SAFETY DATA SHEET

accordance with Annex II of Regulation (EC) No 1907/2006 and its amendment(s)

Product: **MIXLAND+® DPTT 75 BA** Page: 1 / 9

SDS No.: 100146-100 (Version 3.0) Date 27.08.2019 (*Cancel and replace* : 25.06.2018)

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Identification of the product

Identification of the mixture: MIXLAND+® DPTT 75 BA

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

Use of the Substance/Mixture : Curing agent for rubber

1.3. Details of the supplier of the safety data sheet

Supplier

MLPC International
209, Avenue Charles Despiau
F-40370 RION-DES-LANDES, FRANCE
Telephone: + 33 (0) 5 58 57 02 00
E-mail address: http://www.mlpc-intl.com
fds@mlpc-intl.com

1.4. Emergency telephone number

+1-703-741-5970 CHEMTREC international emergency phone number (ARKEMA CCN830055)

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008):
Chronic aquatic toxicity, 4, H413

Additional information:
For the full text of the H, EUH-phrases mentioned in this Section, see Section 16.

2.2. Label elements

Label elements (REGULATION (EC) No 1272/2008):

Hazardous components which must be listed on the label:
Bis(piperidinothiocarbonyl) hexasulphide

Hazard statements:
H413 : May cause long lasting harmful effects to aquatic life.

Precautionary statements:
Prevention:
P273 : Avoid release to the environment.
Disposal:
P501 : Dispose of contents or container to an approved waste disposal plant.

2.3. Other hazards : None.

Other:
Results of PBT and vPvB assessment : According to REACH regulation, annex XIII, this mixture contains no substance meeting PBT and vPvB criteria.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Chemical nature of the mixture[1]:
Mixture based on: Polymer and

Hazardous components (accordance with Annex II of Regulation (EC) No 1907/2006 and its amendment(s)) :

Chemical name[1] & REACH Registration Number[2]	EC-No.	CAS-No.	Concentration	Classification REGULATION (EC) No 1272/2008
Bis(piperidinothiocarbonyl) hexasulphide (01-2119974270-39)	213-537-2	971-15-3	Approximately 75 %	Aquatic Chronic 4; H413
Distillates (petroleum), hydrotreated light paraffinic (01-2119487077-29) (N° ANNEX: 649-468-00-3)	265-158-7	64742-55-8	Approximately 13,5 %	Asp. Tox. 1; H304 Nota L: DMSO <3%

[1]: See chapter 14 for Proper Shipping Name
[2] :See the text of the regulation for applicable exceptions or provisions -

4. FIRST AID MEASURES

4.1. Description of necessary first-aid measures:

General advice:
Take off immediately all contaminated clothing.

Inhalation:
Move to fresh air. Consult a physician.

Skin contact:
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Eye contact:
Wash well-open eyes immediately, abundantly and thoroughly with water. Consult an ophthalmologist.

Ingestion:
Call a physician immediately. Do not induce vomiting without medical advice. Rinse mouth.

Protection of first-aiders:
If entering a saturated atmosphere, wear a self contained breathing apparatus.

4.2. Most important symptoms/effects, acute and delayed: No data available.

4.3. Indication of immediate medical attention and special treatment needed, if necessary: No data available.

5. FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media: Water spray, Foam, Dry powder

Unsuitable extinguishing media: All other extinguishants

5.2. Special hazards arising from the substance or mixture:
Thermal decomposition gives :, Nitrogen oxides (NOx), Sulphur oxides, Carbon oxides

5.3. Advice for firefighters:

Specific methods:
Suppress gases, fumes and/or dust with water spray jet. Remove all sources of ignition.

Special protective actions for fire-fighters:
Wear self-contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures:
Avoid contact with skin and eyes and inhalation of dust.

6.2. Environmental precautions:
Do not let product enter drains. Do not contaminate surface water.

6.3. Methods and materials for containment and cleaning up:

Recovery:
Shovel or sweep up. Recover the product and place in a dry labelled container.

Elimination:
Dispose of as hazardous waste in compliance with local and national regulations.

6.4. Reference to other sections: None.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling:

Technical measures/Precautions:
Provide appropriate exhaust ventilation at machinery. Provide showers, eye-baths. In the presence of an ignition source: Dust may form explosive mixture in air.

