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

· **1.1 Product identifier**

· **Trade name Silan-Verfestigungsharz MS-X 1**
· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.

· **Application of the substance / the mixture** Coating material

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
MUREXIN GmbH
Franz v. Furtenbachstr. 1
A-2700 Wiener Neustadt
Tel.: +43 (0)2622/27401

· **Informing department:** chemikalieninfo@murexin.com
· **1.4 Emergency telephone number:**
UK National poisons Emergency number.: +44 (0) 870 600 6266

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**

GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the GB CLP regulation.
· **Hazard pictograms**

GHS05

· **Signal word** Danger

· **Hazard-determining components of labelling:**
3-(trimethoxysilyl)propylamine
· **Hazard statements**
H318 Causes serious eye damage.
· **Precautionary statements**

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read carefully and follow all instructions.
P280	Wear eye protection / face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.

· **Additional information:**
Contains Bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacat. May produce an allergic reaction.
· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable
· **vPvB:** Not applicable

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SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· **Description:** Mixture consisting of the following components with harmless additives.

· **Dangerous components:**		
CAS: 35435-21-3 EINECS: 252-558-1 Reg.nr.: 01-2119555666-27-0000	Triethoxy(2,4,4-trimethylpentyl)silan Flam. Liq. 3, H226	10-25%
CAS: 13822-56-5 EINECS: 237-511-5	3-(trimethoxysilyl)propylamine Eye Dam. 1, H318 Skin Irrit. 2, H315	≥3-<5%
CAS: 2996-92-1 EINECS: 221-066-9 Reg.nr.: 01-2119964479-19-0001	Trimethoxyphenylsilane Consisting of: 67-56-1 methanol (0.05%) Flam. Liq. 3, H226 STOT RE 2, H373 Acute Tox. 4, H302	1-2.5%
CAS: 41556-26-7	Bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacat Repr. 2, H361f Aquatic Acute 1, H400; Aquatic Chronic 1, H410 Skin Sens. 1, H317	≥0.1-<0.25%
CAS: 6674-22-2 EINECS: 229-713-7	1,8-diazabicyclo[5.4.0]undec-7-ene Acute Tox. 3, H301 Skin Corr. 1B, H314; Eye Dam. 1, H318	<0.5%

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SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **After inhalation** Seek medical treatment in case of complaints.
· **After skin contact**
Instantly wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
· **After eye contact** Rinse opened eye for several minutes under running water. Then consult doctor.
· **After swallowing** In case of persistent symptoms consult doctor.
· **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
· **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents**
CO2, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
· **5.2 Special hazards arising from the substance or mixture**
No further relevant information available.
· **5.3 Advice for firefighters**
· **Protective equipment:** No special measures required.

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SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.

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· **6.2 Environmental precautions:**
Do not allow product to reach sewage system or water bodies.
Dilute with much water.
· **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralising agent.
Dispose of contaminated material as waste according to item 13.
· **6.4 Reference to other sections**
No dangerous materials are released.
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling** Keep containers tightly sealed.
· **Information about protection against explosions and fires:** No special measures required.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage**
· **Requirements to be met by storerooms and containers:** Store only in the original container.
· **Information about storage in one common storage facility:** Store away from foodstuffs.
· **Further information about storage conditions:** Keep container tightly sealed.
· **Storage class** 10
· **7.3 Specific end use(s)** No further relevant information available.

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SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**
· **Components with critical values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
· **Additional information:** The lists that were valid during the compilation were used as basis.

· **8.2 Exposure controls**
· **Appropriate engineering controls** No further data; see section 7.
· **Individual protection measures, such as personal protective equipment**
· **General protective and hygienic measures**
The usual precautionary measures should be adhered to in handling the chemicals.
Keep away from foodstuffs, beverages and food.
Instantly remove any soiled and impregnated garments.
Wash hands during breaks and at the end of the work.
Avoid contact with the eyes and skin.
· **Breathing equipment:** Not necessary if room is well-ventilated.
· **Hand protection**
Protective gloves.
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
· **Material of gloves**
Nitrile rubber, NBR
Butyl rubber, BR
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
· **Penetration time of glove material**
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

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· **Eye/face protection** Safety glasses recommended during refilling.
· **Body protection:** Protective work clothing.

