

**MATERIAL SAFETY DATA SHEET:** According to EC-directive 2001/58/EC**Rubber Accelerator DPTT(TRA)****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 | 四硫化双五亚甲基秋兰姆 Dipentamethylen ethiuram tetrasulfide 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 | 四硫化双五亚甲基秋兰姆 Dipentamethylen ethiuram tetrasulfide |
| CAS 编号/ CAS NO. | 971-15-3 |
| 产品描述/ Chemical description | 黄色粉末/ Yellow powder |
| TSCA NO. 编码/ TSCA NO. | 无/ none |
| EINECS 号码/ EINECS NO. | 无/ none |
| 其他信息/ Other information | C ₁₂ H ₂₀ N ₂ S ₈ |

3. 危险性鉴定(HAZARDS IDENTIFICATION)

3.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Classifications listed are applicable to the OSHA GHS Hazard Communication Standard (29CFR1910.1200)

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

H411

Aquatic Chronic 2
Acute Tox. 4
Eye Irrit. 2

H411 Toxic to aquatic life with long lasting effects.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

Information concerning particular hazards for human and environment: Not applicable

3.2 Label elements



Labeling according to Regulation (EC) No 1272/2008

The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H411.

The product is additionally classified and labelled according to the Globally Harmonized System (GHS) within the United States.

The substance is classified and labeled according to the CLP regulation

Hazard pictograms



GHS07



GHS09

Signal word: Warning

Hazard-determining components of labeling: Dipentamethylenethiuram Tetrasulfide

Hazard statements

The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H411.

- H302 Harmful if swallowed.
H319 Causes serious eye irritation
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

- P280 Wear protective gloves/protective clothing/eye protection/face protection.
P264 Wash thoroughly after handling.
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P337+P313 If eye irritation persists: Get medical advice/attention.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Additional information:

EUH031 Contact with acids liberates toxic gas.

Hazard description

NFPA ratings (scale 0-4)



Health = 2
Fire = 1
Reactivity = 0
Health = 2
Fire = 1
Reactivity = 0

HMIS ratings (scale 0-4)

| | |
|------------|---|
| HEALTH | 2 |
| FIRE | 1 |
| REACTIVITY | 0 |

HMIS Long Term Health Hazard Substances: Substance is not listed.

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 | No typical symptoms and effects known. 目前所知没有典型的症状和效果 |
| 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 | Not applicable. 不适用。 |
| 皮肤/ Skin | Wash immediately with plenty of soap and water. 立即用肥皂和清水冲洗。 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)

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| 灭火媒介/ Extinguishing media | Waterspray, water mist, foam, dry chemical powder, CO ₂ 喷水, 水雾, 泡沫, 干粉灭火器, CO ₂ |
| 不适用的灭火媒介 / Unsuitable extinguishing media | Waterjet. 水注(流) |
| 特殊危险/ Special exposure hazards | None known 不知。 |
| 分解腐烂危险/燃烧产品/ Hazardous decomposition/ combustion products | Hydrogen cyanide (HCN), sulphur dioxide (SO ₂), nitrous gases (NO _x). 氰氢酸, 二氧化硫, 氮的氧化物。 |
| 保护设备/ Protective equipment | Wear self contained breathing apparatus. 需配戴空气呼吸器。 Do not allow run-off from fire fighting to enter drains or water courses. |
| 其他信息/ Other information | 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。 |
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7. 操作处置与储存(HANDLING AND STORAGE)

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|--|---|
| 操作处置/ Handling | The usual precautions for handling chemicals should be observed. 应该遵循一般化学物品的预防措施 |
| 火灾爆炸处理/ Fire and explosion prevention | No specific recommendations. 无详细建议 |
| 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/个人防护(EXPOSURE CONTROLS/PERSONAL PROTECTION)

| | |
|--|---|
| 工程学控制/ Engineering controls | No specific recommendations. 无特别建议。 |
| 暴露限制/ Exposure limits | |
| 名称/ Name: 四硫化双五亚甲基秋兰姆 Dipentamethylen ethiuram tetrasulfide | OES-TWA 10.0 mg/m ³ (total inhalable dust) |
| 个人防护/ Personal protection | |
| 呼吸器/ Respiratory | No specific recommendations. 无特别建议。 |
| 手/ Hand | No specific recommendations.. 无特别建议。 |
| 眼/ Eye | No specific recommendations. 无特别建议。 |
| 皮肤和身体/ Skin and body | No specific recommendations. 无特别建议。 |

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

| | | | |
|------------------------------|-----------------------|------------------------------------|--------------|
| 外观/ Appearance | Yellow powder 黄色粉末 | 颜色/ Colour | Yellow 黄色 |
| 气味/ Odour | -- | 沸点/ Boiling point | ---- |
| 熔点/ Melting point \geq | 110°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 | 1.45 g/cm ³ (25°C) | 体积密度/ Bulk density | |
| 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 | acetone, CS ₂ 丙酮, CS ₂ |
| PH 值/ pH value | | 分解系数/ Partition coefficient | |
| Residues (150um)% Max 筛余物 Max | 0.10 | 相对蒸汽密度/ (air=1) Relative vapour density | |
| 粘性/ Viscosity | | 纯度/Assay content % ≥ | 96 |

