

## 一. Identifications of Substance and Company

物品與廠商資料

- 1.1 Product Name: RUBBER REINFORCING FILLER  
物品名稱: 活性鋅氧粉
- 1.2 Producer(supplier): GUANZHOU BAIYUN XINGGONG CHEMICAL LTD  
製造商 (供應商名稱): 廣州白雲信港化工有限公司
- 1.3 Address: 204,FLOOR 2,BUILDING D, NO.206,YUEXI STREET, TONGDE STREET,BAIYUN DISTRICT,GUANGZHOU  
地址: 廣州市白雲區同德街粵溪大街 206 号 D 栋二楼 204
- 1.4 Phone: 020-86488586


## 二. Composition /Information on Ingredients

成份辨識資料

- 2.1 Zinc compound CAS NO: 1314-13-2  
鋅化合物  $\geq 53\%$  化学文摘登记号:
- 2.2 Moisture  
水分  $\leq 3\%$
- 2.3 Other additives CAS NO: Not applicable  
其他助剂  $\leq 44\%$  化学文摘登记号: 不适用
- 2.4 Chemical name : Zinc Oxide  
化学名称: 氧化鋅

## 三. Hazards Identifications

危害辨識資料

- 3.1 Hazard class  
危險性類別 GHS09 environment   
GHS/CLP Regulation (EC)No 1272/2008: Hazardous substances for water environment (acute toxicity) class 1 H400; Hazardous substances in the aquatic environment (slow toxicity) class 1 H410  
GHS/CLP 規例(EC)第 1272/2008 号: 水环境之危害物质 (急毒性) 第 1 级 H400; 水环境之危害物质 (慢毒性) 第 1 级 H410
- 3.2 Health hazard: Repeated contact is irritating to the skin and eyes. Inhalation may cause thirst, itching, ingestion may cause nausea, vomiting.  
健康危害: 反复接触对皮肤有刺激, 对眼睛有刺激。吸入可能出现口渴、咽痒, 食入可能出现恶心、嘔吐。
- 3.3 Environmental hazard: It may cause long-term harmful effects in the aquatic environment.  
環境危害: R50/53 对水生生物有毒, 在水生环境可能会引起长期有害作用。
- 3.4 Safety suggestions: S60 (substances and containers must be placed as hazardous waste), S61 (prevent discharge to the environment)  
安全建议: S60 (物质及容器必须按危险废物放置)、S61 (防止排向环境)
- 3.5 Explosion hazard: Non-combustible  
燃爆危險: 本品不燃

## 四. First-aid Measures

急救措施

4.1	<b>Inhalation:</b> Move to fresh air. If breathing is difficult, give oxygen and send to a doctor immediately. 吸入：移至新鮮空氣處。如呼吸困難，給輸氧，立即送醫。
4.2	<b>Skin contact:</b> Take off contaminated clothes and wash with soapy water and running water. 皮膚接觸：脫去污染衣着，用肥皂水和流動清水沖洗。
4.3	<b>Eye contact:</b> Lift the eyelids, rinse them with flowing water or normal saline for 15 minutes and send them to hospital immediately. 眼睛接觸：提起眼瞼，用流動的清水或生理鹽水沖洗 15 分鐘，立即送醫。
4.4	<b>Eating:</b> Brush your mouth thoroughly and take milk, soybean milk or egg white orally. If you swallow too much, please send to a doctor immediately. 食入：徹底刷口，口服牛奶、豆漿或蛋清，如吞食過量，請立即送醫。

