Wisatyp® V-50

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade Name	**Wisatyp V-50**
Item number	PV 1450.800
BAG-Register number (CH)	CPID: 998390-94

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

Relevant identified uses	Coating, paint
Uses advised against	All applications that are not explained in this technical data sheet.
Field for application [SU]	SU22 – Commercial use: Public domain (administration, education, entertainment, services, trade)

1.3 Details of the supplier of the safety data sheet

Supplier	**Wisabax AG** Kleb- und Dichtstoffe
Address	Grossmatte 21 / Postfach CH-6014 Luzern-Littau
Phone	+41 (0)41 250 18 18
Email	info@wisabax.ch
URL	www.wisabax.ch
Information contact	Technical Dept. - Mr B. Wicki Environment Dept. - Mrs E. Svets

1.4 Emergency telephone number

24h emergency number (just possible in switzerland)	**Tel. 145**
Tox Info Suisse (ancient swiss toxicological infomations centre) **For emergencies from all the countries** 24h accessible in german, french, italian oder english. For not urgent cases see www.toxinfo.ch.	**Tel. +41 (0)44 251 51 51**

2. Hazards identification

2.1 Classification of the substance or mixture according to (EC) Nr. 1272/2008 (CLP).

Hazard class	Hazard category	Hazard warnings
Aquatic Chronic	3	H412 Harmful to aquatic life with long lasting effects.

2.2 Labelling according to Regulation (EC) Nr. 1272/2008 (CLP)

Pictograms(e)	omitted
Signal word(s)	omitted
Hazard warning(s) [H-statements]	H412 Harmful to aquatic life with long lasting effects.
Safety instruction(s) [P-statements]	P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P273 Avoid release to the environment. P501 Dispose of contents/container in accordance with regional regulations.
Special marking(s) [EUH-Phrases]	EUH208 Contains: N-(3-(trimethoxysilyl)propyl)ethylenediamine, trimethoxyvinylsilane. May produce an allergic reaction.

2.3 Other hazards
omitted

The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII of the regulation (EC) 1907/2006.
The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006.

3. Composition/information on ingredients

3.1 Substances
This product is a mixture, for more see section 3.2.

3.2 Description of the mixture

Mixture of the following dangerous substances in quantities to be declared/relevant.

Relevant hazardous substances:

Content: < 1 %

CAS No.: 2768-02-7 EG No.: 220-449-8 Index No.: 014-049-00-0 Reg. No. (REACH): 01-2119513215-52-XXXX	**trimethoxyvinylsilane** Further name(s): vinyltrimethoxysilane [25/Q2/2]	Flam. Liq. 3, H226; Acute Tox. 4, H332; Skin Sens. 1B, H317

Content: < 1 %

CAS No.: 1760-24-3 EG No.: 217-164-6 Index No.: - Reg. No. (REACH): 01-2119970215-39-XXXX	**N-(3-(trimethoxysilyl)propyl)ethylenediamine** Further name(s): 3-(2-aminoethylamino)propyltrimethoxysilane SCL Eye Irrit. 2, H319, 2.5% ≤ C < 3% SCL Skin Sens. 1B, H317, C ≥ 2.5% [25/Q1,106/4,3]	Eye Dam. 1, H318; Skin Sens. 1B, H317; Acute Tox. 4, H332; STOT SE 2, H373

Content: < 1 %

CAS No.: 63843-89-0 EG No.: 264-513-3 Index No.: - Reg. No. (REACH): 01-2119978231-37-XXXX	**bis(1,2,2,6,6-pentamethyl-4-piperidyl)-[(3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl)methyl]butylmalonate** M Factor Chronic = 10 [24/Q5/3]	Acute Tox. 4, H302; STOT RE 2, H373; Aquatic Chronic 1, H410

Note: H-phrases and abbreviations are detailed in section 16.

4. First aid measures

4.1 Description of first aid measures

General information	Observe the general rules of first aid measures. Refresh occasionally your knowledge. If medical advice is required, have this safety data sheet, the packaging or the label ready.
Following inhalation	This is a product that is not classified as dangerous by inhalation. Supply fresh air. Loosen restrictive clothing. Place in a resting position. Consult a doctor depending on the symptoms.
Following skin contact	Generally, the product does not irritate the skin. Remove contaminated clothing immediately. Wash skin with much water and soap. Consult a doctor depending ond the symptoms, if possible, show this container or label.

Following eye contact	Rinse open eyes for several minutes under running water. Depending on the symptoms (e.g. redness), consult an ophthalmologist. Remove contact lenses, if possible. Never attempt to force open eyes that have been stuck together.
Following ingestion	Rinse mouth thoroughly with water. Hydrolysis releases small amounts of toxic methanol. Consult a doctor immediately or call the emergency number (see section 1.4). Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed
It may, in particular trough prolonged or repeated exposure the following symptoms may occur.
See section 11.

