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

1.1. Product identifier

Product Name	Rubber Accelerator MBTS(DM)
Substance Name	Dibenzothiazole Disulfide
Synonym	Di(benzothiazol-2-yl) disulphide
CAS No	120-78-5
EC No	204-424-9
Index No	613-135-00-0
REACH registration number	01-2119489366-*******

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

Recommended Use	Production of tyres and general rubber goods. MBTS is 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]

Skin sensitisation, Category 1 - H317
Hazardous to the aquatic environment — Acute Hazard, Category 1 - H400 (M=1)
Hazardous to the aquatic environment — Chronic Hazard, Category 1 - H410 (M=1)

2.2. Label elements

Symbols/Pictograms	
Signal word	Warning
Hazard Statements	H317 - May cause an allergic skin reaction H410 - Very toxic to aquatic life with long lasting effects
Precautionary Statements	P280 - Wear protective gloves/protective clothing/eye protection/face protection P261 - Avoid breathing dust/fume/gas/mist/vapors/spray P273 - Avoid release to the environment P302 + P352 - IF ON SKIN: Wash with plenty of soap and water P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention P391 - Collect spillage. P405: Store locked up. P501 - Dispose of contents/ container in accordance with local/regional/national/international regulation.
EU Specific Hazard Statements	EUH031: Contact with acids liberates toxic gas.

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]
Dibenzothiazole Disulfide	204-424-9	120-78-5	⩾97.0	Skin Sens. 1 (H317) Aquatic Acute 1 (H400) (M=1) Aquatic Chronic 1 (H410) (M=1)

There are 3 unknown impurities in the substance. The total concentration of the unknown impurities is below 3%. None of the unknown impurity is classifiable as hazardous and present above 1%.

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

Remove to fresh air. Artificial respiration and/or oxygen may be necessary. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

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
Rinse mouth. Get medical attention. Never give anything by mouth to an unconscious person.

4.2. Most important symptoms and effects, both acute and delayed
May cause allergic skin reaction.

4.3. Indication of any immediate medical attention and special treatment needed
Treat symptomatically.
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.

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media Water spray (fog). Foam. Dry chemical. Carbon dioxide (CO2).
Unsuitable extinguishing media Water jet.

5.2. Special hazards arising from the substance or mixture
Toxic emissions may result if product is involved in a fire. Fire produces highly toxic sulfur dioxide gas. Thermal decomposition and burning will produce carbon dioxide, carbon monoxide, nitrogen oxides, sulfur oxides.

5.3. Advice for firefighters
Fight fire from a safe distance and from a protected location. Flammable dust when in finely divided and highly suspended state. Use water spray to cool fire exposed surfaces. Do not allow runoff to enter waterways. Fire fighters should wear full protective clothing, including self-contained breathing equipment.

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. Isolate spill and stop leak where safe. Remove ignition sources and work with non-sparking tools. 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. 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

Exposure Limits

Dibenzothiazole Disulfide (CAS # 120-78-5): OES-TWA 5.0 mg/m³; TLV (United States):10 mg/m³.

Derived No Effect Level (DNEL)

Workers

Inhalation, Systemic effects, Long term: 8.8 mg/m³
Dermal, Systemic effects, Long term: 5 mg/kg bw/day

General Population

Inhalation, Systemic effects, Long term: 2.2 mg/m³
Inhalation, Systemic effects, Acute/short term: 17.6 mg/m³
Dermal, Systemic effects, Long term: 2.5 mg/kg bw/day
Dermal, Systemic effects, Acute/short term: 20 mg/kg bw/day
Oral, Systemic effects, Long term: 1.25 mg/kg bw/day
Oral, Systemic effects, Acute/short term: 10 mg/kg bw/day

Predicted No Effect Concentration (PNEC)

PNEC STP: 3.8 mg/L
PNEC sediment (freshwater): 0.22 mg/kg sediment dw
PNEC sediment (marine water): 0.022 mg/kg sediment dw