10. 稳定性和反应性(STABILITY AND REACTIVITY)

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|--|---|
| 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 | No specific recommendations. 无详细建议。 |
| 应避免的物质/ Materials to avoid | No specific recommendations. 无特殊推荐。 |
| 腐烂分解毒害性产品/ Hazardous decomposition products | No hazardous decomposition products known. 目前所知无危险分解品 |

11. 毒理学资料(TOXICOLOGICAL INFORMATION)

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|-----------------------|--|
| 名称/ Name | 四硫化双五亚甲基秋兰姆/ Dipentamethylen ethiuram tetrasulfide |
| 敏感性毒害/ Acute toxicity | |
| 口头的/ Oral LD50 | 老鼠/ rat: >5000 mg/kg. |
| 易愤怒/ Irritation | |
| 皮肤/ Skin | Practically non-irritating. 几乎没刺激 |
| 眼睛/ Eye | Practically non-irritating. 几乎无刺激。 |

12. 生态学资料(ECOLOGICAL INFORMATION)

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| No experimental ecological data are available on the preparation as such 无生态学数据。 |
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13. 废弃处理(DISPOSAL CONSIDERATIONS)

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| 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。 |
|-------------|--|



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| | |
|-------------------------------------|--|
| | 小量：根据当地规定。 |
| | 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。 |
| 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)

Meyors



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| 14.1 UN-Number | |
| DOT, ADR, IMDG, IATA | N/A UN 3077 |
| 14.2 UN proper shipping name: | |
| DOT | N/A |
| ADR | 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE SOLID, N.O.S (benzothiazole-2-thiol) |
| IMDG | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (benzothiazole-2-thiol), MARINE POLLUTANT |
| IATA | ENVIRONMENTALLY HAZARDOUS SUBSTANCESOLID, N.O.S (benzothiazole-2-thiol) |
| 14.3 Transport hazard class(es) | |
| DOT, Class ADR | N/A |
| | Class: 9 (M7) Miscellaneous dangerous substances and articles. Label: 9 |
| | |
| | Class:9 Miscellaneous dangerous substances and articles. Label: 9 |
| | |
| 14.4 Packing group | |
| DOT ADR,IMDG,IATA | N/A III |
| 14.5 Environmental hazards | Product contains environmentally hazardous substances: (benzothiazole-2-thiol) |
| Marine pollutant | Yes |
| | 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 |
| Danger code (Kemler) | 90 |
| EMS Number | F-A, S-F. |
| 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: | Not applicable. |
| Transport/Additional information | |
| ADR | |
| Limited quantities (LQ) | 5kg |
| Transport category | 3 |
| Tunnel restriction code | E |
| UN "Model Regulation" | UN3077, ENVIRONMENT ALLY HAZ ARDO US SUBSTANCE, SOLID, N.O.S. (benzothiazole-2-thiol), 9, III |

15. 法规信息(REGULATORY INFORMATION)

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

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|---|------------------------------------|
| United States (USA) | |
| SARA Section 355 (extremely hazardous substances) | None of the ingredients is listed. |



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|--|------------------------------------|
| SARA Section 313 (Specific toxic chemical listings) | 149-30-4 benzothiazole-2-thiol. |
| TSCA (Toxic Substances Control Act) | 149-30-4 benzothiazole-2-thiol. |
| Proposition 65 (California) | |
| Chemicals known to cause cancer | None of the ingredients is listed |
| Chemicals known to cause reproductive toxicity for females | None of the ingredients is listed |
| Chemicals known to cause reproductive toxicity for males | None of the ingredients is listed. |
| Chemicals known to cause developmental toxicity | None of the ingredients is listed |
| Carcinogenic Categories | |
| EPA (Environmental Protection Agency) | None of the ingredients is listed |
| IARC (International Agency for Research on Cancer) | None of the ingredients is listed |
| TLV (Threshold Limit Value established by ACGIH) | None of the ingredients is listed |
| NIOSH-Ca (National Institute for Occupational Safety and Health) | None of the ingredients is listed |
| OSHA-Ca (Occupational Safety & Health Administration) | None of the ingredients is listed |
| Canada | |
| Canadian Domestic Substances List (DSL) | 149-30-4 benzothiazole-2-thiol. |
| Canadian Ingredient Disclosure list (limit 0.1%) | None of the ingredients is listed. |
| Canadian Ingredient Disclosure list (limit 1%) | None of the ingredients is 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.

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



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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)
PNEC: Predicted No-Effect Concentration (REACH)

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