


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

S 78 Klebt & Dichtet MS
Article number: 08985111

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

Sealing material

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company Kellner & Kunz AG
 Boschstr. 37
 4600 Wels / AUSTRIA
 Phone 0043-7242-484-0
 Fax 0043-7242-484-924
 Homepage www.reca.co.at
 E-mail info@reca.co.at

Address enquiries to

Technical information info@reca.co.at
Safety Data Sheet sdb@chemiebuero.de

1.4 Emergency telephone number

Advisory body +43 (0) 1 406 43 43 (24h)

SECTION 2: Hazards identification
2.1 Classification of the substance or mixture [REGULATION (EC) No 1272/2008]

No classification.

2.2 Label elements

The product is required to be labelled in accordance with regulation (EC) No 1272/2008 (CLP).

Hazard pictograms none

Signal word none

Hazard statements none

Precautionary statements none

Special labelling EUH210 Safety data sheet available on request.

Contains: N-[3-(Trimethoxysilyl)propyl]ethylenediamine, Dioctyltinbis(acetylacetonate), N-[3-(Dimethoxymethylsilyl)propyl]ethylenediamine. EUH208 May produce an allergic reaction.

2.3 Other hazards

Human health dangers Frequent persistent contact with the skin can cause skin irritation.

Environmental hazards Does not contain any PBT or vPvB substances.

Other hazards No particular hazards known.



SECTION 3: Composition / Information on ingredients

Product-type:

3.2 The product is a mixture.

Range [%]	Substance
1 - <5	Trimethoxyvinylsilane CAS: 2768-02-7, EINECS/ELINCS: 220-449-8, Reg-No.: 01-2119513215-52-XXXX GHS/CLP: Flam. Liq. 3: H226 - Acute Tox. 4: H332
0,1 - <1	N-[3-(Trimethoxysilyl)propyl]ethylenediamine CAS: 1760-24-3, EINECS/ELINCS: 217-164-6, Reg-No.: 01-2119970215-39-XXXX GHS/CLP: Eye Dam. 1: H318 - Acute Tox. 4: H332 - Skin Sens. 1B: H317 - Aquatic Chronic 2: H411
0,1 - <1	Diocetylindis(acetylacetonate) CAS: 54068-28-9, EINECS/ELINCS: 483-270-6, Reg-No.: 01-0000020199-67-XXXX GHS/CLP: STOT SE 2: H371 - Skin Sens. 1: H317
0,1 - <1	N-[3-(Dimethoxymethylsilyl)propyl]ethylenediamine CAS: 3069-29-2, EINECS/ELINCS: 221-336-6, Reg-No.: 01-2119963926-21-XXXX GHS/CLP: Skin Sens. 1: H317 - Eye Dam. 1: H318 - Skin Irrit. 2: H315 - Acute Tox. 4: H302

Comment on component parts

Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.
For full text of H-statements: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

Take off contaminated clothing and wash before reuse.

Inhalation

Ensure supply of fresh air.
In the event of symptoms seek medical treatment.

Skin contact

In case of contact with skin wash off immediately with soap and water.
Consult a doctor if skin irritation persists.

Eye contact

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

Get medical advice.
Rinse out mouth and give plenty of water to drink.

4.2 Most important symptoms and effects, both acute and delayed

Headache
Allergic reactions

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Foam, dry powder, water spray jet, carbon dioxide.

Extinguishing media that must not be used

Full water jet.

5.2 Special hazards arising from the substance or mixture

In the event of fire the following can be released:
Nitrogen oxides (NO_x).
Carbon monoxide (CO)



5.3 Advice for firefighters

Do not inhale explosion and/or combustion gases.

Use self-contained breathing apparatus.

Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective clothing.

Forms slippery surfaces with water.

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Take up mechanically.

Take up residues with absorbent material (e.g. sand, sawdust, general-purpose binder).

Dispose of absorbed material in accordance with the regulations.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid spilling or spraying in enclosed areas.

Use only in well-ventilated areas.

Keep away from all sources of ignition - Refrain from smoking.

Do not eat or drink when working.

Wash hands before breaks and after work.

Use barrier skin cream.

Take off contaminated clothing and wash before reuse.

7.2 Conditions for safe storage, including any incompatibilities

Keep only in original container.

Provide solvent-resistant and impermeable floor.

Prevent penetration into the ground.

Do not store together with oxidizing agents.

Keep container in a well-ventilated place.

Keep container tightly closed.

