



DIMACIT TMTD-PDR

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	05.04.2017	150000103778	Date of first issue: 03.12.2015
SDSGB / PRD / 0001			

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

1.1 Product identifier

Trade name	: DIMACIT TMTD-PDR
Product code	: 51268-00, N5126810, P5126812, P5126811, P5126813, P5126815, P5126814

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

Use of the Sub-stance/Mixture	: Rubber products
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Recommended restrictions on use	: None known.
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1.3 Details of the supplier of the safety data sheet

Company	: Eastman Chemical Company 200 South Wilcox Drive 37660-5280 Kingsport
Telephone	: +14232292000
E-mail address of person responsible for the SDS	: Visit our website at www.EASTMAN.com or email emnmsds@eastman.com

1.4 Emergency telephone number

Emergency telephone number	: NCEC +44 (0)1235 239 670:
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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4	H302: Harmful if swallowed.
Acute toxicity, Category 4	H332: Harmful if inhaled.
Skin irritation, Category 2	H315: Causes skin irritation.
Eye irritation, Category 2	H319: Causes serious eye irritation.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Specific target organ toxicity - repeated exposure, Category 2	H373: May cause damage to organs through prolonged or repeated exposure.
Acute aquatic toxicity, Category 1	H400: Very toxic to aquatic life.
Chronic aquatic toxicity, Category 1	H410: Very toxic to aquatic life with long lasting effects.



DIMACIT TMTD-PDR

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	05.04.2017	150000103778	Date of first issue: 03.12.2015
SDSGB / PRD / 0001			

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Warning

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

Precautionary statements	Prevention:	
	P273	Avoid release to the environment.
	P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
	Response:	
	P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.
	P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
	P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position 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.
	Disposal:	
	P501	Dispose of contents/ container to an approved incineration plant.

Hazardous components which must be listed on the label:
tetramethylthiuram disulphide

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients



DIMACIT TMTD-PDR

Version 1.1 Revision Date: 05.04.2017 SDS Number: 150000103778 Date of last issue: -
Date of first issue: 03.12.2015
SDSGB / PRD / 0001

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Registration number	Classification	Concentration (% w/w)
tetramethylthiuram disulphide	137-26-8 205-286-2 / 01- 2119492301-45-0000	Acute Tox. 4; H302 Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1; H317 STOT RE 2; H373 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 98

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : Show this safety data sheet to the doctor in attendance.
Consult a physician.
- If inhaled : Remove to fresh air.
If not breathing, give artificial respiration.
If breathing is difficult, give oxygen.
Get immediate medical advice/ attention.
- In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes.
Take off all contaminated clothing immediately.
Call a physician or poison control centre immediately.
- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/ attention.
- If swallowed : Call a physician or poison control centre immediately.
Clean mouth with water and drink afterwards plenty of water.
Do not induce vomiting without medical advice.
Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : Irregular cardiac activity
Dermatitis
Eczema
Headache
Nausea



DIMACIT TMTD-PDR

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	05.04.2017	150000103778	Date of first issue: 03.12.2015
SDSGB / PRD / 0001			

Shortness of breath
May produce an allergic reaction.
Health injuries may be delayed.
More severe effects if alcohol is consumed.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : General advice for dithiocarbamates
Biomonitoring possible at chronical exposure: determination of TTCA in the urine at the end of the workday/week.
Bloodtesting for delayed effects: liver tests, kidney function, thyroid function

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use water spray to extinguish.
Carbon dioxide (CO₂)
Alcohol-resistant foam

Unsuitable extinguishing media : Do NOT use water jet.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

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

5.3 Advice for firefighters

Special protective equipment for firefighters : Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear.

Further information : Take precautionary measures against static discharges.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Wear appropriate personal protective equipment.
Local authorities should be advised if significant spillages cannot be contained.

6.2 Environmental precautions

Environmental precautions : Avoid release to the environment.



DIMACIT TMTD-PDR

Version Revision Date: SDS Number: Date of last issue: -
1.1 05.04.2017 150000103778 Date of first issue: 03.12.2015
SDSGB / PRD / 0001

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Sweep up or vacuum up spillage and collect in suitable container for disposal.
Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

6.4 Reference to other sections

For personal protection see section 8., For disposal considerations see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Avoid breathing dust.
Do not get on skin or clothing.
Do not get in eyes.
Do not swallow.
Ensure adequate ventilation.
Wash thoroughly after handling.

Advice on protection against fire and explosion : Minimize dust generation and accumulation.

