

Safety Data Sheet

according to UK REACH Regulation

i.SEAL transparent

Revision date: 19.07.2022

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

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

Barrier (Sealant)

1.3. Details of the supplier of the safety data sheet

Company name:	i.GLUESYSTEMS GmbH	
Street:	Heinrich-Otto-Str. 71	
Place:	D-73240 Wendlingen am Neckar	
Telephone:	+49(0) 7024 41549 20	
e-mail:	info@i-gluesystems.com	
Contact person:	Peter Fichte	Telephone: +49(0) 7024 41549 20
e-mail:	info@i-gluesystems.com	
Internet:	www.i-gluesystems.com	

1.4. Emergency telephone number:

GIZ-Nord, Göttingen +49 551 19240 (24h / 7d)

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

The product is not classified, according to the CLP regulation.

2.2. Label elements**GB CLP Regulation****Hazard statements**

Void

Precautionary statements

P103	Read carefully and follow all instructions.
P273	Avoid release to the environment.
P501	Dispose of waste according to applicable legislation.

Special labelling of certain mixtures

EUH208	Contains N-(3-(trimethoxysilyl)propyl)ethylenediamine. May produce an allergic reaction.
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2.3. Other hazards

According to REACH (Annex XIII), the substances in the mixture do not meet the PBT / vPvB criteria.

SECTION 3: Composition/information on ingredients**3.2. Mixtures**

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Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
2768-02-7	Trimethoxyvinylsilane			1 - < 5 %
	220-449-8		01-2119513215-52	
	Flam. Liq. 3, Acute Tox. 4; H226 H332			
1760-24-3	N-(3-(trimethoxysilyl)propyl)ethylenediamine			< 1 %
	217-164-6		01-2119970215-39	
	Eye Dam. 1, Skin Sens. 1B, STOT SE 3; H318 H317 H335			
63843-89-0	Bis(1,2,2,6,6-pentamethyl-4-piperidyl) [[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methyl]butylmalonate			< 1 %
	264-513-3		01-2119978231-37	
	Acute Tox. 4, STOT RE 1, Aquatic Chronic 1; H302 H372 H410			

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

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
2768-02-7	220-449-8	Trimethoxyvinylsilane	1 - < 5 %
	inhalation: LC50 = 16,8 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: LD50 = 3200 mg/kg; oral: LD50 = 7120 mg/kg		
1760-24-3	217-164-6	N-(3-(trimethoxysilyl)propyl)ethylenediamine	< 1 %
	dermal: LD50 = > 2000 mg/kg; oral: LD50 = 2995 mg/kg		
63843-89-0	264-513-3	Bis(1,2,2,6,6-pentamethyl-4-piperidyl) [[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methyl]butylmalonate	< 1 %
	oral: ATE = 500 mg/kg M chron.; H410: M=10		

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

When in doubt or if symptoms are observed, get medical advice.

After inhalation

Provide fresh air. In case of respiratory tract irritation, consult a physician.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. In case of skin reactions, consult a physician.

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After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention.

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

No 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**

Co-ordinate fire-fighting measures to the fire surroundings.

5.2. Special hazards arising from the substance or mixture

Non-flammable.

Reacts with : Water (Hydrolysis) Formation of: Methanol

In case of fire may be liberated: Pyrolysis products, toxic

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures****General measures**

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes.

For non-emergency personnel

Use personal protection equipment. Remove persons to safety.

For emergency responders

Use personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

6.3. Methods and material for containment and cleaning up**For containment**

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

Other information

Treat the recovered material as prescribed in the section on waste disposal.

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6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

Advice on protection against fire and explosion

Usual measures for fire prevention.

Advice on general occupational hygiene

Avoid contact with skin, eyes and clothes. Do not breathe gas/fumes/vapour/spray. Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Store in a dry place. Keep container tightly closed in a cool, well-ventilated place. Provide for retaining containers, eg. floor pan without outflow.

Hints on joint storage

Do not store together with: Food and feedingstuffs

To follow: TRGS 510

Further information on storage conditions

Keep away from heat. Protect against direct sunlight.

Protect from moisture.

7.3. Specific end use(s)

Barrier (Sealant)

SECTION 8: Exposure controls/personal protection**8.1. Control parameters Exposure limits****Derived No Effect Level**

There is no information.

Predicted No Effect Concentration (PNEC)

There is no information.