Safe handling advice:
In case of dust formation, wear a dust mask. Avoid static electricity build up with connection to earth.

Hygiene measures:
Handle in accordance with good industrial hygiene and safety practice. Avoid contact with the skin and the eyes.
Wash hands after handling. Remove contaminated clothing and protective equipment before entering eating areas.

7.2. Conditions for safe storage, including any incompatibilities:

Store protected from moisture and heat. Protect from light. Keep away from direct sunlight.

Incompatible products:
Strong acids Oxidizing agents

Packaging material:
Recommended: Cardboard lined with polyethylene liner, Paper bags lined with polyethylene

7.3. Specific end use(s): None.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters:

Exposure Limit Values Not relevant

Derived No Effect Level (DNEL): BIS(PIPERIDINOTHIOCARBONYL) HEXASULPHIDE :

End Use	Inhalation	Ingestion	Skin contact
Workers	11,7 mg/m3 (LT, SE)		3,33 mg/kg (LT, SE)
Consumers	2,9 mg/m3 (LT, SE)	1,67 mg/kg (LT, SE)	1,67 mg/kg (LT, SE)

LE : Local effects, **SE** : Systemic effects, **LT** : Long term, **ST** : Short term

Predicted No Effect Concentration: BIS(PIPERIDINOTHIOCARBONYL) HEXASULPHIDE :

Compartment:	Value:
Soil	33,3 mg/kg

8.2. Exposure controls:

General protective measures: Ensure sufficient air exchange and/or exhaust in work areas

Personal protective equipment:
Respiratory protection: Effective dust mask
Hand protection: Impervious gloves
Eye/face protection: Tightly fitting safety goggles
Skin and body protection: Protective suit

Environmental exposure controls: See chapter 6

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance:
Physical state (20°C): solid
Form: tape
Colour: violet
Odour: odourless
Olfactory threshold: No data available.
pH: Not relevant

Melting point/range :	115 - 130 °C Active ingredient (OECD Test Guideline 102)
Boiling point/boiling range:	No data available.
Flash point:	Not relevant
Evaporation rate:	No data available.
Flammability (solid, gas):	
Flammability:	Non flammable product (Standard A10)
Vapour pressure:	< 0,0000001 Pa , at 20 °C Active ingredient (calculated)
Vapour density:	No data available.
Density:	approx. 1,29 g/cm3 , at 20 °C
Water solubility:	insoluble
Partition coefficient: n-octanol/water:	BIS(PIPERIDINOTHIOCARBONYL) HEXASULPHIDE : log Kow : 4,43 , at 20 °C (QSAR) BIS(PIPERIDINOTHIOCARBONYL) HEXASULPHIDE : log Kow : 4,43 , at 20 °C (QSAR)
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity, dynamic:	Not applicable
Explosive properties:	
Explosivity:	Not relevant (due to its chemical structure)
Oxidizing properties:	Not relevant (due to its chemical structure)

9.2. Other data:

Solubility in other solvents:	Chloroform
pKA:	None.

10. STABILITY AND REACTIVITY

10.1. Reactivity: No data available.

10.2. Chemical stability:
The product is stable under normal handling and storage conditions.

10.3. Possibility of hazardous reactions: No data available.

10.4. Conditions to avoid:
Store protected from moisture and heat. Protect from light. Keep away from direct sunlight.

10.5. Incompatible materials to avoid:
Strong acids and strong bases

10.6. Hazardous decomposition products:
Nitrogen oxides (NOx), Carbon dioxide (CO2), Sulphur oxides
Nitrosamine

11. TOXICOLOGICAL INFORMATION

All available and relevant data on this product and/or the components quoted in section 3 and/or the analogue substances/metabolites have been taken into account for the hazard assessment.