4.3 Indication of any immediate medical attention and special treatment needed: Small amounts of methanol (CAS 67-54-1) are formed by hydrolysis and released when the product is exposed to moisture or water.
Symptomatic treatment

5. Firefighting measures

5.1 Extinguishing media
Always adapt firefighting measures to the surroundings and the size of the fire.

Suitable extinguishing media: Water spray jet, Carbon dioxide, Dry powder fire extinguishers, Alcohol-resistant foam.
Unsuitable extinguishing media: Full water jet.

5.2 Special hazards arising from the substance or mixture
Formation of toxic gases is possible during heating or in case of fire:
Carbon oxide (Carbon monoxide, Carbon dioxide, Silicon dioxide), Nitrogen oxide (NOx).

5.3 Advice for fire-fighters
Do not inhale combustion gases.
Wear breathing apparatus with own air supply. Wear full protection depending on fire class.
Use water spray to cool endangered containers.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Arrange for sufficient air supply. Do not let it get into the eyes, on the skin or on clothing.

6.2 Environmental precautions
Do not empty into drains. Prevent surface and ground-water infiltration, as well as ground penetration.
See section 12 for additional environmental information.

6.3 Methods and material for containment and cleaning up
Do not spread leaked material with a high-pressure water jet.
Mechanical remove and correct disposal of waste (cf. paragraph 13).
Thoroughly clean contaminated objects and surfaces in compliance with environmental regulations.

6.4 Reference to other sections
Personal protective equipment see section 8. Waste disposal see section 13.

7. Handling and storage

7.1 Precautions for safe handling
Ensure good ventilation. General hygiene measures for the handling of chemicals are applicable. Eating, drinking, smoking, as well as food-storage, is prohibited in workspace. Wash hands before breaks and after work.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed and in a well-ventilated place. Protect the product against moisture. Do not store near food, drink or animal feedingstuffs.
Attention of the general rules of the preventing operational fire protection.

7.3 Specific end uses
Adhesive - See technical data sheet and the product imprint.

8. Exposure controls/personal protection

8.1 Control parameters

Components with limit values that require monitoring at the workplace:

Reaction product when crosslinking with humidity.

CAS No.: 67-56-1 EG No.: 200-659-6 Index No.: 603-001-00-X Reg. No. (REACH): 01-2119433307-44-XXXX	**methanol** CH: MAC: 200 ppm, MAC: 260 mg/m^3 CH: MAC: 100 ppm, MAC: 130 mg/m^3/8h CH: STEL: 400 ppm, STEL: 520 mg/m^3 EU: TWA: 200 ppm, TWA: 260 mg/m^3 DE: BLV: Urin 15 mg/l end of exposure or end of shift

MAK = Maximum Workplace Concentration (TLV = Threshold Limit Value)
CH It's a swiss limit, edited by SUVA. If there is no limit from SUVA it's a work place limit (AGW) from Germany or another European state.

CAS No.: 67-56-1 EG No.: 200-659-6 Index No.: 603-001-00-X Reg. No. (REACH): 01-2119433307-44-XXXX	**methanol** employee: DNEL: 20 mg/kg bw/d [dermal exposure route, short-term, systemic effects]; employee: DNEL: 130 mg/m^3 [inhalative, short-term, systemic effects]; employee: DNEL: 130 mg/m^3 [inhalative, short-term, local effects]; employee: DNEL: 20 mg/kg bw/d [dermal exposure route, long-term, systemic effects]; employee: DNEL: 130 mg/m^3 [inhalative, long-term, systemic effects]; employee: DNEL: 130 mg/m^3 [inhalative, long-term, local effects]; consumer: DNEL: 4 mg/kg bw/d [dermal exposure route, short-term, systemic effects]; consumer: DNEL: 26 mg/m^3 [inhalative, short-term, systemic effects]; consumer: DNEL: 4 mg/kg bw/d [oral, short-term, systemic effects]; consumer: DNEL: 4 mg/kg [dermal exposure route, long-term, systemic effects]; consumer: DNEL: 26 mg/m^3 [inhalative, short-term, local effects]; consumer: DNEL: 26 mg/m^3 [inhalative, long-term, local effects]; consumer: DNEL: 26 mg/m^3 [inhalative, long-term, systemic effects]; consumer: DNEL: 4 mg/kg bw/d [oral, long-term, systemic effects]; environment: PNEC: 154 mg/l [fresh water]; environment: PNEC: 15.4 mg/l [sea water]; environment: PNEC: 570.4 mg/kg [sediment, fresh water]; environment: PNEC: 57.04 mg/kg [sediment, seawater]; environment: PNEC: 23.5 mg/kg [soil]; environment: PNEC: 1540 mg/l [water, sporadic release]; environment: PNEC: 100 mg/l [microorganisms in wastewater treatment plants] [25/Q2/5]

