

Product: MIXLAND+® DTD M 80 GA F200

Page: 1 / 9

SDS No.: 100188-100 (Version 2.0)

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SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING
1.1. Product identifier
Identification of the mixture: MIXLAND+® DTD M 80 GA F200

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use of the Substance/Mixture :

Sector of use :	Product category :
Manufacture of General Rubber Goods SU11: Manufacture of rubber products	PC0: Cross-linking agent

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

E-mail address : Exposure scenario reachsubstance@mlpc-intl.com

1.4. Emergency telephone number

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

SECTION 2: HAZARDS IDENTIFICATION
2.1. Classification of the substance or mixture
Classification (REGULATION (EC) No 1272/2008):

Skin sensitisation, 1A, H317
 Specific target organ toxicity - single exposure, 3, H335
 Chronic aquatic toxicity, 2, H411

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:

Di(morpholin-4-yl) disulphide

Hazard pictograms:



Signal word:

Warning
Hazard statements:

H317 : May cause an allergic skin reaction.
 H335 : May cause respiratory irritation.
 H411 : Toxic to aquatic life with long lasting effects.

Precautionary statements:

Prevention:

P261 : Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P280 : Wear eye protection and face protection.
P273 : Avoid release to the environment.

Response:

P333 + P313 : If skin irritation or rash occurs: Get medical advice/ attention.

Storage:

P403 + P233 : Store in a well-ventilated place. Keep container tightly closed.

Disposal:

P501 : Dispose of contents and container to an approved incineration plant.

Additional information: Rubber accelerator

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.

Endocrine disrupting properties - Health :

Based on the available information, it is not possible to conclude on the endocrine disruptor potential.

Endocrine disrupting properties - Environment :

Based on the available information, it is not possible to conclude on the endocrine disruptor potential.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Chemical nature of the mixture¹:

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	specific concentration limit, M-Factors, Acute toxicity estimate
Di(morpholin-4-yl) disulphide (01-2119541817-32)	203-103-0	103-34-4	Approximately 80 %	Skin Sens. 1A; H317 STOT SE3 (Inhalation); H335 Aquatic Chronic2; H411	
Distillates (petroleum), hydrotreated light paraffinic (01-2119487077-29) (N° ANNEX: 649-468-00-3)	265-158-7	64742-55-8	0 - 10 %	Asp. Tox.1; H304 Nota L: DMSO <3%	
Talc (Mg3H2(SiO3)4)	238-877-9	14807-96-6	0 - 5 %	WEL substance	

¹: See chapter 14 for Proper Shipping Name

²: See the text of the regulation for applicable exceptions or provisions -

SECTION 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 and effects, both acute and delayed:** No data available.

4.3. **Indication of any immediate medical attention and special treatment needed:** No data available.

SECTION 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.

SECTION 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.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. **Control parameters:**

Exposure Limit Values Not relevant

Derived No Effect Level (DNEL): DI(MORPHOLIN-4-YL) DISULPHIDE :

End Use	Inhalation	Ingestion	Skin contact
Workers	0,17 mg/m3 (LT, SE) 0,02 mg/m3 (LT, LE)		0,024 mg/kg (LT, SE)
Consumers	0,03 mg/m3 (LT, SE) 0,004 mg/m3 (LT, LE)	0,012 mg/kg (LT, SE)	0,012 mg/kg (LT, SE)

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

Predicted No Effect Concentration: DI(MORPHOLIN-4-YL) DISULPHIDE :

Compartment:	Value:
Fresh water	0,0037 mg/l
Marine water	0,00037 mg/l
Water (Intermittent release)	0,037 mg/l
Sewage treatment plant	7,59 mg/l
Sediment	0,029 mg/kg
Marine sediment	0,0029 mg/kg
Soil	0,0036 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

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance:

Physical state (20°C): solid
Form: granules
Colour: white
Odour: Characteristic and slight
Odour Threshold: No data available.
Melting point/range : 125 °C (OECD Test Guideline 102)
Boiling point/boiling range: No data available.
Flammability:
Flammability (solid, gas): Non flammable product (Standard A10)
Upper explosion limit : No data available.
Flash point: Not applicable
Auto-ignition temperature: Not applicable
Decomposition temperature: 216 °C
pH: Not applicable
Viscosity, kinematic: No data available.
Water solubility: 0,215 g/l Hydrolyses slowly. at 20 °C (OECD Test Guideline 105)
Solubility in other solvents: Chloroform
Acetone
Alcohol
Partition coefficient: n-octanol/water: DI(MORPHOLIN-4-YL) DISULPHIDE :
log Kow : 2,67 , at 22 °C (OECD Test Guideline 117)
Vapour pressure: < 0,004 Pa , at 25 °C (estimation)
Density: 1,24 g/cm3 , at 20 °C True volume mass
Relative vapour density: No data available.

