SECTION 1: Identification of the substance /mixture and of the company/undertaking

1.1. Product identifier

Product Name	Rubber Accelerator TMTD (TT)
Substance Name	Tetramethyl thiuram disulfide
Synonym	Thiram
CAS No	137-26-8
EC No	205-286-2
Index No	006-005-00-4
REACH registration number	Not available

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended Use	Used as vulcanization accelerator in rubber goods manufacture
Uses advised against	No information available

1.3. Details of the supplier of the safety data sheet

Only representative	REACH24H CONSULTING GROUP
Address	Paramount Court, Corrig Road, Sandyford, Dublin 18, Ireland
E-mail	reach@reach24h.com
Supplier	Willing New Materials Technology Co.,Ltd.
Address	Chemical Industry-Intensive Area, Puyang, Henan, China
Postal Code	457163
Phone	+86-393-4840366
FAX	+86-393-4840346
E-mail	kuber@willingchem.com
Importer	
Address	
Postal Code	
Phone	
FAX	
E-mail	

1.4. Emergency telephone number

In China: +86-393-4840366 (Office hours available)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (oral), Category 4 – H302
Acute toxicity (inhal.), Category 4 – H332
Skin corrosion/irritation, Category 2 – H315
Serious eye damage/eye irritation, Category 2 – H319
Skin sensitisation, Category 1 – H317
Specific target organ toxicity — Repeated exposure, Category 2 – H373
Hazardous to the aquatic environment — Acute Hazard, Category 1 – H400 (M=10)
Hazardous to the aquatic environment — Chronic Hazard, Category 1 – H410 (M=10)

2.2. Label elements

Symbols/Pictograms



Signal word Warning

Hazard Statements
H302 - Harmful if swallowed
H332 - Harmful if inhaled
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H317 - May cause an allergic skin reaction
H373 - May cause damage to organs through prolonged or repeated exposure
H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements
P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
P264: Wash hands 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/protective clothing/eye protection/face protection.
P301 + P312: IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P302 + P352: IF ON SKIN: Wash with plenty of water.
P304 + P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P314: Get medical advice/attention if you feel unwell.
P330: Rinse mouth.
P332 + P313: If skin irritation occurs: Get medical advice/attention.
P337 + P313: If eye irritation persists: Get medical advice/attention.
P362 + P364: Take off contaminated clothing and wash it before reuse.
P391: Collect spillage.
P405: Store locked up.
P501: Dispose of contents/container in accordance with local regulation.

EU Specific Hazard Statements None.

2.3. Other hazards

This substance does not meet the PBT criteria of REACH regulation, annex XIII
This substance does not meet the vPvB criteria of REACH regulation, annex XIII
The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

SECTION 3: Composition/information on ingredients

3.1 Substance

Chemical Name	EC No	CAS No	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Tetramethyl thiuram disulfide (TMTD)	205-286-2	137-26-8	⩾97.0	Acute Tox. 4, oral (H302) Acute Tox. 4, inhalation (H332) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Skin Sens. 1 (H317) STOT RE 2 (H373)

				Aquatic Acute 1 (H400) (M=10) Aquatic Chronic 1 (H410) (M=10)

3.2 Mixture
Not applicable.

SECTION 4: First aid measures

4.1. Description of first aid measures
General advice
In all cases of doubt, or when symptoms persist, seek medical attention.

Inhalation
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

Skin Contact
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. If skin irritation persists, call a physician.

Eye contact
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion
IF SWALLOWED: Rinse mouth. DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Seek immediate medical attention/advice.

4.2. Most important symptoms and effects, both acute and delayed
Harmful if swallowed. Harmful if inhaled. Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction. May cause damage to organs through prolonged or repeated exposure.

4.3. Indication of any immediate medical attention and special treatment needed
Persons with pre-existing skin, eye, or respiratory disease may be at increased risk from the irritant or allergic properties of this material. Attending physician should treat exposed patients symptomatically.
Medical conditions aggravated: Alcohol consumption problems.

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media Water spray (fog). Foam. Dry chemical. Carbon dioxide (CO_2).
Unsuitable extinguishing media High volume water jet.

5.2. Special hazards arising from the substance or mixture
Sensitivity to static discharge is possible.
Development of hazardous combustion gases or vapors possible in the event of fire, such as nitrogen oxides, sulfur oxides.

5.3. Advice for firefighters
Fire-fighters should wear self-contained breathing apparatus and full protective clothing when fighting chemical fires. Water spray exposed containers to cool. Toxic emissions are possible in a fire situation. Prevent run off to sewers and bodies of water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas. Remove all sources

of ignition. Do not touch or walk through spilled material. Avoid contact with skin, eyes or clothing. Avoid generation of dust. Avoid breathing dust/fume/gas/mist/vapors/spray. Use personal protection recommended in Section 8.