CAS No.: 2768-02-7 EG No.: 220-449-8 Index No.: 014-049-00-0 Reg. No. (REACH): 01-2119513215-52-XXXX	**trimethoxyvinylsilane** employee: DNEL: 4.9 mg/m^3 [inhalative, short-term, systemic effects]; employee: DNEL: 0.91 mg/kg [dermal exposure route, long-term, systemic effects]; employee: DNEL: 27.6 mg/kg [inhalative, long-term, systemic effects]; consumer: DNEL: 0.1 mg/kg [dermal exposure route, short-term, systemic effects]; consumer: DNEL: 93.4 mg/m^3 [inhalative, short-term, systemic effects]; consumer: DNEL: 0.63 mg/kg bw/day [dermal exposure route, long-term, systemic effects]; consumer: DNEL: 6.8 mg/m^3 [inhalative, long-term, systemic effects]; consumer: DNEL: 0.63 mg/kg bw/day [oral, long-term, systemic effects]; environment: PNEC: 0.4 mg/l [fresh water]; environment: PNEC: 0.04 mg/l [sea water]; environment: PNEC: 1.21 mg/l [water, sporadic release];

	environment: PNEC: 6.6 mg/l [microorganisms in wastewater treatment plants]; environment: PNEC: 0.29 mg/kg [sediment, fresh water]; environment: PNEC: 0.15 mg/kg [sediment, seawater]; environment: PNEC: 0.048 mg/kg [soil] [25/Q2/5]

CAS No.: 63843-89-0 EG No.: 264-513-3 Index No.: - Reg. No. (REACH): 01-2119978231-37-XXXX	**bis(1,2,2,6,6-pentamethyl-4-piperidyl)-[(3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl)methyl]butylmalonate** employee: DNEL: 0.07 mg/kg [dermal exposure route, long-term, systemic effects]; employee: DNEL: 0.05 mg/m^3 [inhalative, long-term, systemic effects]; consumer: DNEL: 0.003 mg/kg [oral, long-term, systemic effects]; consumer: DNEL: 0.033 mg/kg [dermal exposure route, long-term, systemic effects]; consumer: DNEL: 0.01 mg/m^3 [inhalative, long-term, systemic effects]; environment: PNEC: 0.00004 mg/l [fresh water]; environment: PNEC: 0 mg/l [sea water]; environment: PNEC: 0.61 mg/L [freshwater (intermittent release)]; environment: PNEC: 504.4 mg/kg dw [sediment, fresh water]; environment: PNEC: 50.44 mg/kg dw [sediment, seawater]; environment: PNEC: 1 mg/l [microorganisms in wastewater treatment plants]; environment: PNEC: 1 mg/kg [soil] [25/Q5,2/3,2]

CAS No.: 1760-24-3 EG No.: 217-164-6 Index No.: - Reg. No. (REACH): 01-2119970215-39-XXXX	**N-(3-(trimethoxysilyl)propyl)ethylenediamine** consumer: DNEL: 2.5 mg/kg [oral, long-term, systemic effects]; consumer: DNEL: 50 mg/m^3 [inhalative, short-term, systemic effects]; consumer: DNEL: 0.1 mg/m^3 [inhalative, long-term, local effects]; consumer: DNEL: 4 mg/m^3 [inhalative, short-term, local effects]; consumer: DNEL: 2.5 mg/kg bw/d [oral, short-term, systemic effects]; consumer: DNEL: 8.7 mg/m^3 [inhalative, long-term, systemic effects]; consumer: DNEL: 2.5 mg/m^3 [dermal exposure route, long-term, systemic effects]; employee: DNEL: 35.5 mg/m^3 [inhalative, long-term, systemic effects]; employee: DNEL: 5.0 mg/kg bw/d [dermal exposure route, long-term, systemic effects]; employee: DNEL: 0.6 mg/m^3 [inhalative, long-term, local effects]; employee: DNEL: 260 mg/m^3 [inhalative, short-term, systemic effects]; employee: DNEL: 5.36 mg/m^3 [inhalative, short-term, local effects]; environment: PNEC: 0.062 mg/l [fresh water]; environment: PNEC: 0.0062 mg/l [sea water]; environment: PNEC: 0.05 mg/kg [sediment, fresh water]; environment: PNEC: 0.005 mg/kg [sediment, seawater]; environment: PNEC: 0.62 mg/l [sporadic (intermittent) release]; environment: PNEC: 25 mg/l [Mikroorganismen in Kläranlagen]; environment: PNEC: 0.009 mg/kg [soil] [25/Q2/2]

8.2 Exposure controls

8.2.1 Appropriate engineering controls
Ensure good ventilation, e.g. by local suction, general exhaust air.
Minimize the risk of inhalations of vapours.
Comply with the workplace exposure limits.
If limits can't be adhered to, use appropriate respiratory protection.

