Safety Data Sheet - InnoElast® Type 1

1. Description of the Material / Preparation and Company Identification

Details about the product

::: Trade name	InnoElast® Type 1
::: Application of the Product or Mixture	Sealant, Adhesive
::: Supplier	B.T. innovation GmbH Sudenburger Wuhne 60 D-39116 Magdeburg, Germany Tel.: +49 (0) 391-7352-0 Fax: +49 (0) 391-7352-54
::: Information can be obtained from	Technical division info@bt-innovation.de
::: Emergency telephone number	Telephone: +49 (0) 391-7352-0

2. Hazard(s) Identification

2.1 Classification of the substance or mixture

::: Classification according to regulation (EC) No.1272/2008	Not required
::: Classification according to directive 67/548/EEC or regulation 1999/45/EC	Not required

2.2 Labelling elements

::: Labelling according to regulation (EC) No.1272/2008

Labelling of specific mixtures

EUH208	Contains 3-Aminopropyltriethoxysilane; N-(3-(Trimethoxysilyl) propyl)-ethylendiamine; reaction products of 12-Hydroxystearic acid with Ethylen-1,2-diamine. May produce an allergic reaction.
EUH210	Safety data sheet available on request

2.3 Other hazards	Small amounts of methanol (CAS No.: 67-56-1) are formed by hydrolysis and released on curing.
Result of PBT and vPVB assessment	The components of this formulation do not meet the criteria for classification as a PBT or vPvB substance

3. Composition / information on ingredients

::: Chemical Characterisation

Hazardous ingredients:		
CAS: 100545-48-0 Reg.No. 01-2119979085-27 EC-No. : 309-629-8	Reaction products of 12-Hydroxystearic acid with Ethylen-1,2-di-amine May cause an allergic skin reaction1; H317, Aquatic Chronic 3 ; H412	< 2,5%
CAS: 919-30-2 Reg. No. 01-2119480479-24 EC-No.: 213-048-4	3-Aminopropyltriethoxysilane Acute Tox. 4 ; H302, Skin Corr. 1B; H314, May cause an allergic skin reaction1 ; H317	< 1%
CAS: 1760-24-3 Reg. No. 01-2119970215-39 EC-No.: 217-164-6	N-(3-(Trimethoxysilyl) propyl)-ethylendiamine May cause an allergic skin reaction. 1 ; H317, Causes serious eye damage1 ; H318	< 1%

::: Additional advices

For the full text of the hazard notes mentioned in this section, see section 16.

4. First Aid Measures

4.1 Description of first aid measures

::: General advice — Consult a doctor. Show this safety data sheet or the label to the doctor in attendance.

::: After breathing in — Supply with fresh air, consult doctor in case of symptoms

::: After skin contact — Wash off with water and soap

::: After eye contact — Rinse opened eye immediately under running water for 10 to 15 minutes, then consult doctor for treatment

::: After swallowing — Immediately consult a doctor. After swallowing rinse the mouth with plenty of water (never with an unconscious person). Due to hydrolysis low amounts of toxic Methanol are produced.

::: Information for the doctor

4.2 Most important symptoms and effects, both acute and delayed — Not known

4.3 Identification of any immediate medical attention and special treatment needed — Small quantities of methanol are released by hydrolysis during curing (CAS No .: 67-56-1). Symptomatic treatment.

5. Fire Fighting Measures

::: Suitable extinguishing agents	CO2, extinguishing powder, water spray. Fight large fires with water spray or alcohol resistant foam.
::: Unsuitable extinguishing agents	Water with a full water jet.
::: Hazardous combustion products	Carbon monoxide. Carbon dioxide (CO2).
::: Advice for firefighters	Prevent a penetration into sewers, open waters, and ground water.
::: Protective equipment	Wear appropriate breathing apparatus.

6. Accidental Release Measures

::: Person-related safety precautions	Wear personal protective equipment. Ensure adequate ventilation. Avoid contact with eyes and skin.
::: Environmental precautions	Prevent any penetration into sewers, open waters, and ground water.
::: Procedure for cleaning/adsorption	Take up mechanically. Dispose of collected material according to regulations.
::: Additional information	Hardens in contact with water.

7. Handling and Storage

7.1 Precautions for safe handling	Use personal protective equipment. Ensure adequate ventilation. Avoid contact with eyes and skin.
General hygiene regulations	Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke at work. Wash your hands before breaks and after work.

7.2 Conditions for safe storage, including any incompatibilities

::: Requirements to storage areas and containers	No special measures required
::: Information about common storage	Storage class (TRGS 510): 10
::: Further information about storage conditions	Avoid moisture. Keep containers tightly closed and in a dry and well ventilated place.
7.3 Specific end use(s)	Sealant based on silane-modifed polymers. Pay attention to the technical data sheet.

8. Exposure Controls and Personal Protection

8.1 Control parameters

::: Components with workplace control parameters

Methanol (as reaction product)	CAS-No.: 67-56-1
Limit value type (country of origin)	AGW / TRGS 900 (D)
Limit value	200 ppm exposure factor 4 / 270 mg/m³ exposure factor 4 H
Limit value type (country of origin)	TWA (EU)
Limit value	200 ppm / 260 mg/m³
::: Derived No Effect Level:	There is no information available
3-Aminopropyltriethoxysilan	CAS-No.: 919-30-2
Type	For the user, long-term and short-term systemic health effects)
Exposure	breathe in
Derived No Effect Level:	59 mg/m³
Exposure	dermal
Derived No Effect Level:	8.3 mg/kg body weight / day
Predicted no effect concentration (PNEC)	0.33 mg/l (freshwater), 0.033 mg/l (seawater)

8.2 Exposure controls

Personal protective equipment

::: Eye protection	Tightly fitting protective glasses (DIN EN 166)
::: Hand protection	String, tight, consistent protective gloves made from an appropriate material. Select the glove material on consideration of the penetration time, rates of diffusion and degradation. Check prior the application.
::: Breathing protection	Not necessary in well ventilated rooms.
::: General protection and hygienic measures	Keep away from food and animal feeds. Remove soiled, soaked clothing at once. Wash hands before taking a break and at the end of working hours. Avoid contact with eyes and skin.