6.2. Environmental precautions

Local authorities should be advised if significant spillages cannot be contained. Prevent entry into waterways, sewers, basements or confined areas.

6.3. Methods and material for containment and cleaning up

Spill Procedures: Wear protective equipment specified. Avoid the generation of dust. Sweep, vacuum, or shovel and place into closable container for disposal.
Procedure for Cleaning/Absorption: Isolate area and remove sources of friction, impact, heat, low level electrical current, and RF energy. Scoop up and remove. Do NOT spread spilled product with water.

6.4. Reference to other sections

See Section 7 for more information
See section 8 for more information
See section 13 for more information

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation, especially in confined areas. Avoid contact with skin, eyes or clothing. Wash contaminated clothing before reuse. Take precautionary measures against static discharges. Avoid generation of dust. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Use personal protection recommended in Section 8.

7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat. Store away from strong oxidizing materials. Avoid exposure to direct sunlight. Keep locked up and out of reach of children. Keep away from food, drink and animal feeding stuffs. Store in accordance with local regulations.

7.3. Specific end use(s)

Apart from the uses mentioned in SECTION 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Chemical Name	Australia	Austria	Belgium	Denmark	European Union
Tetramethyl thiuram disulfide (CAS #: 137-26-8)	TWA: 1 mg/m^3	STEL 25 mg/m^3 TWA: 5 mg/m^3	TWA: 0.005 ppm, 0.05 mg/m^3	TWA: 1 mg/m^3 STEL: 2 mg/m^3	-

Chemical Name	Latvia	France	Finland	Germany	Italy
Tetramethyl thiuram disulfide (CAS #: 137-26-8)		TWA: 5 mg/m^3	TWA: 1 mg/m^3 STEL: 2 mg/m^3	TWA: 1 mg/m^3 STEL: 2 mg/m^3	-

Chemical Name	Poland	Portugal	Spain	Switzerland	Netherlands
Tetramethyl thiuram disulfide (CAS #: 137-26-8)	TWA: 0.5 mg/m^3	-	TWA: 1 mg/m^3	STEL: 2 mg/m^3 TWA: 1 mg/m^3	-

Chemical Name	Norway	United Kingdom	ACGIH TLV	OSHA PEL	NIOSH IDLH
Tetramethyl thiuram disulfide (CAS #: 137-26-8)	-	-	TWA: 0.05 mg/m^3	TWA: 5 mg/m^3	TWA: 5 mg/m^3

Derived No Effect Level (DNEL)
No information available.
No chemical safety assessment has not been carried out.

Predicted No Effect Concentration (PNEC)
No information available.
No chemical safety assessment has not been carried out.

8.2. Exposure controls

Engineering Controls
Ensure adequate ventilation, especially in confined areas. Showers. Eyewash stations. Remove all sources of ignition.

Personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Hand Protection	Wear protective gloves.
Skin and body protection	Suitable protective clothing. Glove material: Nitrile rubber; Glove thickness: 0.11 mm; Break through time: > 480 min.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment. Recommended Filter type: Filter B-(P3)
Thermal hazards	No information available.

Environmental exposure controls
Do not allow into any sewer, on the ground or into any body of water

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid, powder; granule
Color	White to off-white
Odor	Mild amine
Odor Threshold	Not determined
pH	Not determined
Melting point/freezing point	142 - 157 °C
Boiling point/boiling range	Not determined
Flammability	Not flammable
Explosive limits	Not applicable
Flash point	138 °C (Pensky-Martens Open Cup)
Auto-ignition temperature	270 °C
Decomposition temperature	Not determined
Viscosity, kinematic	Not applicable
Solubility	30 mg/l at 25°C in water; Soluble in benzene, carbon disulfide, organic liquids, including fats and oils
Partition coefficient n-octanol/water (LogPow)	1.73 (20 °C) (OECD Test Guideline 107)
Vapor Pressure	$1.725*10^{-5}$ mmHg (25 °C)
Density/relative density	1.4 g/cm³ (20°C)
Relative Vapor density	Not applicable
Particle characteristics	Not determined
Explosive properties	Not determined
Oxidizing properties	Not determined

9.2. Other information

Information with regard to physical hazard classes
No data available
Other safety characteristics

Volatile by Volume	< 0.5% by weight

Ash content	0.3% max
Loss on drying	0.3% max
Residues on 63 µm sieve	0.5% max
Oil content	0 - 2% (Upon buyer's request)

SECTION 10: Stability and reactivity

10.1. Reactivity
Forms explosive mixtures with air on intense heating. The following applies in general to flammable organic substances and preparations: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

10.2. Chemical stability
Stable when stored at room temperature in closed, original container. Stable under normal conditions of handling, use and transportation.

10.3. Possibility of hazardous reactions
Violent reactions possible with: Oxidizing agents, reducing agents.
In contact with nitrites, nitrates, nitrous acid possible liberation of nitosamines, acids.