8.2.2 Personal protective equipment

General data	Select personal protective equipment according to the CEN standards; discuss protective equipment with the supplier.
Eye/face protection	During refilling or if possible contact with the eyes, goggles recommended.
Hand-/Body protection	Avoid contact with your skin. If it's not avaible wear appropriate gloves.
Protective clothing	Normally not needed.

Respiratory protection	Normally not needed. Comply with the workplace exposure limits. In case of insufficient ventilation or if limit values cannot be complied, use air respirator. Filters type AXBEK in accordance with EN 14387. Follow the wear time limits for breathing apparatus.
Hygiene measures	General hygiene measures for the handling of chemicals are applicable. Do not eat, drink or smoke while at work. Wash hands before breaks and after work.
Thermal hazards	Not applicable.

On the basis of the contents and our experience the following non-binding recommendations for the selection of the material of the protective gloves (minimum layer thickness: 0.4 mm):

Recommended glove material:	Butyl rubber (Butyl), Nitrile rubber/Nitrile latex (NBR)
Inappropriate glove material:	Textile Materials

The selection of suitable depends upon the material, and also upon the quality of the gloves. The degree of protection will vary from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the materials used for gloves cannot be predetermined; it is therefore necessary to check this before using the product.
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

8.2.3 Environmental exposure controls
More information that is detailed is not available yet.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	Liquid
Colour	clear-transparent
Density	Ca. 1.1 g/ml
Viscosity	ca. 1500 mPa*s (Low viscosity)
Odour	Not determined
pH-level	Not determined
Melting point/freezing point	Not determined
Initial boiling point/boiling range	Ca. 175 °C
Decomposition temperature	Not determined
Rate of evaporation	Not determined
Flashpoint	Non-flammable (>60°C)
Auto-ignition temperature	Ca. 245 °C
Lower explosive limits	Not determined
Upper explosive limits	Not determined
Vapour pressure	Ca. 143 Pa (20 °C)
Vapour pressure	Ca. 672.51 Pa = 0.67 kPa (50 °C)
Vapour density (Air = 1)	Not determined
Explosive properties	Not determined
Oxidising properties	No

9.2 Other information

Solubility in / Miscibility with water.	Reacts with water. Hardens with moisture.
Solubility in / Miscibility in	Not determined
Partition coefficient n-Octanol/Water	Not determined
Conductivity	Insulating
VOC-content (EU)	Ca. 1.2 %
VOC-content (CH)	0 %

Wisatyp® V-50

10. Stability and reactivity

10.1 Reactivity
This product reacts with water (air humidity).

10.2 Chemical stability
The product is stable when properly stored and handled.

10.3 Possibility of hazardous reactions
No effects are known if used as intended.

10.4 Conditions to avoid
Product hardens with moisture. Protect from moisture. Prolonged contact with air or moisture. Do not freeze. Keep away from naked flames, hot surfaces and sources of ignition.

10.5 Incompatible materials
Acids, Bases, Alkalis

10.6 Hazardous decomposition products
In case of fire or very high heat the following hazardous decomposition products can occur: Carbon dioxid, nitrogen oxide (NOx), carbon monoxide.
In contact with water/humidity caused small amounts of methanol.

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity (oral)	> 2000 mg/kg (ca. 40%; ca. 60 % of this mixture consists of one or more components of unknown toxicity [oral]).
Acute toxicity (dermal)	> 2000 mg/kg
Acute toxicity (inhalativ)	> 20 mg/l/4h

