

SAFETY DATA SHEET

RHENOGRAN TMTD-80



Version 1.0 Revision Date: 2019/06/27 SDS Number: 103000011118 Date of last issue: -
Country / Language: HK / 6N

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : RHENOGRAN TMTD-80

Product code : 05425646

Manufacturer or supplier's details

Supplier : 朗盛香港有限公司
港島東 英皇道 979 號 太古坊
康橋大廈 35 樓 3503-3504 室, 香港

Telephone : +85235268888

E-mail address of person responsible for the SDS : lxs-sds-china@lanxess.com

Emergency telephone number : 0049-214-30-99300 (German)

Supplier : LANXESS Hong Kong Limited
Suites 3503-3504, 35/F Cambridge House
TaiKoo Place, 979 King's Road Island East, Hong Kong, Hong Kong

Telephone : +85235268888

E-mail address of person responsible for the SDS : lxs-sds-china@lanxess.com

Emergency telephone : 0049-214-30-99300 (German)

Recommended use of the chemical and restrictions on use

Recommended use : Accelerator

2. HAZARDS IDENTIFICATION

GHS Classification

Acute toxicity (Oral) : Category 4

Acute toxicity (Inhalation) : Category 4

Skin corrosion/irritation : Category 2

Serious eye damage/eye irritation : Category 1

Skin sensitisation : Category 1

Specific target organ toxicity - repeated exposure : Category 2

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Short-term (acute) aquatic hazard : Category 1

Long-term (chronic) aquatic hazard : Category 1

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H302 + H332 Harmful if swallowed or if inhaled.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H373 May cause damage to organs through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves/ eye protection/ face protection.

Response:
P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
P302 + P352 IF ON SKIN: Wash with plenty of water.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
P314 Get medical advice/ attention if you feel unwell.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P391 Collect spillage.

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Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards which do not result in classification

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
thiram (ISO)	137-26-8	>= 70 - < 90
calcium oxide	1305-78-8	>= 10 - < 20

4. FIRST AID MEASURES

- General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
- If inhaled : If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of skin contact : If skin irritation persists, call a physician.
If on skin, rinse well with water.
If on clothes, remove clothes.
- In case of eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Induce vomiting immediately and call a physician.
Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.
- Most important symptoms and effects, both acute and delayed : Harmful if swallowed or if inhaled.
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye damage.
May cause damage to organs through prolonged or repeated exposure.

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Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

Notes to physician : No special measures required.

5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Specific hazards during fire-fighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : Carbon dioxide (CO₂)
Carbon monoxide
Nitrogen oxides (NO_x)
Sulphur oxides
Metal oxides

Specific extinguishing methods : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Avoid dust formation.
Avoid breathing dust.

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up : Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Handling

Advice on protection against fire and explosion : Avoid dust formation.
Provide appropriate exhaust ventilation at places where dust is formed.

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Advice on safe handling : Avoid formation of respirable particles.
Do not breathe vapours/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Dispose of rinse water in accordance with local and national regulations.
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Storage

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Electrical installations / working materials must comply with the technological safety standards.

Further information on storage stability : No decomposition if stored and applied as directed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
thiram (ISO)	137-26-8	TWA (Inhalable fraction and vapor)	0.05 mg/m ³	ACGIH
calcium oxide	1305-78-8	OEL-TWA	2 mg/m ³	HK OEL
		TWA	2 mg/m ³	ACGIH

Engineering measures : Handle only in a place equipped with local exhaust (or other appropriate exhaust).

Personal protective equipment

Respiratory protection : In the case of dust or aerosol formation use respirator with an approved filter.
Dust safety masks are recommended when the dust concentration is more than 10 mg/m³.

Hand protection

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Material : Nitrile rubber - NBR
Wearing time : < 60 min

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.

Skin and body protection : Dust impervious protective suit
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : granular

Colour : orange

Odour : slight

Odour Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Boiling point/boiling range : No data available

Flash point : No data available

Evaporation rate : No data available

Flammability (solid, gas) : No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit : No data available

Vapour pressure : No data available

Relative vapour density : No data available

Relative density : No data available

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Density : 1.26 g/cm³ (20 °C)

Solubility(ies)
Water solubility : insoluble

Partition coefficient: n-octanol/water : No data available

Ignition temperature : No data available

Decomposition temperature : No data available

Viscosity : No data available

Explosive properties : No data available

Oxidizing properties : No data available

Molecular weight : No data available

10. STABILITY AND REACTIVITY

Reactivity : No dangerous reaction known under conditions of normal use.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.
Stable under recommended storage conditions.
No hazards to be specially mentioned.
Dust may form explosive mixture in air.