Recommended storage temperature: 15 - 25 °C

7.3 Specific end use(s)

See product use, SECTION 1.2



SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Ingredients with occupational exposure limits to be monitored (GB)

not applicable

DNEL

Substance
Trimethoxyvinylsilane, CAS: 2768-02-7
Industrial, inhalative, Acute - systemic effects: 260 mg/m ³ .
Industrial, dermal, Long-term - systemic effects: 3.9 mg/kg bw/day.
Industrial, inhalative, Long-term - systemic effects: 27.6 mg/m ³ .
general population, inhalative, Acute - systemic effects: 50 mg/m ³ .
general population, inhalative, Long-term - systemic effects: 6.7 mg/m ³ .
general population, dermal, Long-term - systemic effects: 7.8 mg/kg bw/day.
general population, oral, Long-term - systemic effects: 300 µg/kg bw/day.
Diocetylbinbis(acetylacetonate), CAS: 54068-28-9
Industrial, inhalative, Acute - systemic effects: 84 mg/m ³ .
Industrial, dermal, Long-term - systemic effects: 70 µg/kg bw/day.
N-[3-(Trimethoxysilyl)propyl]ethylenediamine, CAS: 1760-24-3
Industrial, inhalative, Acute - systemic effects: 260 mg/m ³ .
Industrial, inhalative, Long-term - systemic effects: 260 mg/m ³ .
Industrial, inhalative, Acute - local effects: 5.36 mg/m ³ .
Industrial, inhalative, Long-term - local effects: 600 µg/m ³ .
general population, inhalative, Long-term - systemic effects: 50 mg/m ³ .
general population, inhalative, Long-term - local effects: 100 µg/m ³ .
general population, inhalative, Acute - local effects: 4 mg/m ³ .
general population, oral, Long-term - systemic effects: 8 mg/kg bw/day.
general population, inhalative, Acute - systemic effects: 50 mg/m ³ .

PNEC

Substance
Trimethoxyvinylsilane, CAS: 2768-02-7
seawater, 40 µg/L.
sewage treatment plants (STP), 6.6 mg/L.
sediment (freshwater), 1.5 mg/kg.
sediment (seawater), 150 µg/kg.
freshwater, 400 µg/L.
Diocetylbinbis(acetylacetonate), CAS: 54068-28-9
sediment (freshwater), 155 µg/kg sediment dw.
sewage treatment plants (STP), 1 mg/L.
seawater, 2.6 µg/L.
freshwater, 26 µg/L.
sediment (seawater), 15.5 µg/kg sediment dw.
N-[3-(Trimethoxysilyl)propyl]ethylenediamine, CAS: 1760-24-3
sediment (seawater), 22 µg/kg.
freshwater, 0,062 mg/l.
seawater, 0,0062 mg/l.
sewage treatment plants (STP), 25 mg/l.



sediment (freshwater), 220 µg/kg.
N-[3-(Dimethoxymethylsilyl)propyl]ethylenediamine, CAS: 3069-29-2
seawater, 0,0062 mg/l.
sewage treatment plants (STP), 25 mg/l.
sediment (freshwater), 240 µg/kg.
sediment (seawater), 24 µg/kg.
freshwater, 0,062 mg/l.

8.2 Exposure controls

Additional advice on system design	Ensure adequate ventilation on workstation. Measurement methods for taking workplace measurements must meet the performance requirements of DIN EN 482. For example, recommendations are given in the IFA's list of hazardous substances.
Eye protection	Safety glasses. (EN 166:2001)
Hand protection	The details concerned are recommendations. Please contact the glove supplier for further information. 0,7 mm Butyl rubber, >480 min (EN 374-1/-2/-3).
Skin protection	Light protective clothing.
Other	Do not inhale gases/vapours/aerosols. Avoid contact with eyes and skin. Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier.
Respiratory protection	In the event of occupational exposure limits being exceeded or of inadequate ventilation: wear appropriate respiratory protection. Short term: filter apparatus, filter A. (DIN EN 14387)
Thermal hazards	No information available.
Delimitation and monitoring of the environmental exposition	Protect the environment by applying appropriate control measures to prevent or limit emissions.



SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	pasty
Color	various
Odor	characteristic
Odour threshold	No information available.
pH-value	No information available.
pH-value [1%]	No information available.
Boiling point [°C]	270
Flash point [°C]	> 100
Flammability (solid, gas) [°C]	not applicable
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	No information available.
Density [g/ml]	1,58 (20 °C / 68,0 °F)
Bulk density [kg/m ³]	No information available.
Solubility in water	immiscible
Partition coefficient [n-octanol/water]	No information available.
Viscosity	No information available.
Relative vapour density determined in air	No information available.
Evaporation speed	No information available.
Melting point [°C]	No information available.
Autoignition temperature [°C]	420
Decomposition temperature [°C]	not applicable

9.2 Other information

none

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reactions known if used as directed.