11.2. Toxicological information of hazardous ingredients

CAS No.: 2768-02-7 EG No.: 220-449-8 Index No.: 014-049-00-0 Reg. No. (REACH): 01-2119513215-52-XXXX	**trimethoxyvinylsilane** acute toxicity: LD50: 7120 mg/kg [oral, rat, OECD 401]; acute toxicity: LC50: 16.8 mg/l/4h [inhalative, rat, OECD TG 403, vapours]; acute toxicity: ATE: 16.8 mg/l/4h [inhalative, vapours, OECD TG 403]; acute toxicity: LD50: 2773 ppm/4h [inhalative, rat, OECD TG 403]; acute toxicity: LD50: 3200 mg/kg [dermal exposure route, rabbit, OECD 402]; acute toxicity: ATE: 1.5 mg/l/4h [inhalative, dust / fog]; acute toxicity: NOAEL: 200 mg/kg/90d bw/d [oral, rat]; corrosive/irritant effect on the skin: non-irritant [rabbit, dermal exposure route, OECD 404]; serious eye damage/irritation: non-irritant [rabbit, OECD 405]; respiratory/skin sensitization: sensitising [Guinea pig, dermal exposure route, OECD 406, Skin Sens. 1B]; germ cell mutagenicity: negative [OECD 476, In Vitro Mammalian Cell Gene Mutation Test]; germ cell mutagenicity: negative [mouse, OECD 474, Mammalian Erythrocyte Micronucleus Test]; germ cell mutagenicity: negative [rat, OECD 489, In Vitro Mammalian Alkaline Comet Assay]; germ cell mutagenicity: negative [Salmonella typhimurium, OECD 471, Bacterial Reverse Mutation Test]; reproductive toxicity: NOAEL: 1000 mg/kg, negative [rat, OECD 422] reproductive toxicity (developmental effects): NOAEL: ≥ 75 mg/kg, negative [rabbit, OECD 414]; specific target organ toxicity - repeated exposure (STOT RE): NOAEL: 62.5 mg/kg/90d [rat, oral, OECD 408, vapours, target organ(s): bladder]; specific target organ toxicity - repeated exposure (STOT RE): NOAEL: 0.058 mg/kg/90d [rat, inhalative, OECD 413, vapours]; carcinogenicity: negative;

	symptoms: drowsiness, dizziness, nausea, abdominal pain, breathing difficulties, visual disturbances [25/Q1,2/4,5]

CAS No.: 67-56-1 EG No.: 200-659-6 Index No.: 603-001-00-X Reg. No. (REACH): 01-2119433307-44-XXXX	**methanol** acute toxicity: ATE: 100 mg/kg [oral, human]; acute toxicity: LD50: 17100 mg/kg [dermal exposure route, rabbit]; acute toxicity: ATE: 300 mg/kg [dermal exposure route]; acute toxicity: ATE: 3 mg/l/4h [inhalative, vapours]; acute toxicity: ATE: 0.5 mg/l/4h [inhalative, dust/fog]; corrosive/irritant effect on the skin: non-irritant [rabbit, BASF-Test]; serious eye damage/irritation: non-irritant [rabbit, OECD 405]; respiratory/skin sensitization: not sensitising (skin contact) [Guinea pig, OECD 406]; germ cell mutagenicity: negative [Salmonella typhimurium, OECD 471, Bacterial Reverse Mutation Test]; germ cell mutagenicity: negative [mammals, OECD 476]; germ cell mutagenicity: negative [mouse, OECD 474, Mammalian Erythrocyte Micronucleus Test]; carcinogenicity: negative [mouse, OECD 453, Combined Chronic Toxicity/Carcinogenicity Studies]; reproductive toxicity: NOAEL: 1.3 mg/l [mouse, OECD 416, Two-generation Reproduction Toxicity Study]; specific target organ toxicity - repeated exposure (STOT RE): NOAEL: 0.13 mg/l [mouse, OECD 453, Combined Chronic Toxicity/Carcinogenicity Studies]; symptoms: abdominal pain, vomiting, headaches, gastrointestinal complaints, drowsiness, visual disturbances, tearing of the eyes, nausea, confusion, intoxication, dizziness [25/Q2/1,5]

CAS No.: 1760-24-3 EG No.: 217-164-6 Index No.: - Reg. No. (REACH): 01-2119970215-39-XXXX	**N-(3-(trimethoxysilyl)propyl)ethylenediamine** acute toxicity: LD50: 2295 mg/kg [oral, rat]; acute toxicity: LD50: >2000 mg/kg [dermal exposure route, rat]; acute toxicity: LD50: >2000 mg/kg [dermal exposure route, rabbit]; acute toxicity: LD50: 1.49 - 2.44 mg/kg [dermal exposure route, rat, OECD 403]; acute toxicity: LC50: 1.5 - 2.44 mg/l/4h [inhalative, aerosol, dust/fog]; corrosive/irritant effect on the skin: non-irritant [rabbit, OECD 404]; serious eye damage/irritation: Eye Dam. 1 [rabbit, OECD 405]; respiratory/skin sensitization: Skin Sens. 1B [Guinea pig, OECD 406]; respiratory/skin sensitization: Skin Sens. 1B [mouse, OECD 429]; germ cell mutagenicity: negative [Salmonella typhimurium, OECD 471]; germ cell mutagenicity: negative [Chinese hamster, OECD 476, In Vitro Mammalian Cell Gene Mutation Test]; germ cell mutagenicity: negative [mouse, OECD 474, Mammalian Erythrocyte Micronucleus Mutation Test]; reproductive toxicity (developmental effects): NOAEL: ≥ 500 mg/kg [rat, OECD 422]; reproductive toxicity (effects on fertility): NOAEL: ≥ 500 [rat, OECD 422]; specific target organ toxicity - repeated exposure (STOT RE): NOAEL: ≥ 500 mg/kg [oral, rat, OECD 422]; specific target organ toxicity - repeated exposure (STOT RE): NOAEL: 0.015 mg/l/6h/d [inhalative, rat, OECD 413]; persistence and degradability: poorly biodegradable [24/Q1,106/4]