Conditions to avoid : No data available

Incompatible materials : No specific data.

Hazardous decomposition products : No hazardous decomposition products are known.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Harmful if swallowed or if inhaled.

Product:

Acute oral toxicity : Acute toxicity estimate: 1,657 mg/kg
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: 4.41 mg/l

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Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

Components:

thiram (ISO):

- Acute oral toxicity : LD50 (Rat, female): 1,800 mg/kg
LD50 (Rat, male and female): 1,300 mg/kg
- Acute inhalation toxicity : LC50 (Rat, female): 3.464 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
GLP: yes
- Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes
Remarks: Extrapolation according to Regulation (EC) No. 440/2008

calcium oxide:

- Acute oral toxicity : LD50 (Rat, female): > 5,000 mg/kg
Method: OECD Test Guideline 425
GLP: yes
- Acute dermal toxicity : LD50 (Rabbit, male and female): > 5,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes

Skin corrosion/irritation

Causes skin irritation.

Components:

thiram (ISO):

Result: Irritating to skin.

calcium oxide:

Result: Irritating to skin.

Serious eye damage/eye irritation

Causes serious eye damage.

Components:

thiram (ISO):

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Result: Irritating to eyes.

calcium oxide:

Result: Risk of serious damage to eyes.

Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

Not classified based on available information.

Components:

thiram (ISO):

Exposure routes: Skin contact

Species: Guinea pig

Result: May cause sensitisation by skin contact.

Germ cell mutagenicity

Not classified based on available information.

Components:

thiram (ISO):

Genotoxicity in vitro

: Test system: Bacteria

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: positive

Carcinogenicity

Not classified based on available information.

Components:

thiram (ISO):

Remarks: Animal testing did not show any carcinogenic effects.

Reproductive toxicity

Not classified based on available information.

Components:

calcium oxide:

Effects on foetal development

: Species: Rat

Application Route: Oral

Duration of Single Treatment: 10 d

Developmental Toxicity: NOAEL: \geq 680 mg/kg body weight

Method: OECD Test Guideline 414

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Result: No teratogenic potential
GLP: no

Species: Mouse
Application Route: Oral
Duration of Single Treatment: 10 d
General Toxicity Maternal: NOAEL: \geq 440 mg/kg body weight
Developmental Toxicity: NOAEL: \geq 440 mg/kg body weight
Method: OECD Test Guideline 414
GLP: no

STOT - single exposure

Not classified based on available information.

Components:

calcium oxide:

Assessment: May cause respiratory irritation.

STOT - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Components:

thiram (ISO):

Target Organs: Liver, Kidney, Thyroid

Assessment: May cause damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Components:

thiram (ISO):

Species: Rat, male and female

NOAEL: 3.5 - 4 mg/kg

Application Route: Oral

Exposure time: 13 Weeks

Dose: 3,5 - 4 mg/kg

GLP: yes

Remarks: Subchronic toxicity

Species: Rat, male and female

Application Route: Skin contact

Exposure time: 21 d

Dose: 300 mg/kg

GLP: yes

Remarks: Subacute toxicity

Aspiration toxicity

Not classified based on available information.

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Further information

Product:

Remarks: No data available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

thiram (ISO):

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.046 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
GLP: yes
Remarks: Fresh water

NOEC (Oncorhynchus mykiss (rainbow trout)): 0.01 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
GLP: yes
Remarks: Fresh water

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.38 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
GLP: yes
Remarks: Fresh water

NOEC (Daphnia magna (Water flea)): 0.14 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
GLP: yes
Remarks: Fresh water

Toxicity to algae : EC50: 0.065 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
GLP: yes
Remarks: Fresh water

IC50: 1.6 mg/l
Exposure time: 7 d
GLP: yes
Remarks: Fresh water

NOEC: 0.057 mg/l
Exposure time: 7 d
GLP: yes
Remarks: Fresh water

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M-Factor (Acute aquatic toxicity) : 10

Toxicity to microorganisms : EC50 (activated sludge): 3.11 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209
GLP: yes
Remarks: Fresh water