五.	<b>Fire-fighting Measures</b> 滅火措施
5.1	<b>Extinguishing Media:</b> Use water mist, chemical dry powder, foam or carbon dioxide extinguisher 適用滅火劑：用水霧、化學干粉、泡沫或二氧化碳滅火劑
5.2	<b>Not suitable for fire cutting:</b> there is no limit to the extinguishing agent applied to this substance or mixture. 不適用滅火劑：施用于此物質或混合物的滅火劑無限制。
5.3	<b>Hazardous combustion products :</b> ZnO 有害燃燒產物：氧化鋅
5.4	<b>Firemen should wear fire-resistant or fire-resistant clothing, face mask, helmet and gloves, and positive pressure self-contained breathing equipment (SCBA).</b> 滅火注意措施及防護措施：消防人員需穿戴耐火或防火的衣服，同時穿戴面罩，頭盔和手套，正壓自給式呼吸設備（SCBA）。
5.5	<b>Fire extinguishing guidance:</b> Prevent dilution of the controlled area from entering rivers, sewers or drinking water supplies. 滅火指導：防止控區的稀釋流出進入河流、下水道或飲用水供應系統。

六.	<b>Accidental Release Measures</b> 洩漏處理方法
6.1	<b>Small amount of leakage:</b> Avoid raising dust, sweep it carefully and collect it in a closed container. It can also be washed with a large amount of water and diluted into the wastewater system. 小量泄漏：避免揚塵，小心掃起，收集于密閉容器中。也可用大量水沖洗，洗水稀釋後放入廢水系統。
6.2	<b>Massive leakage:</b> Collect, recycle or transport to waste treatment site for disposal. 大量泄漏：收集回收或運至廢物處理場所處置。
6.3	<b>Other:</b> Avoid drainage into the sewer 其它：避免排入下水道

七.	<b>Safe operation and Storage</b> 安全操作與儲存方法
7.1	<b>Operational matters:</b> Closed operation, local exhaust. Wear dust masks, eye protection, latex gloves and protective clothing. Lightly load and unload,. Wash thoroughly with water and soap after work. 操作事項：密閉操作，局部排風。佩帶防塵口罩，防護眼睛，乳膠手套及防護服。工作完後應用水和肥皂徹底清洗。

7.2 Storage method: Store in a cool, dry and ventilated warehouse, away from heat and ignition sources. Separate from acid, base and oxidizer. Separate from magnesium and chlorinated rubber.

儲存方法：儲存於陰涼乾燥通風的庫房，遠離熱及引火源。與酸、碱、氧化劑分開存放。與鎂、氯化橡膠分開存放。

#### 八. Contact and Precaution

##### 接觸與防護措施

#### 8.1 Occupational exposure concentration

职业暴露浓度

1. 8 hour-TWA (mg/m<sup>3</sup>)

1. 八小时日时量平均容许浓度：5 mg/m<sup>3</sup>

2. 15 min-STEL (mg/m<sup>3</sup>)

2. 短时间时量平均容许浓度：10 mg/m<sup>3</sup>

3. PEL-CEILING

3. 最高容许浓度：--

8.2 Respiratory protection: 1. 50~125 mg/m<sup>3</sup>: Constant flow oxygen supply breathing protection; Or anti-dust, fog drops and smoke of the dynamic air quiet breathing protection.

呼吸系统防护：1. 50~125 mg/m<sup>3</sup>: 定流量式供氧式呼吸防护具；或防粉尘、雾滴及烟熏之动力型空气清静式呼吸防护具。

250 mg/m<sup>3</sup>: full type air 滤 clean breathing protection with high efficiency 滤 material; Or comprehensive self-carrying respirator; Or all - round oxygen - supplied breathing protection equipment.

250 mg/m<sup>3</sup>: 具高效率滤材之全面型空气滤清式呼吸防护具；或全面型自携式呼吸防护具；或全面型供氧式呼吸防护具。

8.3 Eye protection: If contact is likely, protective eyes with protective wings are recommended.

眼睛防护：如果有可能发生接触，建议使用带护翼的防护眼睛。

8.4 Body protection: Work protective clothing.

身体防护：工作防护衣。

8.5 Hand protection: Protective gloves.

手防护：防护手套。

8.6 Other protection: Smoking, eating and drinking are prohibited at the work site. Shower and change clothes after work. Keep good hygiene habits.