CAS No.: 63843-89-0 EG No.: 264-513-3 Index No.: - Reg. No. (REACH): 01-2119978231-37-XXXX	**bis(1,2,2,6,6-pentamethyl-4-piperidyl)-[(3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl)methyl]butylmalonate** acute toxicity: LD50: 1490 mg/kg [oral, rat, OECD 401]; acute toxicity: LD50: >3170 mg/kg [dermal exposure route, rat, OECD 402]; acute toxicity: LD50: >460 mg/m/3h [inhalative, rat, OECD 403]; corrosive/irritant effect on the skin: non-irritant [rabbit, OECD 404]; serious eye damage/irritation: non-irritant [rabbit, OECD 405]; respiratory/skin sensitization: not sensitising [Guinea pig]; germ cell mutagenicity: negative [Salmonella typhimurium]; germ cell mutagenicity: negative [Chinese hamster, OECD 476, In Vitro Mammalian Cell Gene Mutation Test];

	germ cell mutagenicity: positive [Chinese hamster, OECD 473, In Vitro Mammalian Chromosome Aberration Test]; germ cell mutagenicity: negative [mouse, OECD 474, Mammalian Erythrocyte Micronucleus Test]; reproductive toxicity: NOAEL ≥10 mg/kg bw/d [rat, OECD 421]; aspiration hazard: no; specific target organ toxicity - repeated exposure (STOT RE): target organ(s): lymph nodes, Leber, spleen; specific target organ toxicity - repeated exposure (STOT RE): NOAEL: 2 mg/kg bw/d [oral, rat, OECD 421] [25/Q2/2]

Classification of the respective hazardous components see section 3.

12. Ecological information

12.1 Toxicity

Aquatic toxicity Germany (Self-classification)	WGK 1 Slightly hazardous to water
The product/mixture is not classified as hazardous to the aquatic environment – acute.	
The product/mixture is not classified as hazardous to the aquatic environment – chronic.	
The product is not classified as dangerous for the environment.	

12.2 Persistence and degradability
The product is slightly degradable.

12.3 Bioaccumulative potential
There is no information available on the product. For details on individual components see section 12.7

12.4 Mobility in soil
No information is available.

12.5 Results of PBT and vPvB assessment
See section 2.3.

12.6 Other adverse effects
Do not allow product to reach ground water, water course or sewag system.

12.7 Additional ecotoxicological information

CAS No.: 2768-02-7 EG No.: 220-449-8 Index No.: 014-049-00-0 Reg. No. (REACH): 01-2119513215-52-XXXX	**trimethoxyvinylsilane** acute toxicity, fish: LC50: 191 mg/l/96h [Oncorhynchus mykiss]; acute toxicity, algae: EC50: >957 mg/l/72h [Desmodesmus subspicatus, EU Method C.3]; acute toxicity, algae: ErC50: >100 mg/l/72h [OECD 201]; acute toxicity, crustaceans: EC50: 168.7 mg/l/48h [Daphnia magna]; acute toxicity, crustaceans: NOEC: 28.1 mg/l [chronic]; acute toxicity, algae: NOEC: 25 mg/l [chronic]; persistence and degradability: 104 mg/l, 51%/28d, manometric respiration test, BSB (biochemical oxygen demand (BOD)) [OECD 301 F]; bioaccumulative potential: partition coefficient: 1.1 results of PBT and vPvB assessment: no PBT substance, no vPvB substance mobility in soil: slight [24/Q1,5,106/4,3]