10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

10.3 Possibility of hazardous reactions

Reactions with oxidizing agents.

10.4 Conditions to avoid

See SECTION 7.2.

10.5 Incompatible materials

No information available.

10.6 Hazardous decomposition products

No hazardous decomposition products known.



SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product
dermal, Based on the available information, the classification criteria are not fulfilled.:
oral, Based on the available information, the classification criteria are not fulfilled.:
ATE-mix, inhalation (vapour), Rat: > 20 mg/l.
Substance
Trimethoxyvinylsilane, CAS: 2768-02-7
LD50, dermal, Rabbit: 3259 mg/kg bw.
LD50, inhalative, Rat: 16,8 mg/l (4 h) (OECD TG 403).
LD50, oral, Rat: 7120 mg/kg (OECD TG 401).
NOAEL, inhalative, Rat: 0,058 mg/l (98 d).
NOAEL, oral, Rat: < 62,5 mg/kg (28 d) (OECD TG 422).
Diocetyl tinbis(acetylacetonate), CAS: 54068-28-9
LD50, dermal, Rat: > 2000 mg/kg (Study Number TX 1027).
LD50, dermal, Rat: > 2000 mg/kg (OECD 402).
LD50, oral, Rat: 2500 mg/kg.
N-[3-(Trimethoxysilyl)propyl]ethylenediamine, CAS: 1760-24-3
LD50, oral, Rat: 2295 mg/kg bw (Lit.).
LD50, dermal, Rat: >2000 mg/kg bw (Lit.).
LC50, inhalative, Rat: 1,49 - 2,44 mg/L (4h) (Lit.).
N-[3-(Dimethoxymethylsilyl)propyl]ethylenediamine, CAS: 3069-29-2
LD50, dermal, Rabbit: 15520 mg/kg bw.
LC50, inhalative, Rat: 5200 mg/m ³ (4h).

Serious eye damage/irritation Based on the available information, the classification criteria are not fulfilled.

Skin corrosion/irritation Based on the available information, the classification criteria are not fulfilled.

Respiratory or skin sensitisation Based on the available information, the classification criteria are not fulfilled.
May produce an allergic reaction.
Calculation method

Specific target organ toxicity — single exposure Based on the available information, the classification criteria are not fulfilled.

Specific target organ toxicity — repeated exposure Based on the available information, the classification criteria are not fulfilled.

Mutagenicity Based on the available information, the classification criteria are not fulfilled.

Reproduction toxicity Based on the available information, the classification criteria are not fulfilled.

Carcinogenicity Based on the available information, the classification criteria are not fulfilled.

Aspiration hazard Based on the available information, the classification criteria are not fulfilled.

General remarks

Toxicological data of complete product are not available.
The toxicity data listed pertaining to the ingredients are intended for those working in the medicinal professions, experts for occupational health and safety and toxicologists. The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.



SECTION 12: Ecological information

12.1 Toxicity

Product
Based on the available information, the classification criteria are not fulfilled.:
Substance
Trimethoxyvinylsilane, CAS: 2768-02-7
LC50, (96h), Oncorhynchus mykiss: 191 mg/l.
EC50, Pseudokirchneriella subcapitata: 210 mg/l (7 d) (US-EPA).
EC50, (48h), Daphnia magna: 168,7 mg/l (92/69/EWG C.2).
EC10, Pseudomonas putida: 1000 mg/l (5 h).
Diocetylbinbis(acetylacetonate), CAS: 54068-28-9
EC50, (48h), Daphnia magna: 58,6 mg/l (OECD 202).
EC50, (96h), fish: 86 mg/l (OECD 203).
EC50, (24h), Scenedesmus subspicatus: 300 mg/l (OECD 201).
N-[3-(Trimethoxysilyl)propyl]ethylenediamine, CAS: 1760-24-3
LC50, (96h), Danio rerio: 597 mg/l (Lit.).
EC50, (16h), Pseudomonas putida: 67 mg/l (Lit.).
EC50, (48h), Daphnia magna: 81 mg/l (Lit.).
IC50, (72h), Algae: 8,8 mg/l (OECD 201).
NOEC, (21d), Daphnia magna: > 1 mg/l (Lit.).
NOEC, (72h), Algae: 3,1 mg/l (OECD 201).
N-[3-(Dimethoxymethylsilyl)propyl]ethylenediamine, CAS: 3069-29-2
LC50, (96h), Danio rerio: 597 mg/l (Lit.).
EC50, (72h), Algae: 5.5 - 8.8 mg/L.

