b>	Insoluble in water 不溶于水	<b>在其它溶剂中的溶解性/ Solubility in other solvents</b>	Soluble in Acetone 溶于丙酮
<b>PH 值/ pH value</b>		<b>分解系数/ Partition coefficient</b>	
<b>Residues (150um)% Max</b>	0.10 (Max)	<b>相对蒸汽密度/ (air=1) Relative vapour density</b>	
<b>筛余物</b>			
<b>粘性/ Viscosity</b>			

### 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).
应避免的情况/ Conditions to avoid	推荐的稳定储存和搬运条件（请参照第 7 部分） Heating > 100 °C: May catch fire.
应避免的物质/ Materials to avoid	大于 100 °C:可能导致火灾。 No specific recommendations.
腐烂分解毒性产品/ Hazardous decomposition products	无特殊推荐。 Thermal decomposition products: carbon monoxide (CO), nitrous gases (NOx), Sulfur oxides (SOx). 热分解产品：一氧化碳，氮的氧化物，硫的氧化物。

**11. 毒理学资料(TOXICOLOGICAL INFORMATION)**

名称/ Name	2-醇基苯骈噻唑锌盐/ Zinc 2-mercaptobenzothiazole
敏感性毒害/ Acute toxicity	
口头的/ Oral LD50	老鼠/ rat: 7500 mg/kg.
皮肤的/ Dermal LD50	兔子/ rabbit: >7940 mg/kg.
易愤怒/ Irritation	
皮肤/ Skin	Slightly irritating to skin but not sufficient for classification. 对皮肤有轻微刺激但未达到分级阶段。
眼睛/ Eye	Slightly irritating to eyes but not sufficient for classification. 对眼有轻微刺激但未达到分级阶段。

**12. 生态学资料(ECOLOGICAL INFORMATION)**

名称/ Name	2-醇基苯骈噻唑锌盐/ Zinc 2-mercaptobenzothiazole
生态学/ Ecotoxicity	
鱼/ fish	96h-LC50 (Lepomis macrochirus): 1.5 mg/l. 96h-LC50 (Oncorhynchus mykiss): 0.75 mg/l. 96h-LC50 (Pimephales promelas): 11 mg/l.
水蚤/ daphnia	48h-EC50 (Daphnia magna): 4.1mg/l.
藻类/ algae	96h-IC50 (Selenastrum capricornutum): 0.25 mg/l.
初级生物/ Degradation Biotic	不能被轻易分解/ Not readily biodegradable.

**13. 废弃处理(DISPOSAL CONSIDERATIONS)**

产品/ Product	Avoid discharge into the environment. Small quantities: According to local regulations. Large quantities: Consult Meyors Chemical for special advice. 避免流入环境。 小量：根据当地规定。 大量：请联系美尔化工获取建议。
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包装污染/ Contaminated packaging	According to local regulations. 根据当地规定。
其他信息/ Other information	Waste code number: Please refer to your specific industry in the European Waste Catalogue. 消耗物代码: 请联系欧洲在消耗物领域的特殊工业。

### 14. 运输信息(TRANSPORT INFORMATION)

#### 陆运/ Land transport (ADR/ RID)

ADR 等级/ ADR class	9	RID 等级/ RID class	9
ADR/RID 包装组成/ ADR/RID packing group	---	危害鉴定号/ Hazard Identification No.	90
物质鉴定号/ Substance Identification No.	2811	UN 号 UN number	2811
适当海运名称/ Proper Shipping Name	Environmentally hazardous substance, solid, n.o.s. (Zinc 2-mercaptobenzothiazole) 环境危害物质, 固体, n.o.s (2-醇基苯并噻唑锌盐)		

#### 海运/ Sea transport (IMDG-code/ IMO)

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

#### 空运/ Air transport (ICAO-TI/ IATA-DGR)

ICAO-TI/IATA-DGR 等级 ICAO-TI/IATA-DGR Class	9	UN 号 UN number	2811
包装组成 Packing group	Environmentally hazardous substance, Solid 对环境有害的物质, 固体。 Environmentally hazardous substance, solid, n.o.s.		
正确的技术名称 Correct technical name	(Zinc 2-mercaptobenzothiazole) 环境危害物质, 固体, n.o.s (2-醇基苯并噻唑锌盐)		

### 15. 法规信息(REGULATORY INFORMATION)

化学品描述/ Chemical description	Zinc 2-mercaptobenzothiazole 2-醇基苯并噻唑锌盐
标签根据 EC 指标/ Labelling according to EC directives	See section 2 查看第 2 部分
EC 号/ EC-number	Annex-1 to directive 67/548/EEC 根据 67/548/EEC 指示
分级标准/ Classification based on	
危险性短语/ R(isk) phrase(s)	R 43 May cause sensitization by skin contact



### 安全性短语/ S(safety) phrase(s)

R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment  
R 43 可能导致皮肤接触加剧。  
R 50/53 对水生有机体有剧毒，可能导致对水生环境的长期影响。  
S 24 Avoid contact with skin  
S 37 Wear suitable gloves  
S 60 This material and its container must be disposed of as hazardous waste  
S 61 Avoid release to the environment. Refer to special instructions/Safety data sheets  
S 24 避免接触皮肤。  
S 37 配戴相应的手套。  
S 60 这种物质和其容器必须按照有害物质的原则进行相应处理。  
S 61 避免释放到环境，参照相关指令或安全数据表。  
To be displayed on the label: "EC label".  
显示在"EC label"标签上。  
2 (VwVwS, Nr. 6613)

### 其他信息/ Other information

Wassergefährdungsklasse (WGK)

## 16. 其他信息(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.**

这些信息仅仅涉及以上提到的产品，如果用于其他产品或其他过程，本公司不付任何法律责任。这些信息是我们当前最新最好的资料编写而成，值得信任，但我们不能绝对保证没有错误。它仅仅起到提醒使用者自己使这些信息指导相关产品用于适当的地方。