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DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
2768-02-7	Trimethoxyvinylsilane			
Consumer DNEL, long-term		inhalation	systemic	0,7 mg/m ³
Consumer DNEL, acute		inhalation	systemic	0,7 mg/m ³
Consumer DNEL, long-term		dermal	systemic	0,1 mg/kg bw/day
Consumer DNEL, acute		dermal	systemic	0,1 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,1 mg/kg bw/day
Worker DNEL,		inhalation	systemic	2,6 mg/m ³
Worker DNEL,		dermal	systemic	0,2 mg/kg bw/day
1760-24-3	N-(3-(trimethoxysilyl)propyl)ethylenediamine			
Worker DNEL, long-term		inhalation	systemic	35,5 mg/m ³
Worker DNEL, acute		dermal	systemic	5 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	2,5 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	8,7 mg/m ³
Consumer DNEL, long-term		dermal	systemic	2,5 mg/kg bw/day

PNEC values

CAS No	Substance	Value
2768-02-7	Trimethoxyvinylsilane	
Environmental compartment		
Freshwater		0,36 mg/l
Freshwater (intermittent releases)		2,4 mg/l
Marine water		0,036 mg/l
Marine water (intermittent releases)		2,4 mg/l
Freshwater sediment		0,29 mg/kg
Micro-organisms in sewage treatment plants (STP)		6,6 mg/l
Soil		0,048 mg/kg
1760-24-3	N-(3-(trimethoxysilyl)propyl)ethylenediamine	
Freshwater		0,062 mg/l
Freshwater (intermittent releases)		0,62 mg/l
Marine water		0,0062 mg/l
Freshwater sediment		0,05 mg/kg
Marine sediment		0,005 mg/kg
Micro-organisms in sewage treatment plants (STP)		25 mg/l
Soil		0,0075 mg/kg

8.2. Exposure controls



Appropriate engineering controls

Provide adequate ventilation as well as local exhaust at critical locations.

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Individual protection measures, such as personal protective equipment

Eye/face protection

Suitable eye protection: Eye glasses with side protection (EN 166)

Hand protection

Wear suitable gloves. (EN ISO 374)

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Suitable material: NBR (Nitrile rubber)

Thickness of the glove material: 0,2 mm

Breakthrough time (maximum wearing time): > 60 min

Skin protection

Use of protective clothing.

Respiratory protection

This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.

Thermal hazards

No information available.

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:	Liquid
Colour:	transparent
Odour:	characteristic
Odour threshold:	not determined

Changes in the physical state

Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	not determined
Flash point:	not applicable

Flammability

Solid/liquid:	not determined
Gas:	not applicable

Explosive properties

The product is not: Explosive.

Lower explosion limits:	not determined
Upper explosion limits:	not determined
Auto-ignition temperature:	not determined

Self-ignition temperature

Solid:	not applicable
Gas:	not applicable

Decomposition temperature:	not determined
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Oxidizing properties

The product is not: oxidising.

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pH-Value:	7
Viscosity / dynamic:	not determined
Viscosity / kinematic:	not determined
Water solubility:	practically insoluble (Hydrolysis)
Solubility in other solvents	
not determined	
Partition coefficient n-octanol/water:	not determined
Vapour pressure:	not determined
Density:	not determined
Relative vapour density:	not determined

9.2. Other information

Other safety characteristics

No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Reacts with : Water (Hydrolysis) Formation of: Methanol

10.4. Conditions to avoid

Humidity, heat.
UV-radiation/sunlight

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

(Hydrolysis) Methanol
In case of fire may be liberated: Pyrolysis products, toxic

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in GB CLP Regulation

Acute toxicity

Based on available data, the classification criteria are not met.

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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
2768-02-7	Trimethoxyvinylsilane				
	oral	LD50 mg/kg 7120	Rat	Manufacturer	OECD 401
	dermal	LD50 mg/kg 3200	Rabbit	Manufacturer	OECD 402
	inhalation (4 h) vapour	LC50 16,8 mg/l	Rat	Manufacturer	OECD 403
	inhalation aerosol	ATE 1,5 mg/l			
1760-24-3	N-(3-(trimethoxysilyl)propyl)ethylenediamine				
	oral	LD50 mg/kg 2995	Rat	Manufacturer	
	dermal	LD50 mg/kg > 2000	Rat	Manufacturer	
63843-89-0	Bis(1,2,2,6,6-pentamethyl-4-piperidyl) [[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methyl]butylmalonate				
	oral	ATE mg/kg 500			

Irritation and corrosivity

Based on available data, the classification criteria are not met.

