

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product form : Mixture
Trade name : Flex MS

1.2. Relevant identified uses of the substance or mixture and uses advised against**1.2.1. Relevant identified uses**

Intended for general public
Main use category : Consumer use, Professional use, Industrial use
Use of the substance/mixture : Sealants

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet**Manufacturer**

fischerwerke GmbH & Co. KG
Klaus-Fischer-Straße, 1
72178 Waldachtal
Germany
T +49(0)7443 12-0 - F +49(0)7443 12-4222
info-sdb@fischer.de - www.fischer.de

Distributor

fischer fixings UK Ltd.
Whitely Road
Oxon OX10 9AT Wallingford
United Kingdom of Great Britain and Northern Ireland
T +44 14 91 82 79 00 - F +44 14 91 82 79 53
info@fischer.co.uk - www.fischer.co.uk

1.4. Emergency telephone number

Emergency number : +49(0)6132-84463 (24h)

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture**

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

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

EUH-statements : EUH208 - Contains trimethoxyvinylsilane; trimethoxy(vinyl)silane, Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate, dibutyltin dilaurate; dibutyl[bis(dodecanoyloxy)] stannane. May produce an allergic reaction.
EUH210 - Safety data sheet available on request.
EUH212 - Warning! Hazardous respirable dust may be formed when used. Do not breathe dust.

2.3. Other hazards

Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

SECTION 3: Composition/information on ingredients**3.1. Substances**

Not applicable

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according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2015/830

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter \leq 10 μ m] substance with national workplace exposure limit(s) (GB)	CAS-No.: 13463-67-7 EC-No.: 236-675-5 EC Index-No.: 022-006-00-2 REACH-no: 01-2119489379-17	1 – 5	Carc. 2, H351
trimethoxyvinylsilane; trimethoxy(vinyl)silane	CAS-No.: 2768-02-7 EC-No.: 220-449-8 EC Index-No.: 014-049-00-0 REACH-no: 01-2119513215-52	1 – 2.5	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation:vapour), H332 (ATE=16.8 mg/l/4h) Skin Sens. 1B, H317
dibutyltin dilaurate; dibutyl[bis(dodecanoyloxy)] stannane	CAS-No.: 77-58-7 EC-No.: 201-039-8 EC Index-No.: 050-030-00-3 REACH-no: 01-2119496068-27	0.1 – 0.5	Eye Irrit. 2, H319 Skin Sens. 1, H317 Muta. 2, H341 Repr. 1B, H360FD STOT SE 1, H370 STOT RE 1, H372 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	CAS-No.: 1065336-91-5 EC-No.: 915-687-0 REACH-no: 01-2119491304-40	0.01 – 0.1	Skin Sens. 1A, H317 Repr. 2, H361 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash with plenty of soap and water.
First-aid measures after eye contact	: Rinse eyes with water as a precaution. Remove contact lenses, if present and easy to do. Continue rinsing.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell. If possible, show the doctor this safety data sheet. Failing this, show the doctor the packaging or label. Wash out mouth with water and afterwards drink plenty of water.

4.2. Most important symptoms and effects, both acute and delayed

No additional information available

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	: Strong water jet.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire	: Toxic fumes may be released.
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5.3. Advice for firefighters

Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
Other information	: Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

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according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2015/830

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Mechanically recover the product.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Avoid contact with skin, eyes and clothing. Remove dirty clothes.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.
Storage temperature : 5 – 25 °C

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (13463-67-7)

United Kingdom - Occupational Exposure Limits

Local name	Titanium dioxide
WEL TWA (OEL TWA) [1]	4 mg/m ³ respirable 10 mg/m ³ total inhalable
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

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8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Safety glasses

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

No specific measures are required provided the product is handled in accordance with the general rules of occupational hygiene and safety

Hand protection					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Nitrile rubber (NBR), Chloroprene rubber (CR), Butyl rubber	3 (> 60 minutes)	-		

8.2.2.3. Respiratory protection

Respiratory protection:

No respiratory protection needed under normal use conditions. In case of insufficient ventilation, wear suitable respiratory equipment

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Paste.
Colour	: Various colours.
Odour	: characteristic.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: > 61 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1.34 g/ml
Solubility	: No data available

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Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: 800000 mm ² /s
Viscosity, dynamic	: 800000 mPa.s
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity (oral)	: Not classified.
Acute toxicity (dermal)	: Not classified.
Acute toxicity (inhalation)	: Not classified

trimethoxyvinylsilane; trimethoxy(vinyl)silane (2768-02-7)

LD50 oral rat	7120 mg/kg (OECD 401 method)
LD50 dermal rabbit	3760 mg/kg
LC50 Inhalation - Rat	16.8 mg/l (OECD 403 method)
ATE CLP (oral)	7120 mg/kg bodyweight
ATE CLP (dermal)	3760 mg/kg bodyweight
ATE CLP (vapours)	16.8 mg/l/4h
ATE CLP (dust,mist)	16.8 mg/l/4h

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (13463-67-7)

LD50 oral rat	> 5000 mg/kg bodyweight (OECD 425 method)
LD50 dermal rabbit	> 10000 mg/kg bodyweight
LC50 Inhalation - Rat (Dust/Mist)	> 6.82 mg/l/4h Neither mortality nor clinical signs of toxicity were observed with the given dose

Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate (1065336-91-5)