11.1. Information on toxicological effects:

Acute toxicity:

Inhalation: **Based on the available information, it is not possible to conclude on the hasard potential of this mixture.**

BIS(PIPERIDINOTHIOCARBONYL) HEXASULPHIDE :
• In animals : No mortality/4 h/Rat: > 2,83 mg/l (Method: OECD Test Guideline 403) (Aerosol)

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :
• In animals : No mortality/4 h/Rat: 5,53 mg/l (Method: OECD Test Guideline 403) (Aerosol)

Ingestion: **Based on the available information, it is not possible to conclude on the hasard potential of this mixture.**

BIS(PIPERIDINOTHIOCARBONYL) HEXASULPHIDE :

• In animals : No mortality/Rat: > 2.000 mg/kg (Method: OECD Test Guideline 423)

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :
• In animals : No mortality/Rat: 5 g/kg (Method: OECD Test Guideline 401)

Dermal: **Based on the available information, it is not possible to conclude on the hasard potential of this mixture.**

BIS(PIPERIDINOTHIOCARBONYL) HEXASULPHIDE :
• In animals : No mortality/Rat: > 2.000 mg/kg (Method: OECD Test Guideline 402)

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :
• In animals : No mortality/Rabbit: 5 g/kg (Method: OECD Test Guideline 402)

Local effects (Corrosion / Irritation / Serious eye damage):

Skin contact: **Based on the available information, it is not possible to conclude on the hasard potential of this mixture.**

BIS(PIPERIDINOTHIOCARBONYL) HEXASULPHIDE :
• In animals : No skin irritation (EPISKIN Human Skin Model Test)

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :
• In animals : Slightly irritating to skin. (Rabbit, Exposure time: 24 h)

Eye contact: **Based on the available information, it is not possible to conclude on the hasard potential of this mixture.**

BIS(PIPERIDINOTHIOCARBONYL) HEXASULPHIDE :
• In animals : No eye irritation (OECD Test Guideline 405, Rabbit)

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :
• In animals : No eye irritation (OECD Test Guideline 405, Rabbit)

Respiratory or skin sensitisation:

Inhalation: No data available.

Skin contact: **Based on the available information, it is not possible to conclude on the hasard potential of this mixture.**

BIS(PIPERIDINOTHIOCARBONYL) HEXASULPHIDE :
• In animals : No skin allergy was observed. (Method: OECD Test Guideline 429 LLNA: Local Lymph Node Assay, Mouse)

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :
• In animals : Not a skin sensitizer (Method: OECD Test Guideline 406 Guinea pig maximization test)

CMR effects :

Mutagenicity: **Based on the available information, it is not possible to conclude on the hasard potential of this mixture.**

In vitro

BIS(PIPERIDINOTHIOCARBONYL) HEXASULPHIDE :
Ames test: Inactive (Method: OECD Test Guideline 471)
In vitro gene mutations test on mammalian cells: Active (Method: OECD Test Guideline 476)

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :
Ames test in vitro: Inactive (Method: OECD Test Guideline 471)
In vitro test for chromosomal abnormalities on CHO cells: Inactive (Method: OECD Test Guideline 473)
In vitro gene mutations test on mammalian cells: Inactive (Method: OECD Test Guideline 476)

In vivo

BIS(PIPERIDINOTHIOCARBONYL) HEXASULPHIDE :
Micronucleus test in vivo rat: Inactive (Method: OECD Test Guideline 474)

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :
Micronucleus test in vivo mouse: Inactive (Method: OECD Test Guideline 474)

Carcinogenicity: **Based on the available information, it is not possible to conclude on the hasard potential of this mixture.**

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :
• In animals : Absence of carcinogenic effects (Method: OECD Test Guideline 451, mice, Chronic, dermal route)

Reproductive toxicity:

Fertility: **Based on the available information, it is not possible to conclude on the hasard potential of this mixture.**

BIS(PIPERIDINOTHIOCARBONYL) HEXASULPHIDE :

• In animals : No toxic effects for reproduction
NOAEL (Parental toxicity): 1.000 mg/kg bw/day
NOAEL (Fertility): 1.000 mg/kg bw/day
NOAEL (Developmental Toxicity): 1000 mg/kg bw/day
(Method: OECD Test Guideline 421, Rat, By oral route)

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :
• In animals : Reproductive/Developmental Effects Screening Assay: No toxicity to reproduction
NOAEL (Parental toxicity): 1 g/kg
NOAEL (Fertility): 1 g/kg
(Method: OECD Test Guideline 421, Rat, By oral route)

Foetal development: **Based on the available information, it is not possible to conclude on the hasard potential of this mixture.**

BIS(PIPERIDINOTHIOCARBONYL) HEXASULPHIDE :
• In animals : Embryo-foetal development: Absence of toxic effects for foetal development
NOAEL (Developmental Toxicity): 1.000 mg/kg bw/day
NOAEL (Maternal Toxicity): 1.000 mg/kg bw/day
(Method: OECD Test Guideline 414, Rat, By oral route)

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :
• In animals : Absence of toxic effects for foetal development.
NOAEL (Developmental Toxicity): 2 g/kg
NOAEL (Maternal Toxicity): < 0,125 g/kg
(Method: OECD Test Guideline 414, Rat, dermal route)

Specific target organ toxicity :
Single exposure : No data available.