Sensitising effects

Contains N-(3-(trimethoxysilyl)propyl)ethylenediamine. May produce an allergic reaction.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Information on likely routes of exposure

Inhalation, oral, dermal.

11.2. Information on other hazards

Other information

No information available.

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SECTION 12: Ecological information

12.1. Toxicity

Toxic to aquatic life with long lasting effects.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
2768-02-7	Trimethoxyvinylsilane					
	Acute fish toxicity	LC50 191 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)	Manufacturer	
	Acute algae toxicity	ErC50 210 mg/l	72 h	Selenastrum capricornutum	Manufacturer	
	Acute crustacea toxicity	EC50 169 mg/l	48 h	Daphnia magna (Big water flea)	Manufacturer	OECD 202
	Crustacea toxicity	NOEC 28 mg/l	21 d	Daphnia magna (Big water flea)	Manufacturer	OECD 211
1760-24-3	N-(3-(trimethoxysilyl)propyl)ethylenediamine					
	Acute fish toxicity	LC50 597 mg/l	96 h	Brachydanio rerio (zebra-fish)	Manufacturer	
	Acute algae toxicity	ErC50 8,8 mg/l	72 h	Algae	Manufacturer	OECD 201
	Acute crustacea toxicity	EC50 81 mg/l	48 h	Daphnia magna (Big water flea)	Manufacturer	
	Algae toxicity	NOEC 3,1 mg/l	3 d	Algae	Manufacturer	OECD 201
	Crustacea toxicity	NOEC > 1 mg/l	21 d	Daphnia magna (Big water flea)	Manufacturer	

12.2. Persistence and degradability

The product has not been tested.

Reacts with : Water (Hydrolysis) Formation of: Methanol

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
2768-02-7	Trimethoxyvinylsilane			
	Biochemical oxygen demand (OECD 301F)	51 %	28	Manufacturer
	Not readily biodegradable (according to OECD criteria)			
1760-24-3	N-(3-(trimethoxysilyl)propyl)ethylenediamine			
	OECD 301A	39 %	28	Manufacturer
	Not readily biodegradable (according to OECD criteria)			

12.3. Bioaccumulative potential

The product has not been tested.

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Endocrine disrupting properties

No information available.

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12.7. Other adverse effects

No information available.

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

Contaminated packaging

Dispose of waste according to applicable legislation. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

No information available.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

EU regulatory information

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Restrictions on use (REACH, annex XVII):

Entry 3, Entry 40, Entry 48, Entry 69

2010/75/EU (VOC): < 6 %

National regulatory information

Ordinance on Industrial Safety and Health

- Germany - BetrSichV: No flammable liquids in accordance with BetrSichV

Water hazard class (D): Water hazard class 1 (Self-assessment): slightly hazardous for water.

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Abbreviations and acronyms

CLP: Classification, labelling and Packaging

REACH: Registration, Evaluation and Authorization of Chemicals

GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals

UN: United Nations

CAS: Chemical Abstracts Service

DNEL: Derived No Effect Level

DMEL: Derived Minimal Effect Level

PNEC: Predicted No Effect Concentration

ATE: Acute toxicity estimate

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

LL50: Lethal loading, 50%

EL50: Effect loading, 50%

EC50: Effective Concentration 50%

ErC50: Effective Concentration 50%, growth rate

NOEC: No Observed Effect Concentration

BCF: Bio-concentration factor

PBT: persistent, bioaccumulative, toxic

vPvB: very persistent, very bioaccumulative

ADR: Accord européen sur le transport des marchandises dangereuses par Route

(European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Regulations concerning the international carriage of dangerous goods by rail

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

(Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)

IMDG: International Maritime Code for Dangerous Goods

EmS: Emergency Schedules

MFAG: Medical First Aid Guide

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

MARPOL: International Convention for the Prevention of Marine Pollution from Ships

IBC: Intermediate Bulk Container

VOC: Volatile Organic Compounds

SVHC: Substance of Very High Concern

For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>

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Relevant H and EUH statements (number and full text)

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.
H335	May cause respiratory irritation.
H372	Causes damage to organs through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.
EUH208	Contains N-(3-(trimethoxysilyl)propyl)ethylenediamine. May produce an allergic reaction.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)