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SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **General Information**	
· **Physical state**	Liquid
· **Colour:**	Yellow tint
· **Smell:**	Characteristic
· **Odour threshold:**	Not determined
· **Melting point/freezing point:**	Not determined
· **Boiling point or initial boiling point and boiling range**	237 °C (35435-21-3 Triethoxy(2,4,4-trimethylpentyl)silan)
· **Flammability**	Not applicable
· **Lower and upper explosion limit**	
· **Lower:**	Not determined
· **Upper:**	Not determined
· **Flash point:**	42 °C (35435-21-3 Triethoxy(2,4,4-trimethylpentyl)silan)
· **Auto-ignition temperature:**	251 °C (35435-21-3 Triethoxy(2,4,4-trimethylpentyl)silan)
· **Decomposition temperature:**	Not determined
· **pH**	Mixture is non-soluble (in water).
· **Viscosity:**	
· **Kinematic viscosity at 20 °C**	15-20 s (DIN 53211/4)
· **dynamic:**	Not determined
· **Solubility**	
· **Water:**	Not determined
· **Partition coefficient n-octanol/water (log value)**	Not determined
· **Steam pressure at 25 °C:**	0.1 hPa (35435-21-3 Triethoxy(2,4,4-trimethylpentyl)silan)
· **Vapour pressure at 50 °C:**	0.5 hPa
· **Density and/or relative density**	
· **Density at 20 °C**	1.1 g/cm³
· **Relative density**	Not determined
· **Vapour density**	Not determined
· **9.2 Other information**	
· **Appearance:**	
· **Form:**	Fluid
· **Important information on protection of health and environment, and on safety.**	
· **Self-inflammability:**	Product is not selfigniting.
· **Explosive properties:**	Product is not explosive.
· **Solvent content:**	
· **Solids content:**	0.0 %
· **Change in condition**	
· **Evaporation rate**	Not determined
· **Information with regard to physical hazard classes**	
· **Explosives**	Void
· **Flammable gases**	Void
· **Aerosols**	Void

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· **Oxidising gases**	Void
· **Gases under pressure**	Void
· **Flammable liquids**	Void
· **Flammable solids**	Void
· **Self-reactive substances and mixtures**	Void
· **Pyrophoric liquids**	Void
· **Pyrophoric solids**	Void
· **Self-heating substances and mixtures**	Void
· **Substances and mixtures, which emit flammable gases in contact with water**	Void
· **Oxidising liquids**	Void
· **Oxidising solids**	Void
· **Organic peroxides**	Void
· **Corrosive to metals**	Void
· **Desensitised explosives**	Void

SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.
· **10.2 Chemical stability**
· **Conditions to be avoided:** No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions** No dangerous reactions known
· **10.4 Conditions to avoid** No further relevant information available.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:** None

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SECTION 11: Toxicological information

· **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
· **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values that are relevant for classification:**		
35435-21-3 Triethoxy(2,4,4-trimethylpentyl)silan		
Oral	LD50	>2,000 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)
2996-92-1 Trimethoxyphenylsilane		
Oral	LD50	1,049 mg/kg (rat)
Dermal	LD50	3,014 mg/kg (rabbit)
6674-22-2 1,8-diazabicyclo[5.4.0]undec-7-ene		
Oral	LD50	251-300 mg/kg (rat)
Dermal	LD50	>1,233 mg/kg (rabbit)

· **Primary irritant effect:**
· **Serious eye damage/irritation** Causes serious eye damage.
· **Additional toxicological information:**
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)** -
· **11.2 Information on other hazards**

· **Endocrine disrupting properties**
None of the ingredients is listed.

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SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**	
35435-21-3 Triethoxy(2,4,4-trimethylpentyl)silan	
EC 50	32 mg/l (G)
2996-92-1 Trimethoxyphenylsilane	
EC 50/48h	>100 mg/l (G)
EC 50	>100 mg/l (Acartia Tonsa)
LC50	>100 mg/l (Oncorhynchus mykiss (Regenbogenforelle))
6674-22-2 1,8-diazabicyclo[5.4.0]undec-7-ene	
EC 50/48h	50 mg/l (G)

· **12.2 Persistence and degradability** No further relevant information available.
· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable
· **vPvB:** Not applicable
· **12.6 Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.
· **12.7 Other adverse effects**
· **Additional ecological information:**
· **General notes:**
Must not reach sewage water or drainage ditch undiluted or unneutralised.
Water hazard class (Germany) 1 (Self-assessment): slightly hazardous for water.
Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.

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SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.
· **Recommended cleaning agent:** Water, if necessary with cleaning agent.

SECTION 14: Transport information

· **14.1 UN number or ID number**	
· **ADR, ADN, IMDG, IATA**	Void
· **14.2 UN proper shipping name**	
· **ADR, ADN, IMDG, IATA**	Void
· **14.3 Transport hazard class(es)**	
· **ADR, ADN, IMDG, IATA**	
· **Class**	Void
· **14.4 Packing group**	
· **ADR, IMDG, IATA**	Void

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· **14.5 Environmental hazards:**	
· **Marine pollutant:**	No
· **14.6 Special precautions for user**	Not applicable
· **14.7 Maritime transport in bulk according to IMO instruments**	Not applicable
· **UN "Model Regulation":**	Void

SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **Poisons Act**

· **Regulated explosives precursors**
None of the ingredients is listed.

· **Regulated poisons**
None of the ingredients is listed.

· **Reportable explosives precursors**
None of the ingredients is listed.

· **Reportable poisons**
None of the ingredients is listed.

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.
· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**
H226 Flammable liquid and vapour.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H361f Suspected of damaging fertility.
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.

· **Contact:** chemikalieninfo@murexin.com (+43 02622/27401)
· **Abbreviations and acronyms:**
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organisation
ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals

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EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
Repr. 2: Reproductive toxicity – Category 2
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

· **** Data compared to the previous version altered.***