Keep product and empty container away from heat and sources of ignition.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep tightly closed. Keep in a dry, cool and well-ventilated place. Keep away from direct sunlight. Use only explosion-proof equipment.

7.3 Specific end use(s)

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
	Workers	Dermal	Acute effects	10 mg/kg bw/day
	Workers	Inhalation	Acute effects	0.564 mg/m3
	Workers	Dermal	Long-term systemic	1.6 mg/kg



DIMACIT TMTD-PDR

Version 1.1 Revision Date: 05.04.2017 SDS Number: 150000103778 Date of last issue: -
Date of first issue: 03.12.2015
SDSGB / PRD / 0001

			effects	bw/day
	Workers	Inhalation	Long-term systemic effects	0.118 mg/m3

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
	Fresh water	0.00046 mg/l
	Fresh water sediment	0.047 mg/kg
	Marine water	0.000046 mg/l
	Marine sediment	0.0047 mg/kg
	Soil	0.00912 mg/kg
	Sewage treatment plant	0.0311 mg/l

8.2 Exposure controls

Engineering measures

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal protective equipment

- Eye protection : Wear safety glasses with side shields (or goggles).
Face-shield
Always wear eye protection when the potential for inadvertent eye contact with the product cannot be excluded.
- Hand protection : Rubber gloves Neoprene gloves The data about break through time/strength of material are standard values! The exact break through time/strength of material has to be obtained from the producer of the protective glove.
- Remarks
- Skin and body protection : Complete suit protecting against chemicals
- Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.
Effective dust mask
- Protective measures : Remove respiratory and skin/eye protection only after vapours have been cleared from the area.
Ensure that eye flushing systems and safety showers are located close to the working place.
Use personal protective equipment as required.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties



DIMACIT TMTD-PDR

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	05.04.2017	150000103778	Date of first issue: 03.12.2015
SDSGB / PRD / 0001			

Appearance	: powder
Colour	: white, light brown
Odour	: odourless
pH	: 6.75, 4 % (20 °C)
Melting point/range	: 144 - 146 °C
Boiling point/boiling range	: 165 °C Decomposition
Flash point	: Not applicable
Flammability (solid, gas)	: not auto-flammable
Vapour pressure	: 0.00002 Pa (25 °C)
Density	: 1.36 g/cm ³ (20 °C)
Solubility(ies) Water solubility	: 0.018 g/l (20 °C)
Partition coefficient: n-octanol/water	: log Pow: 1.84
Decomposition temperature	: 165 °C
Viscosity Viscosity, kinematic	: Not applicable
Oxidizing properties	: Not classified

9.2 Other information

Surface tension	: 71.5 mN/m, 20 °C
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SECTION 10: Stability and reactivity

10.1 Reactivity

None reasonably foreseeable.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions	: Hazardous decomposition products formed under fire conditions. Dust can form an explosive mixture in air.
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DIMACIT TMTD-PDR

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	05.04.2017	150000103778	Date of first issue: 03.12.2015
SDSGB / PRD / 0001			

10.4 Conditions to avoid

Conditions to avoid : Avoid dust formation.
Heat, flames and sparks.

10.5 Incompatible materials

Materials to avoid : Strong oxidizing agents
Strong acids

10.6 Hazardous decomposition products

Carbon monoxide, Carbon dioxide (CO₂), Nitrogen oxides (NO_x), Sulphur oxides

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Components:

tetramethylthiuram disulphide:

Acute oral toxicity : LD50 Oral (Rat): 1,800 mg/kg

Acute inhalation toxicity : LC50 (Rat): 4.42 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 Dermal (Rabbit): > 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Components:

tetramethylthiuram disulphide:

Species: Rabbit
Exposure time: 4 h
Result: Skin irritation

Serious eye damage/eye irritation

Components:

tetramethylthiuram disulphide:

Species: Rabbit
Result: irritating

Respiratory or skin sensitisation

Components:

tetramethylthiuram disulphide:

Test Type: Skin sensitisation



DIMACIT TMTD-PDR

Version	Revision Date:	SDS Number:	Date of last issue: -
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SDSGB / PRD / 0001			

Species: Guinea pig
Result: sensitizing

Germ cell mutagenicity

Product:

Germ cell mutagenicity- Assessment : Did not show mutagenic effects in animal experiments.

Reproductive toxicity

Product:

Reproductive toxicity - Assessment : Did not show teratogenic effects in animal experiments.