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	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. Recommended: safety glasses with side-shields.
Hand Protection	Based on the task being performed and the risks involved approved chemical-resistant, impervious gloves should be worn if a risk assessment indicates this is necessary. After contamination with

	product change the gloves immediately and dispose of them according to relevant national and local regulations. Suitable materials for this product are: PVC, nitrile rubber or Polychloroprene - CR. The breakthrough time for the mentioned materials is approx. one hour. Use hygiene measures as supporting or in case wearing of gloves may not be possible immediately.
Skin and body protection	Suitable protective clothing.
Respiratory protection	When no local exhaust ventilation is available, use a properly fitted, air-purifying or air-fed respirator complying with an approved standard.
Thermal hazards	No information available.

Environmental exposure controls
Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid, powder or granule
Color	Off-white or light yellow
Odor	Slight aromatic odor
Odor Threshold	Not determined
pH	Not determined
Melting point/freezing point	164 °C
Boiling point/boiling range	Decomposes above 240 °C
Flammability	Not flammable
Explosive limits	Not applicable
Flash point	Not applicable
Auto-ignition temperature	Not applicable
Decomposition temperature	> 240 °C
Viscosity, kinematic	Not applicable
Solubility	Water: 0.05 mg/L (20 °C)
Partition coefficient n-octanol/water (LogPow)	4.5 (25°C)
Vapor Pressure	1.35 x 10-9 hPa (25°C)
Density/relative density	1.5 (20 °C)
Relative Vapor density	Not applicable
Particle characteristics	D50 = 24 µm
Explosive properties	Non explosive
Oxidizing properties	Non oxidising

9.2. Other information
Information with regard to physical hazard classes
No data available

Other safety characteristics

Volatile by Volume	< 0.5%
Ash content	0.3% max
Loss on drying	0.3% max
Residues on 63 µm sieve	0.5% max
Oil content	0 - 2.0% (Upon buyer's request)

SECTION 10: Stability and reactivity

10.1. Reactivity
Contact with acids liberates toxic gas.

10.2. Chemical stability
Stable under recommended storage and handling conditions.

10.3. Possibility of hazardous reactions
A risk of explosion and/or of toxic gas formation exists with the following substances: strong oxidizing agents, acids.

10.4. Conditions to avoid
Heat, flames and sparks. Dispersion of dust. Temperatures above 250 °C. Incompatible materials.

10.5. Incompatible materials
Strong oxidizing agents. Strong acids.

10.6. Hazardous decomposition products
Carbon oxides, nitrogen oxides, ammonia, hydrogen cyanide, oxides of nickel.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008
Acute toxicity
Not classified.

Dibenzothiazole Disulfide (CAS #: 120-78-5)	
LD50 oral rat	> 7940 mg/kg
LD50 dermal rabbit	> 7940 mg/kg

Skin corrosion/irritation
Not irritating, rabbit.

Serious eye damage/eye irritation
Not irritating, rabbit.

Sensitization
May cause sensitization by skin contact, guinea pig.

Germ cell mutagenicity
Genotoxicity: Negative for genetic activity - in vitro tests. Negative for genetic activity - in vivo tests.

Carcinogenicity
Not classified.

Reproductive toxicity
Not classified.

STOT - single exposure
Not classified.

STOT - repeated exposure
Not classified.

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.

12.2. Persistence and degradability

Degradation: 0%, 28day;
Not readily biodegradable.

12.3. Bioaccumulative potential

Partition coefficient (Log Pow): 4.5 (25°C);
BCF: 51

12.4. Mobility in soil

Log Koc = 3.72

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	UN3077
14.2 UN Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,N.O.S. (Dibenzothiazole 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
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)

Germany

Water hazard class (WGK) WGK 2, Significantly hazardous to water (Classification according to AwSV)

15.2. Chemical safety assessment

A chemical safety assessment has 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	22-June-2018
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
H317 - May cause an allergic skin reaction
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 --------