

**MATERIAL SAFETY DATA SHEET:** According to EC-directive 2001/58/EC**Rubber Accelerator ETU (NA-22)****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	乙撑硫脲(2-硫醇基咪唑啉) Ethylene thiourea 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	橡胶硫化促进剂/ Rubber Vulcanization accelerator

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

化学名/ Chemical name	乙撑硫脲(2-硫醇基咪唑啉) Ethylene thiourea
CAS 编号/ CAS NO.	96-45-7
产品描述/ Chemical description	白色粉末/ White powder
TSCA NO. 编码/ TSCA NO.	无/ none precautionary
EINECS 号码/ EINECS NO.	无/ none
其他信息/ Other information	C <sub>3</sub> H <sub>6</sub> N <sub>2</sub> S

**3. 危险性鉴定(HAZARDS IDENTIFICATION)**

## 3.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008:

The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H360D.

The following Hazard Statements are applicable only according to OSHA regulations within the United States. These Statements are not applicable for the CLP regulation (1272/2008/EC) in the EU. H360.



H360: May damage fertility or the unborn child

GHS08  
Repr. 1B H360D  
Health hazard  
May damage the unborn childGHS07  
Acute Tox. 4  
H302 Harmful if swallowed.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC



T; Toxic

Repr.

Cat.2

R61

May cause harm to the unborn child



Xn;Harmful

Harmful if swallowed.

R22

Information concerning particular hazards for human and environment: Not applicable

### 3.2 Label elements

Labeling according to Regulation (EC) No 1272/2008

The substance is classified and labeled according to the CLP regulation.

Hazard pictograms



GHS07



GHS08

Signal word: Warning

Hazard-determining components of labeling: ethylene thiourea

Hazard statements

The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation:  
H360D.

H360 May damage fertility or the unborn child. (USA)

H302 Harmful if swallowed.

H360D May damage the unborn child.

Precautionary statements

P281 Use personal protective equipment as required.

P264 Wash thoroughly after handling.

P202 Do not handle until all safety precautions have been read and understood

P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

P308+P313 IF exposed or concerned: Get medical advice/attention

P330 Rinse mouth.

Additional information: Restricted to professional users

Hazard description

WHMIS-symbols

D1B - Toxic material causing immediate and serious toxic effects

D2A - Very toxic material causing other toxic effects



NFPA ratings (scale 0-4)



Health = 3

Fire = 1

Reactivity = 0

HMIS ratings (scale 0-4)

HEALTH	*3
FIRE	1
REACTIVITY	0

Health = \*3

Fire = 1



Reactivity = 0

\* - Indicates a long-term health hazard from repeated or prolonged exposures.

HMIS Long Term Health Hazard Substances: 96-45-7, ethylene thiourea

3.3 Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

#### 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。 Remove all contaminated clothing immediately. Wash off with plenty of soap and water.
皮肤/ Skin	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。 Rinse thoroughly with plenty of water. Eyelids should be held away from the eyeball to
眼睛/ Eye	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>
特殊防火程序/ Special firefighting procedures	Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. 佩戴空气呼吸器和防护服来保护皮肤和眼睛。
不同寻常的火情和爆炸危险 Unusual fire and explosions hazards	Emits toxic fumes under fire conditions 在火灾条件下排放有毒烟雾。
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

Wear disposable coveralls and discard them after use.

穿着任意的防护服，使用之后就丢弃。

### 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。

### 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: 乙撑硫脲(2-硫醇基咪唑啉)

Ethylene thiourea

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)

外观/ Appearance	White powder 白色粉末	颜色/ Colour	White 白色
气味/ Odour	---	沸点/ Boiling point	---
熔点/ Melting point ≥	195°C	闪点/ Flash point	---
易燃性/ Flammability	---	爆炸极限/ Explosion limits	---



爆炸性/ Explosive properties	----	自燃温度/ Auto ignition temperature	----
氧化性/ Oxidizing properties	----	蒸汽压/ Vapour pressure	----
比重/ Density	2.00g/cm <sup>3</sup>	体积密度/ Bulk density	----
溶解性/ Solubility in water	Aether, chloroform 乙醚, 氯仿	在其它溶剂中的溶解性 Solubility in other solvents	Insolubility water, ethanol, glycol 不溶于水, 乙醇, 乙二醇
PH 值/ pH value		分解系数/ Partition coefficient	
Residues (150um)% Max 筛余物	0.10(Max)	相对蒸汽密度/ (air=1) Relative vapour density	
纯度/Assay content % ≥	95	油含量.Oil Content %	1.0-2.0