LD50 oral rat	3230 mg/kg bodyweight (OECD 423 method)
LD50 dermal rat	> 3170 mg/kg bodyweight (OECD 402 method)
ATE CLP (oral)	3230 mg/kg bodyweight

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dibutyltin dilaurate; dibutyl[bis(dodecanoyloxy)] stannane (77-58-7)	
LD50 oral rat	2071 mg/kg bodyweight
LD50 dermal rat	> 2000 mg/kg bodyweight
LC50 Inhalation - Rat	> 2000 mg/kg
ATE CLP (oral)	2071 mg/kg bodyweight
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified. ((OECD 406 method). No sensitisation responses were observed)
Additional information	: May cause sensitisation of susceptible persons
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified.
titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (13463-67-7)	
IARC group	2B - Possibly carcinogenic to humans
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
dibutyltin dilaurate; dibutyl[bis(dodecanoyloxy)] stannane (77-58-7)	
STOT-single exposure	Causes damage to organs.
STOT-repeated exposure	: Not classified
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate (1065336-91-5)	
NOAEL (oral, rat, 90 days)	300 mg/kg bodyweight
dibutyltin dilaurate; dibutyl[bis(dodecanoyloxy)] stannane (77-58-7)	
STOT-repeated exposure	Causes damage to organs (immune system) through prolonged or repeated exposure.
Aspiration hazard	: Not classified
Flex MS	
Viscosity, kinematic	800000 mm ² /s

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified.

Not rapidly degradable

trimethoxyvinylsilane; trimethoxy(vinyl)silane (2768-02-7)	
LC50 - Fish [1]	> 92.2 mg/l <i>Oryzias latipes</i> (Ricefish)
EC50 - Crustacea [1]	168.7 mg/l <i>Daphnia magna</i> (Water flea)
EC50 72h - Algae [1]	> 957 mg/l <i>Desmodesmus subspicatus</i>
LOEC (chronic)	52.4 mg/l
NOEC (chronic)	28.1 mg/l
titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (13463-67-7)	
LC50 - Fish [1]	> 1000 mg/l <i>Pimephales promelas</i>
EC50 - Crustacea [1]	> 100 mg/l <i>Daphnia magna</i> (Water flea) (OECD 202 method)
EC50 72h - Algae [1]	> 100 mg/l <i>Pseudokirchneriella subcapitata</i>
ErC50 algae	> 100 mg/l <i>Pseudokirchneriella subcapitata</i>
LOEC (chronic)	5 mg/l Test organisms (species): <i>Daphnia magna</i> Duration: '21 d'
NOEC chronic algae	> 5600 mg/l 72 h

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Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate (1065336-91-5)

LC50 - Fish [1]	0.9 mg/l Brachydanio rerio (zebra-fish)
EC50 72h - Algae [1]	1.68 mg/l Desmodesmus subspicatus

dibutyltin dilaurate; dibutyl[bis(dodecanoyloxy)] stannane (77-58-7)

LC50 - Fish [1]	21.2 mg/l Brachydanio rerio (zebra-fish)
EC50 - Crustacea [1]	463 µg/l Daphnia magna (Water flea)
EC50 72h - Algae [1]	1 mg/l Desmodesmus subspicatus

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

dibutyltin dilaurate; dibutyl[bis(dodecanoyloxy)] stannane (77-58-7)

Partition coefficient n-octanol/water (Log Pow)	4.44
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12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Component

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (13463-67-7)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
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12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations. Avoid release to the environment.
European List of Waste (LoW) code	: 20 00 00 - MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA

ADR	IMDG	IATA
14.1. UN number		
Not regulated	Not regulated	Not regulated
14.2. UN proper shipping name		
Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)		
Not regulated	Not regulated	Not regulated
14.4. Packing group		
Not regulated	Not regulated	Not regulated
14.5. Environmental hazards		
Not regulated	Not regulated	Not regulated

No supplementary information available

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14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Substances 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: Dibutyltin compounds (77-58-7)

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Contains no substance subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

Child-resistant fastening : Not applicable

Tactile warning : Not applicable

Contains no substance subject to Regulation (EC) 273/2004 of the European Parliament and of the Council of 11 February 2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances.

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:

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
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer

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Abbreviations and acronyms:	
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Full text of H- and EUH-statements:	
Acute Tox. 4 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Carc. 2	Carcinogenicity, Category 2
EUH208	Contains trimethoxyvinylsilane; trimethoxy(vinyl)silane, Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate, dibutyltin dilaurate; dibutyl[bis(dodecanoyloxy)] stannane. May produce an allergic reaction.
EUH210	Safety data sheet available on request.
EUH212	Warning! Hazardous respirable dust may be formed when used. Do not breathe dust.
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
H226	Flammable liquid and vapour.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H341	Suspected of causing genetic defects.
H351	Suspected of causing cancer.
H360FD	May damage fertility. May damage the unborn child.
H361	Suspected of damaging fertility or the unborn child.
H370	Causes damage to organs.

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Full text of H- and EUH-statements:	
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
Muta. 2	Germ cell mutagenicity, Category 2
Repr. 1B	Reproductive toxicity, Category 1B
Repr. 2	Reproductive toxicity, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
Skin Sens. 1A	Skin sensitisation, category 1A
Skin Sens. 1B	Skin sensitisation, category 1B
STOT RE 1	Specific target organ toxicity — Repeated exposure, Category 1
STOT SE 1	Specific target organ toxicity — single exposure, Category 1

The classification complies with : ATP 12

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.