10.4. Conditions to avoid
Heat, flames and sparks. High temperature. Incompatible materials.

10.5. Incompatible materials
Acids. Bases. Oxidizers.

10.6. Hazardous decomposition products
Carbon oxides (CO_x). Nitrogen oxides (NO_x). Oxides of sulfur (SO_x).

SECTION 11: Toxicological information

11.1.Information on hazard classes as defined in Regulation (EC) No 1272/2008
Acute toxicity
Harmful if swallowed
HHarmful if inhaled

Tetramethyl thiuram disulfide (CAS #: 137-26-8)	
LD50 oral rat	1080 mg/kg
LD50 dermal rabbit	>2000 mg/kg
LC50 Inhalation - Rat	500 mg/m³/4 h

Skin corrosion/irritation
Causes skin irritation, rabbit.

Serious eye damage/eye irritation
Causes serious eye irritation, rabbit.

Sensitization
May cause an allergic skin reaction, guinea pig.

Germ cell mutagenicity
Negative.

Carcinogenicity
Not classified.

Tetramethyl thiuram disulfide (CAS #: 137-26-8)	
IARC Group	3 - Not classifiable as to its carcinogenicity to humans

Reproductive toxicity
No evidence of teratogenicity in animal studies using rats, mice and hamsters.

STOT - single exposure
Not classified.

STOT - repeated exposure
May cause damage to organs through prolonged or repeated exposure.

Tetramethyl thiuram disulfide (CAS #: 137-26-8)	
LOAEL (oral, rat, 90 days)	38 mg/kg EU Method B.26
NOAEL (oral, rat, 90 days)	3.5 – 4 mg/kg EU Method B.26
NOAEL (subchronic, oral, animal/male, 90 days)	< 51 mg/kg mouse, male
NOAEL (subchronic, oral, animal/female, 90 days)	< 59 mg/kg mouse, female

Aspiration hazard
Not classified.

11.2. Information on other hazards
Endocrine disrupting properties
The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

Other information
No information available.

SECTION 12: Ecological information

12.1. Toxicity
Very toxic to aquatic life with long lasting effects.

Tetramethyl thiuram disulfide (CAS #: 137-26-8)	
LC50 96h - Fish	0.046 mg/l Oncorhynchus mykiss (previous name: Salmo gairdneri)
LC50 96h - Fish	0.13 mg/l Lepomis macrochirus
EC50 48h - Crustacea	0.38 mg/l Daphnia magna
EC50 72h - Algae	0.065 mg/l Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 96h - Algae	< 0.1 mg/l Desmodesmus subspicatus

12.2. Persistence and degradability
Biodegradability: 100 %, Exposure time: 28 d.
Result: Readily biodegradable.
Method: OECD Test Guideline 301D

12.3. Bioaccumulative potential

Tetramethyl thiuram disulfide (CAS #: 137-26-8)	
Partition coefficient (LogPow)	1.73
Bioconcentration factor (BCF)	91

12.4. Mobility in soil
No information available.

12.5. Results of PBT and vPvB assessment
This substance is not considered to be persistent, bioaccumulating nor toxic (PBT). This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

12.6. Endocrine disrupting properties

The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

12.7. Other adverse effects
No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14: Transport information

14.1. UN number or ID number	3077
14.2. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Tetramethyl thiuram disulfide)
14.3. Transport hazard class(es)	9
14.4. Packing group	III
14.5. Environmental hazards	Marine pollutant
14.6. Special precautions for user	No information available
14.7. Maritime transport in bulk according to IMO instruments	Not applicable

SECTION 15: Regulatory information

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

EU-Regulations
No REACH Annex XVII restrictions
Not on the REACH Candidate List
Not on the REACH Annex XIV List
Not subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 july 2012 concerning the export and import of hazardous chemicals.
Not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

National regulations
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Canadian DSL (Domestic Substances List)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Japanese Pollutant Release and Transfer Register Law (PRTR Law)
Subject to reporting requirements of United States SARA Section 313
Listed on the Canadian IDL (Ingredient Disclosure List)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)

Germany
Water hazard class (WGK) WGK 3, Highly hazardous to water (Classification according to AwSV)

15.2. Chemical safety assessment
No chemical safety assessment has not been carried out.

SECTION 16: Other information
This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Data sources	LOLI, ECHA
Issue Date	25-Jan-2016
Revision date	08-July-2024

Key or legend to abbreviations and acronyms used in the safety data sheet
TWA - TWA (time-weighted average)
STEL - STEL (Short Term Exposure Limit)
Ceiling - Maximum limit value
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

Full text of H-Statements referred to under section 3
H302 - Harmful if swallowed
H332 - Harmful if inhaled
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H317 - May cause an allergic skin reaction
H373 - May cause damage to organs through prolonged or repeated exposure if inhaled
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects

Disclaimer
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.

-------- End of Safety Data Sheet --------