Particle size: measured 0,7 - 0,8 cm pellets

9.2. Other information:

Surface tension: 58,2 mN/m at 23 °C
Bulk density: 452 kg/m³, at 20 °C
pKA: None.
Molecular weight: 236,35 g/mol
Explosive properties:
 Minimum ignition energy: not determined
 Explosivity: Not explosive, Not relevant (due to its chemical structure)

SECTION 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:

Thermal decomposition:
Decomposition temperature: 216 °C
Nitrogen oxides (NO_x), Carbon dioxide (CO₂), Sulphur oxides
Nitrosamine

SECTION 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 hazard classes as defined in Regulation (EC) No 1272/2008:

Acute toxicity:

Inhalation: **According to its composition, this product should not be harmful in normal conditions of use**
Inhalation of vapours due to thermal decomposition.; Risk of irritation of respiratory system, Toxic effects cannot be excluded

Ingestion: **According to its composition, can be considered as Slightly harmful by ingestion**

DI(MORPHOLIN-4-YL) DISULPHIDE :
• In animals : LD50/Rat: 5,6 g/kg (Method: OECD Test Guideline 401)

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

Dermal: **According to its composition, can be considered as Slightly harmful in contact with skin.**

DI(MORPHOLIN-4-YL) DISULPHIDE :
• In animals : No mortality/Rat: 2 g/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: **According to its composition, can be considered as Slightly irritating to skin**

Eye contact: **According to its composition, can be considered as Slightly irritating to eyes**

Respiratory or skin sensitisation:

Inhalation: No data available.

Skin contact: **According to its composition : May cause an allergic skin reaction.**

DI(MORPHOLIN-4-YL) DISULPHIDE :

- In animals : Strong sensitizing effects by skin contact. (Method: Buehler method, Guinea pig)

CMR effects :

Mutagenicity: Contains no ingredient listed as a mutagen

Carcinogenicity: No data available.

Reproductive toxicity:

Fertility: Based on the available data, the substance is not suspected of having reprotoxic potential.

DI(MORPHOLIN-4-YL) DISULPHIDE :

- In animals : Repeated administration: Absence of toxic effects upon the reproductive system
NOAEL (Parental toxicity) : 8,38 mg/m³
(Method: OECD Test Guideline 413, Rat, By inhalation)

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 data, the substance is not suspected of having developmental toxicity potential.

DI(MORPHOLIN-4-YL) DISULPHIDE :

- In animals : Absence of congenital malformations and embryotoxic effects at non-toxic doses for the mothers
NOAEL (Developmental Toxicity) : 250 mg/kg bw/day
NOAEL (Maternal Toxicity) : 250 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 :**

The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

Exposure routes : Inhalation
Target Organs : Respiratory Tract

Inhalation:

DI(MORPHOLIN-4-YL) DISULPHIDE :

- In animals : Irritating to respiratory system. , Rat

Repeated exposure:

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

DI(MORPHOLIN-4-YL) DISULPHIDE :

- In animals : By inhalation: (Method: OECD Test Guideline 413, Rat, 3 months)

Local irritation of the respiratory system
NOAEL= 0,507mg/m³
No specific toxic effects
NOAEL= 8,38mg/m³

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

11.2. Information on other hazards:**Endocrine disrupting properties:**

Based on the available information, it is not possible to conclude on the endocrine disruptor potential.

Other information: Not relevant

SECTION 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.