Repeated exposure: **Based on the available information, it is not possible to conclude on the hasard potential of this mixture.**

BIS(PIPERIDINOTHIOCARBONYL) HEXASULPHIDE :

• In animals : By oral route: No specific toxic effects
NOAEL= 1.000 mg/kg (Method: OECD Test Guideline 407, Rat, 4 Weeks)

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :
• In animals : By inhalation: No effect is reported.
NOAEL= > 1 mg/l (Rat, 4 Weeks) (Aerosol)
dermal route: No effect is reported.
NOAEL= > 2g/kg bw/d (Method: OECD Test Guideline 411, Rat, 3 months)
By oral route: (Results obtained on a similar product).
Target organs: Reproductive organs, Stomach, Liver, Thymus, NOAEL= < 125 mg/kg (Method: OECD Test Guideline 408, Rat, 3 months)

Aspiration hazard:
Not applicable

12. ECOLOGICAL INFORMATION

Ecotoxicology Assessment: All available and relevant data on this product and/or the components quoted in section 3 and/or the analogue substances/metabolites have been taken into account for the hazard assessment.

Chronic aquatic toxicity : May cause long lasting harmful effects to aquatic life.

12.1. Acute toxicity :

Aquatic plants: **Based on the available information, it is not possible to conclude on the hasard potential of this mixture.**

BIS(PIPERIDINOTHIOCARBONYL) HEXASULPHIDE :
72 h (Pseudokirchneriella subcapitata) (Method: OECD Test Guideline 201, growth rate inhibition) No effect up to the limit of solubility

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :
May be considered as comparable to a similar product for which experimental results are:
ErL50, 72 h (Pseudokirchneriella subcapitata (green algae)) : > 100 mg/l (Method: OECD Test Guideline 201)

Microorganisms:

BIS(PIPERIDINOTHIOCARBONYL) HEXASULPHIDE :
NOEC, 28 d : = 100 mg/l

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :
May be considered as comparable to a similar product for which experimental results are:
NOEC, 4 d (Photobacterium phosphoreum) : > 1,93 mg/l (Method: DIN 38412)

Aquatic toxicity / Long term toxicity:

Aquatic invertebrates:

BIS(PIPERIDINOTHIOCARBONYL) HEXASULPHIDE :
21 d (Daphnia magna (Water flea)) (Reproduction inhibition) No effect up to the limit of solubility

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :
May be considered as comparable to a similar product for which experimental results are:
NOEC, 21 d (Daphnia magna (Water flea)) : 10 mg/l (Method: OECD Test Guideline 211, Growth inhibition/Reproduction inhibition)

Aquatic plants:

BIS(PIPERIDINOTHIOCARBONYL) HEXASULPHIDE :
72 d (Pseudokirchneriella subcapitata) (growth rate inhibition) No effect up to the limit of solubility

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :
NOEC r, 72 h (Pseudokirchneriella subcapitata (green algae)) : 100 mg/l (Method: OECD Test Guideline 201)

Non aquatic toxicity / Acute toxicity :

Toxicity to soil dwelling organisms:

BIS(PIPERIDINOTHIOCARBONYL) HEXASULPHIDE :
NOEC, 56 d (Eisenia fetida (earthworms)) : > 1.000 mg/kg (Soil dw) (Method: OECD Test Guideline 222, reproduction)
NOEC, 28 d (Microorganisms) : > 1.000 mg/kg (Soil dw) (Method: OECD Test Guideline 216)

Terrestrial plants:

BIS(PIPERIDINOTHIOCARBONYL) HEXASULPHIDE :
NOEC, 28 d (Brassica napus (Rapeseed)) : 333 mg/kg (Method: OECD Test Guideline 208, Growth inhibition)

12.2. Persistence and degradability :

Biodegradation (In water): **All the products and/or components quoted in section 3 and/or analogue substances/metabolites are not readily biodegradable.**