Experience with human exposure

Product:

Inhalation	: Remarks: Harmful if inhaled.
Skin contact	: Remarks: Causes skin irritation. May cause an allergic skin reaction.
Eye contact	: Remarks: Causes serious eye irritation.
Ingestion	: Remarks: Harmful if swallowed.

SECTION 12: Ecological information

12.1 Toxicity

Components:

tetramethylthiuram disulphide:

Toxicity to fish	: LC50 (Oncorhynchus mykiss (rainbow trout)): 0.046 - 0.54 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 0.011 - 0.139 mg/l Exposure time: 48 h
Toxicity to algae	: EC50 (Chlorella pyrenoidosa (aglae)): > 0.14 mg/l Exposure time: 120 h
M-Factor (Acute aquatic toxicity)	: 10
Toxicity to bacteria	: IC50 (Bacteria): 3.11 mg/l Exposure time: 3 h
Toxicity to fish (Chronic toxicity)	: NOEC: 0.0046 mg/l Exposure time: 33 d



DIMACIT TMTD-PDR

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	05.04.2017	150000103778	Date of first issue: 03.12.2015
SDSGB / PRD / 0001			

Species: Pimephales promelas (fathead minnow)

M-Factor (Chronic aquatic toxicity) : 10

12.2 Persistence and degradability

Product:

Biodegradability : Result: Not readily biodegradable.

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

12.4 Mobility in soil

Product:

Distribution among environmental compartments : Koc: 2245 - 24526

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

12.6 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: Transport information

14.1 UN number

ADN : UN 3077

ADR : UN 3077

IMDG : UN 3077

IATA : UN 3077



DIMACIT TMTD-PDR

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	05.04.2017	150000103778	Date of first issue: 03.12.2015
SDSGB / PRD / 0001			

14.2 UN proper shipping name

ADN	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (tetramethylthiuram disulphide)
ADR	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (tetramethylthiuram disulphide)
IMDG	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (tetramethylthiuram disulphide)
IATA	: Environmentally hazardous substance, solid, n.o.s. (tetramethylthiuram disulphide)

14.3 Transport hazard class(es)

ADN	: 9
ADR	: 9
IMDG	: 9
IATA	: 9

14.4 Packing group

ADN	
Packing group	: III
Classification Code	: M7
Hazard Identification Number	: 90
Labels	: 9
ADR	
Packing group	: III
Classification Code	: M7
Hazard Identification Number	: 90
Labels	: 9
Tunnel restriction code	: (E)
IMDG	
Packing group	: III
Labels	: 9
EmS Code	: F-A, S-F
IATA	
Packing instruction (cargo aircraft)	: 956
Packing instruction (passenger aircraft)	: 956
Packing instruction (LQ)	: Y956
Packing group	: III
Labels	: Miscellaneous

14.5 Environmental hazards

ADN



DIMACIT TMTD-PDR

Version	Revision Date:	SDS Number:	Date of last issue: -
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SDSGB / PRD / 0001			

Environmentally hazardous : yes

ADR

Environmentally hazardous : yes

IMDG

Marine pollutant : yes

14.6 Special precautions for user

Not applicable

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

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

		Quantity 1 100 t	Quantity 2 200 t
E1	ENVIRONMENTAL HAZARDS		

Other regulations : Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

The components of this product are reported in the following inventories:

TSCA : On TSCA Inventory

DSL : All components of this product are on the Canadian DSL

AICS : On the inventory, or in compliance with the inventory

ENCS : On the inventory, or in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory



DIMACIT TMTD-PDR

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	05.04.2017	150000103778	Date of first issue: 03.12.2015
SDSGB / PRD / 0001			

PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory

15.2 Chemical safety assessment

A Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

Full text of H-Statements

H302	: Harmful if swallowed.
H315	: Causes skin irritation.
H317	: May cause an allergic skin reaction.
H319	: Causes serious eye irritation.
H332	: Harmful if inhaled.
H373	: May cause damage to organs through prolonged or repeated exposure.
H400	: Very toxic to aquatic life.
H410	: Very toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	: Acute toxicity
Aquatic Acute	: Acute aquatic toxicity
Aquatic Chronic	: Chronic aquatic toxicity
Eye Irrit.	: Eye irritation
Skin Irrit.	: Skin irritation
Skin Sens.	: Skin sensitisation
STOT RE	: Specific target organ toxicity - repeated exposure

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumu-



DIMACIT TMTD-PDR

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1.1	05.04.2017	150000103778	Date of first issue: 03.12.2015
SDSGB / PRD / 0001			

lative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

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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