其它防护：工作现场禁止吸烟、进食和饮水。工作完毕，淋浴更衣。保持良好的卫生习惯。

8.7 Protective equipment (Graphics)

防护设备(图形)



#### 九. Physical and Chemical Property

##### 物理及化學性質

9.1 Exterior: White powder, odorless

外觀：白色粉末，无臭。

9.2 Molecular formula:

分子式：ZnO

9.3 PH: 9.5±1.0

9.4 Melting point:

熔点(°C): 1975°C

9.5 Boiling point:

沸点(°C): 2360°C

9.6 Spontaneous combustion temperature: Meaningless

自燃温度(°C): 无意义

9.7 Critical temperature (°C): Meaningless

临界温度(°C): 无意义

9.8 Critical pressure (MPa): Meaningless

临界压力(MPa): 无意义

9.9 Flash point:

闪点(°C): 1436°C

9.10 Ignition temperature: This product is not flammable

引燃温度: 本品不易燃

9.11 Explosive upper/Lower limit %(V/V) : non-explosive

爆炸上限/下限%(V/V): 非爆炸物

9.12 Vapor pressure:

蒸气压: --

9.13 Vapor density: >1 (air =1)

蒸气密度: >1 (空气=1)

9.14 Density:

密度: 5.6 /cm<sup>3</sup>

9.15 Solubility: The solubility of water is 1.6ppm@29°C, soluble in acid, sodium hydroxide aqueous solution.

溶解性: 水中溶解度为 1.6ppm@29°C, 可溶于酸、氢氧化钠水溶液。

9.16 Main purpose: Reinforcer for rubber or cable, vulcanization activator for natural rubber, colorant and filler for white rubber

主要用途: 橡胶或电缆的补强剂, 天然橡胶的硫化活化剂, 白色橡胶的着色剂和填料。。

#### 十. Stability and Reactivity

安定性及反应性

10.1 Invariability: Stable at room temperature under normal pressure

安定性: 常温常压下稳定

10.2 Hazardous reactions during special condition: Dangerous polymerization does not occur

特殊状况下可能之危害反应: 危险聚合反应不会发生。

10.3 Hazardous decomposition products: No data available

危害分解产物: 无资料

10.4 Materials to avoid: Strong oxidants, strong acids and bases, chlorine compounds, magnesium.

应避免之物资: 强氧化剂、强酸强碱、氯化物、镁。

10.5 Other: Avoid dust

其它: 避免产生粉尘

#### 十一. Toxicological Information

毒性资料

11.1	Acute toxicity: 1.Eat 急毒性: 1. 食入 LD50 >5000 mg/kg (rat) (OECD 401) 2. Skin 2. 皮肤 LD50 >2000 mg/kg bw (rat) (OECD 402) 3. Inhalation 3. 吸入 LC50/4h >5.7 mg/l (rat) (OECD 403)
11.2	Toxicity: No data 亚急性和慢性毒性: 無
11.3	Thrill: No data 刺激性: 無
11.4	Mutagenicity: No data 致突变性: 無
11.5	Teratogenicity: No data 致畸性: 無
11.6	Carcinogenicity: No data 致癌性: 無
11.7	Others: Zinc is a trace element needed by all tissues of the body to maintain normal physiological functions. Zinc compounds are generally absorbed only in trace amounts in the digestive tract. 其它: 锌为身体各组织所需、维持正常生理功能的微量元素。一般锌化合物在消化道中仅能微量吸收。