BIS(PIPERIDINOTHIOCARBONYL) HEXASULPHIDE :
Not readily biodegradable.: 0 % after 28 d (Method: OECD Test Guideline 301F)

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :
Not readily biodegradable.: 4 % after 28 d (Method: OECD Test Guideline 301 B)

12.3. Bioaccumulative potential :

Bioaccumulation: **Based on the available information, it is not possible to conclude on the bioaccumulation potential of this mixture.**

BIS(PIPERIDINOTHIOCARBONYL) HEXASULPHIDE :
Partition coefficient: n-octanol/water: log Kow : 4,43 , at 20 °C (Method: QSAR)

BIS(PIPERIDINOTHIOCARBONYL) HEXASULPHIDE :
Partition coefficient: n-octanol/water: log Kow : 4,43 , at 20 °C (Method: QSAR)

12.4. Mobility in soil - Distribution among environmental compartments:

Vapor pressure: < 0,0000001 Pa, 20 °C, Active ingredient, (Method: calculated)

Absorption / desorption:
BIS(PIPERIDINOTHIOCARBONYL) HEXASULPHIDE :
log Koc: = 4,56 (Method: calculated)

12.5. Results of PBT and vPvB assessment :
According to REACH regulation, annex XIII, this mixture contains no substance meeting PBT and vPvB criteria.

12.6. Other adverse effects: None known.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment:

Disposal of product: Destroy the product by incineration (in accordance with local and national regulations).

Disposal of packaging: Destroy packaging by incineration at an approved waste disposal site (in accordance with local and national regulations).

14. TRANSPORT INFORMATION

Not classified as dangerous in the meaning of transport regulations.

15. REGULATORY INFORMATION

Safety data sheets: accordance with Annex II of Regulation (EC) No 1907/2006 and its amendment(s)

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

Listed in:

EU. REACH, Annex XVII, Marketing and Use Restrictions (Regulation 1907/2006/EC): Distillates (petroleum), hydrotreated light paraffinic; Baseoil -- unspecified
EU. REACH, Annex XVII, Appendix 2, Entry 28 - Carcinogens: Category 1B (Table 3). (Regulation 1907/2006/EC): Distillates (petroleum), hydrotreated light paraffinic; Baseoil -- unspecified

15.2. Chemical safety assessment: None.

INVENTORIES:

EINECS:	Conforms to
TSCA:	Conforms to
DSL:	All components of this product are on the Canadian DSL
IECSC (CN):	Conforms to
ENCS (JP):	Conforms to
ISHL (JP):	Conforms to
KECI (KR):	Conforms to
PICCS (PH):	Conforms to
AICS:	Conforms to
NZIOC:	Conforms to
TSCA 12B:	

16. OTHER INFORMATION

Full text of H, EUH-phrases referred to under sections 2 and 3

H304	May be fatal if swallowed and enters airways.
H413	May cause long lasting harmful effects to aquatic life.

Update:

Safety datasheet sections which have been updated:		Type:
1	1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING, Emergency telephone number	Revisions
12	12. ECOLOGICAL INFORMATION	Revisions

Thesaurus:
NOAEL : No Observed Adverse Effect Level (NOAEL)
LOAEL : Lowest Observed Adverse Effect Level (LOAEL)
bw : Body weight
food : oral feed
dw : Dry weight
vPvB : very Persistent and very Bioaccumulative
PBT : Persistent, Bioaccumulative and Toxic

This information applies to the PRODUCT AS SUCH and conforming to specifications of ARKEMA. In case of formulations or mixtures, it is necessary to ascertain that a new danger will not appear. The information contained is based on our knowledge of the product, at the date of publishing and it is given quite sincerely. Users are advised of possible additional hazards when the product is used in applications for which it was not intended. This sheet shall only be used and reproduced for prevention and security purposes. The references to legislative, regulatory and codes of practice documents cannot be considered as exhaustive. It is the responsibility of the person receiving the product to refer to the

totality of the official documents concerning the use, the possession and the handling of the product. It is also the responsibility of the handlers of the product to pass on to any subsequent persons who will come into contact with the product (usage, storage, cleaning of containers, other processes) the totality of the information contained within this safety data sheet and necessary for safety at work, the protection of health and the protection of environment.

NB: In this document the numerical separator of the thousands is the "." (point), the decimal separator is "," (comma).