CAS No.: 1760-24-3 EG No.: 217-164-6 Index No.: - Reg. No. (REACH): 01-2119970215-39-XXXX	**N-(3-(trimethoxysilyl)propyl)ethylenediamine** acute toxicity, fish: LC50: 597 mg/l/96h [Brachydanio rerio]; acute toxicity, daphnia: NOEC/NOEL: >1 mg/l/21d [Daphnia magna, OECD 211]; acute toxicity, daphnia: EC50: 81 mg/l/48h [Daphnia magna, OECD 202]; acute toxicity, algae: EC50: 8.8 mg/l/72h [Pseudokirchneriella subcapitata, OECD 201]; acute toxicity, algae: NOEC/NOEL: 3.1 mg/l/72h [Pseudokirchneriella subcapitata, OECD 201]; persistence and degradability: 39%/28d, poorly biodegradable [activated sludge, OECD 301A]; bioaccumulative potential: low, partition coefficient: -0.3; mobility in soil: slight;

	results of PBT and vPvB assessment: no PBT substance, no vPvB substance; acute bacteriotoxicity: EC10: 25 mg/l/16h [Pseudomonas putida, DIN 38412]; other organisms: NOEC/NOEL: ≥1000 mg/kg/14d [Eisenia foetida, OECD 207] [25/Q1,5,2/4,3,2]

CAS No.: 52829-07-9 EG No.: 258-207-9 Index No.: - Reg. No. (REACH): 01-2119537297-32-XXXX	**bis(2,2,6,6-tetramethyl-4-piperidyl)sebacate** acute toxicity, fish: LC50: 3.1 mg/l, 96h; acute toxicity, daphnia: EC50: 8.6 mg/l, 48h [Daphnia magna, Krebstiere]; acute toxicity, algae: EC50: 0.7 mg/l/72h; persistence and degradability: BSB5, 28d, 29% bioaccumulative potential: partition coefficient: 0.35 [24/Q1,5/4]

CAS No.: 67-56-1 EG No.: 200-659-6 Index No.: 603-001-00-X Reg. No. (REACH): 01-2119433307-44-XXXX	**methanol** acute toxicity, fish: LC50: 15400 mg/l/96h [Lepomis macrochirus]; acute toxicity, daphnia: EC50: >18260 mg/l/48h [Daphnia magna, OECD202]; acute toxicity, algae: EC50: 2200 mg/l/96h [Pseudokirch neriella subcapitata, OECD 201 (Alga, Growth Inhibition Test)]; persistence and degradability: 99 mg/l/28d, easily biodegradable [OECD 301 D (Ready Biodegradability – Closed Bottle Test)]; bioaccumulative potential: BCF: 28400, is not to be expected [Chlorella vulgaris]; results of PBT and vPvB assessment: no PBT substance, no vPvB substance; acute bacteriotoxicity: IC50: >1000 mg/l/3h [activated sludge, OECD 209, Respiration Inhibition Test (Carbon and Ammonium Oxidation)]; other information: [Log Pow: -0.77, low (σ 2.355E-2N/m, 25 °C), DOC: <70%; BOD >60%] [25/Q2/5]

13. Disposal considerations

13.1 Waste treatment methods

Waste disposal according to official state regulations.

Waste treatment options: 08 04 09 – Waste adhesives and sealants containing organic solvents or other dangerous substances.
Contaminated packages: Disposal must be made according to official regulations. If possible empty packaging completely. CH: After complete hardening, product can be disposed of with domestic waste. Packagings that cannot be cleaned are to be disposed off in the same manner as the product. Alternatively, it can be used if necessary following waste code: 15 01 10 – Packing that contains the residues of hazardous materials or is contaminated through hazardous materials.
• The waste code numbers mentioned are recommendations based on the probable use of the product. The particular application and local disposal situation obtaining for the user may lead to other waste codes being assigned as well. • Switzerland: Following regulation in the latest valid constitution must be observed: Technical regulation on waste (TVA, SR 814.600), regulation for waste processing (VeVa, SR 814.610) and in the regulation of UVEK concerning lists for handling waste (LVA, SR 814.610.1).

14. Transport information

14.1 UN-Number:
ADR, RID, ADN, IMDG, IATA: Not applicable

14.2 UN proper shipping name
ADR, RID, ADN, IMDG, IATA: Not applicable

14.3 Transport hazard class(es):
ADR, RID, ADN, IMDG, IATA: Not applicable

14.4 Packing group:
ADR, RID, ADN, IMDG, IATA: Not applicable

14.5 Enviromental hazards:
Dangerous to the environment: No / Marine pollutant: No

14.6 Special precautions for user:
Not applicable

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Inapplicable

14.8 Additional information:

UN "Model Regulation":	Inapplicable

15. Regulatory information

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

Classification and labelling see section 2. Classification of the preparation has been done by calculation or based on studies/test on the product itself or experience with similar mixtures.