## 十二. Ecological Information

## 生態資料

12.1	Ecotoxicological toxicity: 生态毒理毒性: 1. Toxicity to fish 1. 对鱼类毒性: LC50 , 0.169 mg/L <i>Oncorhynchus mykiss</i> 2. Toxicity to daphnia and other aquatic invertebrates: 2. 对水蚤和其他水生无脊椎动物毒性: EC50 , 0.413 mg/L <i>Ceriodaphnia dubia</i> NOEC , 0.082 mg/L <i>Daphnia magna</i> 3. Toxicity to algae: 3. 对藻类毒性: IC50 , 0.137 mg/L <i>Pseudokirchneriella subcapitata</i> NOEC , 0.082 mg/L <i>Pseudokirchneriella subcapitata</i>
12.2	Biodegradability: No data 生物降解性: 無
12.3	Non biodegradability: No data 非生物降解性: 無
12.4	Bioaccumulation: this product does not have bioaccumulation, zinc is a natural element, and is one of the elements required for the growth and development of all organisms 生物蓄积性: 本品不具有生物蓄积性, 锌为天然元素, 且为所有生物成长发育所需元素之一。



## 十三. Disposal Method

## 廢棄處置方法

- 13.1 Nature of waste: This product is harmless if handled in a standard manner. Refer to relevant national and local regulations before disposal. Incineration is recommended.  
废弃物性质：本产品若按标准的方法处置是没有危害的。处置前应参阅国家和地方有关法规。建议用焚烧法处置。
- 13.2 Waste disposal method: dispose, bury, burn or recycle according to the requirements of relevant national and local laws and regulations.  
废弃处理方法：根据国家和地方有关法规的要求处置，掩埋、焚烧或回收处理。
- 13.3 Precautions for waste: it is forbidden to flow directly into the sewer.  
废弃注意事项：禁止直接流入下水道

## 十四. Transport Information

## 運輸信息

- 14.1 Transport number of dangerous goods No.: UN3077  
危险货物运输编号：UN3077
- 14.2 IMDG rule page: --  
IMDG 规则页码：--
- 14.3 Classification of transport hazards:    
运输危害分类：9 级，海洋污染物
- 14.3 Packing mark:  
包装类别：III
- 14.4 Applicable Name of transport: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,N.O.S.(Zinc oxide)  
适用运输名称：氧化锌
- 14.5 Domestic transport regulations: According to the national road traffic safety regulations  
国内运输规定：根据国家道路交通安全规则
- 14.6 Other: Less than or equal to 5kg/L packaging, not belonging to the ninth category of dangerous goods.  
其它：小于或等于 5kg/L 的包装，不属于第九类的危险品。

## 十五. Statute Information

## 法規資料

- 15.1 Occupational Safety and Health Act  
职业安全卫生法
- 15.2 Hazardous chemicals labeling and General knowledge rules  
危害性化学品标示及通识规则
- 15.3 Road traffic safety rules  
道路交通安全规则
- 15.4 Storage, removal and disposal methods and facility standards for business waste  
事业废弃物保存清除处理方法及设施标准
- 15.5 Permissible exposure standards for workers in workplaces  
劳工作业场所容许暴露标准
- 15.6 Measures for the assessment and grading administration of hazardous chemicals  
危害性化学品评估及分级管理办法

## 十六. Other Information

## 其他資料

16.1 Statement: This SDS is based on our current knowledge and provides the correct safety precautions required for chemicals. This document is not a guarantee of the characteristics of the product, nor is it a legally binding contractual relationship. This note is for industrial use only and should not be used for pharmaceutical or other purposes.

声明：本 SDS 是以我们现有的知识而撰写，提供了有关化学品所需正确的安全注意事项。此文件并非为产品特性之保证，也不为具有法律效力的合同关系。本说明仅供工业生产使用，不能用作药物或其它用途。

16.2 Reference

参考文献

1. Global Harmonization system for GHS Chemicals  
GHS 化学品全球调和制度
2. Classification, Labelling and Packaging of Chemical Substances and Mixtures  
化学物质和混合物分类、标示与包装法规 (Regulation(EC)No.1272/200/)
3. Xingang Chemical Laboratory analyzed data  
信港化工实验室分析数据

16.3 Drawing by: GUANZHOU BAIYUN XINGGONG CHEMICAL LTD

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16.4 Data review: Xingang Chemical Laboratory, He Songwen

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16.5 Tabulating date

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