NOEC (activated sludge): < 0.1 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209
GLP: yes
Remarks: Fresh water

Toxicity to fish (Chronic toxicity) : NOEC: 0.0046 mg/l
Exposure time: 33 d
Species: Pimephales promelas (fathead minnow)
Method: OECD Test Guideline 210
GLP: yes
Remarks: Fresh water

NOEC: 0.0093 mg/l
Exposure time: 33 d
Species: Pimephales promelas (fathead minnow)
Method: OECD Test Guideline 210
GLP: yes
Remarks: Fresh water

Lowest Observed Effect Concentration: 0.0093 mg/l
Exposure time: 33 d
Species: Pimephales promelas (fathead minnow)
Method: OECD Test Guideline 210
GLP: yes
Remarks: Fresh water

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC50: 0.07 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211
GLP: yes
Remarks: Fresh water

EC50: 0.057 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211
GLP: yes
Remarks: Fresh water

NOEC: 0.04 mg/l

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Exposure time: 21 d
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211
GLP: yes
Remarks: Fresh water

NOEC: 0.02 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211
GLP: yes
Remarks: Fresh water

M-Factor (Chronic aquatic toxicity) : 10

calcium oxide:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 50.6 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
GLP: yes
Remarks: Fresh water

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 49.1 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae : EC10 (Pseudokirchneriella subcapitata (microalgae)): 79.22 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
GLP: yes

EC50 (Pseudokirchneriella subcapitata (microalgae)): 184.57 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
GLP: yes

Toxicity to microorganisms : EC10 (activated sludge): 300.4 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209
GLP: yes

Persistence and degradability

Components:

thiram (ISO):

Biodegradability : aerobic

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Result: Not readily biodegradable.
Biodegradation: 20 %
Exposure time: 28 d
Method: OECD Test Guideline 301D
GLP: yes

Bioaccumulative potential

Components:

thiram (ISO):

Partition coefficient: n-octanol/water : log Pow: 1.73

Mobility in soil

No data available

Other adverse effects

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects.

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

14. TRANSPORT INFORMATION

International Regulations

IATA-DGR


UN/ID No. : UN 3077
Proper shipping name : Environmentally hazardous substance, solid, n.o.s. (TETRAMETHYLTHIURAM DISULPHIDE)
Class : 9
Packing group : III
Labels : 9

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: 
Packing instruction (cargo aircraft) : 956: 400.00 KG
Packing instruction (passenger aircraft) : 956: 400.00 KG
Environmentally hazardous : yes



IMDG-Code

UN number : UN 3077
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (TETRAMETHYLTHIURAM DISULPHIDE)
Class : 9
Packing group : III
Labels : 9



Marine pollutant : yes



Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Hazard statements : Environmentally hazardous substance.
Irritating to skin and eyes.
Keep separated from foodstuffs.

15. REGULATORY INFORMATION

National regulatory information

International Chemical Weapons Convention (CWC) : Not applicable
Schedules of Toxic Chemicals and Precursors

Hong Kong. Control of Chemicals Ordinance : Neither banned nor restricted

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Hong Kong. Chemical Weapons (Convention) Ordinance (Cap. 578) (Schedule 1 Chemicals) : Neither banned nor restricted

Hong Kong. Chemical Weapons (Convention) Ordinance (Cap. 578) (Schedule 2 Chemicals) : Neither banned nor restricted

Hong Kong. Chemical Weapons (Convention) Ordinance (Cap. 578) (Schedule 3 Chemicals) : Neither banned nor restricted

Further information : Dangerous Goods Ordinance (Cap295)
Factories and Industrial Undertaking Ordinance (Cap59),
F&IU (Dangerous Substances) Regulations
Waste Disposal Ordinance Waster Disposal (Chemical Waste) (General) Regulations (Cap354)
Air Pollution Control Ordinance Air Pollution (Volatile Organic Compounds) Regulation (Cap311)
Code of Practice on Control of Air Impurities (Chemical Substance) in the Workplace

Other international regulations

Rotterdam Convention (Prior Informed Consent) : thiram (ISO)

16. OTHER INFORMATION

Full text of other abbreviations

ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
HK OEL : Code of Practice on Control of Air Impurities (Chemical Substances) in the Workplace

ACGIH / TWA : 8-hour, time-weighted average
HK OEL / OEL-TWA : Time weighted Average

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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