Further national and further regulations, limitations and legal requirements

VOC content according to swiss VOC regulation (VOCV) see section 9.2.
Water hazard class (WGK) see section 12.1.
Chemicals regulation (ChemV), ordinance on chemicals risk reduction (ChemRRV), Luftreinhalte-Verordnung (LRV), Ordinance on protection against major accidents (StFV), professional association principles/industrial medicine regulations

15.2 Chemical Safety Assessment
A chemical safety assessment is not provided for mixtures.

16. Other information

Hazards used in the document (H-phrases):

H226 Flammable liquid and vapour
H302 Harmful if swallowed.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H332 Harmful if inhaled.
H373 May cause damage to the central nervous system through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

Other recommended sources for more information:
- Federal Office of Public Health (Switzerland): www.bag.admin.ch (German/French/Italian/English)

List of relevant abbreviations that may be used in the document:

Abbreviation	Full text / Meaning
ADR	Accord européen realtif au transport international des marchandises Dangereuses par Route (= European agreement concerning the international carriage of dangerouse goods by road)
AGW, Spb.-Üf.	AGW = Arbeitsplatzgrenzwert (occupational limit value), Spb.-Üf. = Spitzenbegrenzung (peak limit) – Überschreitungsfaktor (exceedance factor) (1 bis 8) and category (I, II) for short-term values (TRGS 900, germany)
AOEL	Acceptable Operator Exposure Level
Aquatic Acute	Hazardous to the aquatic environment - Acute
Aquatic Chronic	Hazardous to the aquatic environment – Chronic
Asp. Tox.	Aspiration hazard (Danger when inhaling)
ATE	Acute Toxicity Estimates
BAG	Office for health (Bundesamt für Gesundheit, Schweiz)
BAT	Biological tolerance values at the workplace (Biologische Arbeitsstofftoleranzwerte, Schweiz)
BG	Trade association (Berufsgenossenschaft)
BGR	Trade association regulations (Berufsgenossenschaftliche Regeln)
BGV	Trade association regulations (Berufsgenossenschaftliche Vorschrift)
Carz.	Carcinogenic substance
CAS-Nr.	Chemical Abstracts Service
CH	Swiss confederation (from the latin Confoederatio Helvetica)
CH: MAK:	Swiss limit of maximum allowable concentration, issued by the swiss accident insurance fund. (Schweizerischen Unfallversicherungsanstalt (SUVA)
CLP	Classification, Labelling and Packaing (REGULATION (EG) Nr. 1272/2008)
CPID	Chemical Product IDentification.

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DMEL	Derived Minimum Effect Level
DNEL	Derived No Effect Level
EG-Nr.	Substances of the EC material inventory, consisting of 7 digits (Syntax: XXX-XXX-X). Comprises waste materials (EINECS), new substances (ELINCS) as well as the No-Longer-Polymers-Liste (NLP-Liste).
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
Eye Irrit.	Eye irritant, depending on the category Eye irritation possible to serious eye damage.
Flam. Gas	Flammable gas
Flam. Liq.	Flammable liquid
Flam. Sol.	Flammable solid
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
IATA	International Air Transport Association
IMDG-Code	International Maritime Code for Dangerous Goods
Index-Nr.	Indexation of dangerous substances of appendix 5 in the VO(EG)1272/2008 (or annex I of directive 67/548/EWG) with the following syntax: XXX-XXX-XX-X
LC	Lethal concentration
LD	Lethal (fatal) dose
LD50	Lethal dose, 50%
Met. Corr.	On metal corrosive acting substance or mixture
Muta.	Substance with germ cell mutagenicity
NOAEL	No Observed Adverse Effect Level
NOEC	No Observed Effect Concentration
NOEL	No Observed Effect Level
Ozone	Hazardous for the ozone layer
PBT	Persistent, bioaccumulative, and toxic
PNEC	Predicted No Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals (Verordnung (EG) Nr. 1907/2006 zur Registrierung, Bewertung, Zulassung und Beschränkung chemischer Stoffe)
Repr.	Reproductive toxicity
Resp. Sens.	Sensitising for respiratory tract
SCL	Specific concentration limits
Skin Irrit.	Skin irritant – corrosive/irritant to skin
Skin Sens.	Sensitising for the skin
STOT RE	Specific target organ toxicity – repeated exposure
STOT SE	Specific target organ toxicity – single exposure
TRGS	Technical rules on hazardous substances
VOC	Volatile organic compounds
VOCV	VOC-regulation (Swiss)
vPvB	Very persistent and very bioaccumulative

Department issuing data specification sheet: See section 1.3.
This safety data sheet replaces all previous versions.

Disclaimer: The specifications rest on the today's stand of our knowledge. It does not constitute a legally binding assurance of specific product properties.