12.2 Persistence and degradability

Behaviour in environment compartments	No information available.
Behaviour in sewage plant	No information available.
Biological degradability	No information available.

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

Based on all available information not to be classified as PBT or vPvB respectively.

12.6 Other adverse effects

Do not discharge product unmonitored into the environment.

Ecotoxicological data are not available.

The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.



SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste material c It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

Product

Coordinate disposal with the authorities if necessary.
Dispose of as hazardous waste.

Waste no. (recommended) 080409*

Contaminated packaging

Packaging that cannot be cleaned should be disposed of as for product.
Uncontaminated packaging may be taken for recycling.

Waste no. (recommended) 150110*

SECTION 14: Transport information

14.1 UN number

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable

14.2 UN proper shipping name

Transport by land according to ADR/RID NO DANGEROUS GOODS

Inland navigation (ADN) NO DANGEROUS GOODS

Marine transport in accordance with IMDG NOT CLASSIFIED AS "DANGEROUS GOODS"

Air transport in accordance with IATA NOT CLASSIFIED AS "DANGEROUS GOODS"

14.3 Transport hazard class(es)

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable

**14.4 Packing group**

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable

14.5 Environmental hazards

Transport by land according to ADR/RID no

Inland navigation (ADN) no

Marine transport in accordance with IMDG no

Air transport in accordance with IATA no

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

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

No information available.

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

EEC-REGULATIONS 1991/689 (2001/118); 2010/75; 2004/42; 648/2004; 1907/2006 (REACH); 1272/2008; 75/324/EEC (2016/2037/EC); (EU) 2015/830; (EU) 2016/131; (EU) 517/2014

TRANSPORT-REGULATIONS ADR (2019); IMDG-Code (2019, 39. Amdt.); IATA-DGR (2019)

NATIONAL REGULATIONS (GB): EH40/2005 Workplace exposure limits (Second edition, published December 2011).

- Observe employment restrictions for people not applicable

- VOC (2010/75/CE) 2,32 - 2,44%
36,7 - 38,6 g/l

15.2 Chemical safety assessment

not applicable

SECTION 16: Other information**16.1 Hazard statements (SECTION 03)**

H411 Toxic to aquatic life with long lasting effects.
H371 May cause damage to organs. [Immune system; if swallowed]
H302 Harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H317 May cause an allergic skin reaction.
H332 Harmful if inhaled.
H226 Flammable liquid and vapour.



16.2 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
 RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
 ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
 ATE = acute toxicity estimate
 CAS = Chemical Abstracts Service
 CLP = Classification, Labelling and Packaging
 DMEL = Derived Minimum Effect Level
 DNEL = Derived No Effect Level
 EC50 = Median effective concentration
 ECB = European Chemicals Bureau
 EEC = European Economic Community
 EINECS = European Inventory of Existing Commercial Chemical Substances
 ELINCS = European List of Notified Chemical Substances
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
 IC50 = Inhibition concentration, 50%
 IMDG = International Maritime Code for Dangerous Goods
 IUCLID = International Uniform Chemical Information Database
 LC50 = Lethal concentration, 50%
 LD50 = Median lethal dose
 LC0 = lethal concentration, 0%
 LOAEL = lowest-observed-adverse-effect level
 MARPOL = International Convention for the Prevention of Marine Pollution from Ships
 NOAEL = No Observed Adverse Effect Level
 NOEC = No Observed Effect Concentration
 PBT = Persistent, Bioaccumulative and Toxic substance
 PNEC = Predicted No-Effect Concentration
 REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
 STP = Sewage Treatment Plant
 TLV@/TWA = Threshold limit value – time-weighted average
 TLV@STEL = Threshold limit value – short-time exposure limit
 VOC = Volatile Organic Compounds
 vPvB = very Persistent and very Bioaccumulative

16.3 Other information

Classification procedure

Modified position

SECTION 2 been added: none

SECTION 2 been added: none

SECTION 8 been added: In the event of occupational exposure limits being exceeded or of inadequate ventilation: wear appropriate respiratory protection.

SECTION 8 deleted: Respiratory protection mask in the event of high concentrations.

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