### 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)
应避免的物质/ Materials to avoid	Strong oxidizing agents. 强氧化剂。
腐烂分解毒害性产品/ Hazardous decomposition products	Thermal decomposition products: carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ). 热分解产品: 一氧化碳, 二氧化碳。

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

名称/ Name	乙撑硫脲(2-硫醇基咪唑啉)/ Ethylene thiourea
敏感性毒害/ Acute toxicity	
口头的/ Oral LD50	老鼠/ rat: 1832 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)

Data not yet available.

### 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
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<p><b>包装污染/ Contaminated packaging</b></p> <p><b>其他信息/ Other information</b></p>	<p>advice.</p> <p>避免流入环境。</p> <p>少量：根据当地规定。</p> <p>大量：请联系美尔化工获取建议。</p> <p>According to local regulations.</p> <p>根据当地规定。</p> <p>Waste code number: Please refer to your specific industry in the European Waste Catalogue.</p> <p>消耗物代码：请联系欧洲在消耗物领域的特殊工业。</p>
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**14. 运输信息(TRANSPORT INFORMATION)**

14.1 UN-Number	
DOT,ADR, IMDG, IATA	UN 3077
14.2 UN proper shipping name:	
DOT	Environmentally hazardous substances, solid, n.o.s.
(Ethylenethiourea)	3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE SOLID, N.O.S (Ethylenethiourea)
ADR	
IMDG	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (Ethylenethiourea), MARINE POLLUTANT
IATA	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S(Ethylenethiourea)
14.3 Transport hazard class(es)	
DOT, Class	9
ADR	
	Class:9 Miscellaneous dangerous substances and articles. Label: 9
	Class:9 Miscellaneous dangerous substances and articles. Label: 9
14.4 Packing group	
DOT,ADR,IMDG,IATA	III
14.5 Environmental hazards	
Marine pollutant	Symbol (fish and tree)
Special Marking (ADR)	Symbol (fish and tree)
Special Marking (IATA)	Symbol (fish and tree)
14.6 Special precautions for user	Warning: Miscellaneous dangerous substances and articles.
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:	Not applicable.
Transport/Additional information:	This product is non-hazardous for transport for packages less than 10 lbs
ADR:Limited quantities (LQ)	5kg
UN "Model Regulation"	UN3077, ENVIRONMENT ALLY HAZ ARDO US SUBSTANCE, SOLID, N.O.S. 9, III

**15. 法规信息(REGULATORY INFORMATION)**

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture United States (USA)



SARA Section 355 (extremely hazardous substances)	Substance is not listed.
SARA Section 313 (Specific toxic chemical listings)	96-45-7 ethylene thiourea
TSCA (Toxic Substances Control Act)	Substance is listed.
Proposition 65 (California)	
Chemicals known to cause cancer	96-45-7 ethylene thiourea
Chemicals known to cause reproductive toxicity for females	Substance is not listed.
Chemicals known to cause reproductive toxicity for males	Substance is not listed.
Chemicals known to cause developmental toxicity	96-45-7 ethylene thiourea
Carcinogenic Categories	
EPA (Environmental Protection Agency)	Substance is not listed.
IARC (International Agency for Research on Cancer)	96-45-7 ethylene thiourea. 3
TLV (Threshold Limit Value established by ACGIH)	Substance is not listed.
NIOSH-Ca (National Institute for Occupational Safety and Health)	96-45-7 ethylene thiourea
OSHA-Ca (Occupational Safety & Health Administration)	Substance is not listed.
Canada	
Canadian Domestic Substances List (DSL)	Substance is listed.
Canadian Ingredient Disclosure list (limit 0.1%)	96-45-7 ethylene thiourea
Canadian Ingredient Disclosure list (limit 1%)	Substance is not listed.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

## 16. 其他信息(OTHER INFORMATION)

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases

H304 May be fatal if swallowed and enters airways. R65 Harmful: may cause lung damage if swallowed. Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous

Goods DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labeling of Chemicals ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American

Chemical Society) NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System

(Canada) DNEL: Derived No-Effect Level (REACH)



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PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Meyors