Acute aquatic toxicity : Toxic to aquatic life.
Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

12.1. Toxicity :

Fish: **From its composition, it must be considered as: Toxic to fish.**

DI(MORPHOLIN-4-YL) DISULPHIDE :
LC50, 96 h (Oncorhynchus mykiss (rainbow trout)) : 3,7 mg/l (Method: OECD Test Guideline 203)

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :
LL50, 96 h (Pimephales promelas (fathead minnow)) : > 100 mg/l (Method: OECD Test Guideline 203)

Aquatic invertebrates: **From its composition, it must be considered as: Toxic to daphnia.**

DI(MORPHOLIN-4-YL) DISULPHIDE :
EC50, 48 h (Daphnia magna (Water flea)) : 4,5 mg/l

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :
May be considered as comparable to a similar product for which experimental results are:
LL50, 48 h (Daphnia magna (Water flea)) : > 10.000 mg/l (Method: OECD Test Guideline 202)

Aquatic plants: **From its composition, it must be considered as: Harmful to algae.**

DI(MORPHOLIN-4-YL) DISULPHIDE :
EC50, 96 h (Selenastrum capricornutum) : 29 mg/l

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:

DI(MORPHOLIN-4-YL) DISULPHIDE :
EC50, 3 h (Activated sludge) : 759 mg/l (Method: OECD Test Guideline 209, Respiration inhibition of activated sludge)

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:

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:

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

12.2. Persistence and degradability :

Biodegradation (In water): **From its composition, it must be considered as: Not readily biodegradable.**

DI(MORPHOLIN-4-YL) DISULPHIDE :
Not readily biodegradable.: 76 % after 49 d (Method: OECD Test Guideline 301 B)

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :
Not readily biodegradable.: 2 - 31 % 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 hazard potential of this mixture.

DI(MORPHOLIN-4-YL) DISULPHIDE : Partition coefficient: n-octanol/water: log Kow : 2,67 , at 22 °C (Method: OECD Test Guideline 117)

12.4. Mobility in soil - Distribution among environmental compartments:

Vapor pressure: < 0,004 Pa, 25 °C, (Method: estimation)
Surface tension: 58,2 mN/m 23 °C

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. Endocrine disrupting properties:

Based on the available information, it is not possible to conclude on the endocrine disruptor potential.

12.7. Other adverse effects: None known.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods:

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).

SECTION 14: TRANSPORT INFORMATION

Table with 8 columns: Regulation, 14.1. UN number, 14.2. UN proper shipping name, 14.3. Class(es)*, Label, 14.4. PG*, 14.5. Environmental hazards, 14.6. Special precautions for user. Rows include ADR, ADN, RID, IATA Cargo, IATA Passenger, and IMDG.

*Description: 14.3. Transport hazard class(es)
14.4. Packing group

14.7. Maritime transport in bulk according to IMO instruments: Not applicable

SECTION 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, Appendix 2, Entry 28 - Carcinogens: Category 1B (CLP Table 3 of Anx VI). (Reg. 1907/2006/EC): Distillates (petroleum), hydrotreated light paraffinic; Baseoil — unspecified [complex combination of hydrocarbons obtained by trea

EU, REACH, Annex XVII, Marketing and Use Restrictions (Regulation 1907/2006/EC): Distillates (petroleum), hydrotreated light paraffinic; Baseoil — unspecified [complex combination of hydrocarbons obtained by trea

15.2. Chemical safety assessment: None.

INVENTORIES:

European union/EEA : In the event of purchase from an Arkema legal entity based in the European Economic Area (EEA), it is established that this product complies with the registration provisions of REACH Regulation (EC) No. 1907/2006, given that all of its components are excluded, exempted and / or registered. If purchasing from a legal entity established outside the EEA, please contact your local representative for more information.

TSCA (USA) : The components of this product are all on the TSCA Inventory
 DSL/NDSL (CA) : All components of this product are on the Canadian DSL
 IECSC (CN) : All components of this product are listed or exempted
 ENCS (JP) : All components of this product are listed or exempted
 ISHL (JP) : All components of this product are listed or exempted
 KECI (KR) : All components of this product are listed or exempted
 PICCS (PH) : All components of this product are listed or exempted
 NZIOC (NZ) : All components of this product are listed or exempted
 AIIC (AU) : All components of this product are listed or exempted
 TCSI (TW) : All components of this product are listed or exempted

SECTION 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.
 H317 May cause an allergic skin reaction.
 H335 May cause respiratory irritation.
 H411 Toxic to aquatic life with long lasting effects.

Update:

Safety datasheet sections which have been updated:		Type:
1-16	General update of Safety Data Sheet.	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).