9. Physical and Chemical Properties

Form	paste-like
Colour	concrete grey
Odour	weak, characteristic
Boiling point / -range	not applicable
Self-ignitability	The product is not self-igniting.
Danger of explosion	The product is not explosive.
Vapour pressure	< 1100 hPa @ 50 °C
Density at 20° C	1.5 g/cm³
Solubility in / Miscibility with water	reacts with water
Dynamic viscosity	ca. 7000 - 13000 Pa.s at 23 °C

10. Stability and Reactivity

Reactivity	The product cures / hardens with moisture
Chemical stability	The product is stable at standard conditions.
Possibility of dangerous reactions	Not known
Thermal decomposition	No decomposition if used according to specification.
Conditions to be avoided	Protect from moisture
Materials to be avoided	None known
Dangerous decomposition products	No dangerous decomposition products known at appropriate storage and handling

11. Toxicological Information

::: Information on toxicological effects

Irritation and corrosion	Primary irritation of skin and eyes.
Practical experiences	Irritation of eyes and skin is possible.
Sensitization	The product contains sensitizing components.
	It may cause allergic reactions.

::: Information on the components

Chemical description	LD50 oral	LD50 dermal	LC50 breathe in
Reaction products of 12-Hydroxystearic acid with Ethylen-1,2-diamine CAS-Nr.: 100545-48-0	LD50 >2000 mg/kg (rat)		LC50 =5.05 mg/kg (rat)
3-Aminopropyltriethoxysilane CAS-Nr.: 919-30-2	LD50 = 1490 mg/kg (rat, female) EPA OTS 798.1175	LD50 = 4075 mg/kg (rabbit) EPA OTS 798.1100	LC50 >144 mg/L (6h) rat (vapor)
N-(3-(Trimethoxysilyl) propyl)-ethylendiamine CAS-Nr.: 1760-24-3	LD50 = 2295 mg/kg (rat) EPA OPPTS 870.1100	LD50 > 2000 mg/kg (rabbit) EPA OPPTS 870.1200	

12. Ecological Information

::: Ecotoxicity

Chemical description	Algae / aquatic plants	Fish	Microorganism	crustaceans	M-factor
Reaction products of 12-Hydroxystearic acid with Ethylen-1,2-diamine CAS-Nr.: 100545-48-0	EL50 (72h) >100 mg/L Algae (Pseudokirchneriella subcapitata)	LL50 (96h) >10mg/L Fish (Onchohynchus mykiss)	-	EL50 (48h) >10mg/L Daphnia (Daphnia magna)	-
3-Aminopropyltriethoxysilane CAS-Nr.: 919-30-2	EC50 (72h) >1000 mg/L Green algae (desmodesmus subspicatus) (OECD TG 201)	LC50 (96h) >934 mg/L Fish (Brachydanio rerio) (OECD TG 203)	-	EC50 (48h) =331 mg/L Daphnia magna (OECD TG 202)	-

Chemical description	Algae / aquatic plants	Fish	Microorganism	crustaceans	M-factor
N-(3-(Trimethoxysilyl) propyl)-ethylendia-mine CAS-Nr.: 1760-24-3	-	LC50 (96H) =597 mg/L Fish (Danio rerio) Semi-static	-	EC50 (48h) =81mg/L Daphnia magna Static	-

::: Persistence and degradability — No further relevant information available.

::: Bioaccumulative potential — No further relevant information available.

::: Information on the components

Chemical description	Distribution coefficient	Bioconcentration factor
3-Aminopropyltriethoxysilane CAS-Nr.: 919-30-2	1.7	3.4
N-(3-(Trimethoxysilyl)propyl)-ethylendiamine CAS-Nr.: 1760-24-3	-0.3	-

Mobility in soil — No further relevant information available

Result of PBT-and vPvB-assessment — No further relevant information available

Other adverse effects — No further relevant information available

Further ecological information — The product should not be released uncontrolled into the environment..

13. Disposal Considerations

::: Recommendation — Dispose only hardened product scrap with the household waste
Dispose not hardened product residues as hazardous waste.

::: European waste catalogue — 08 04 10 / Waste adhesives and sealants

::: Packaging — Packagings have to be discharged from remaining product. Empty packagings with hardened product parts can be forwarded for recycling. Packagings with not hardened product parts have to be discharged as the product.

14. Transport Information

::: UN-Number — No dangerous goods according to transport regulations

::: UN-proper shipping name — No dangerous goods

::: Transport hazard class(es) — No dangerous goods according to transport regulations

::: Packing group — No dangerous goods according to transport regulations

::: Special precautions for user — Not applicable

15. Regulatory Information

::: Safety, health and environmental regulations / legislation specific

National regulations — Act according to the national regulations / law!

Advices on employment restrictions — Consider possible employment restrictions according to maternity protection and youth labour protection law.

Technical instructions on air quality (TA-Luft) — Percentage by weight (Point 5.2.5. I): < 1 %

Directive on Registration, Evaluation and Authorization of Chemicals (REACH) (EC 1907/2006)

EU-REACH (1907/2006) - Annex XVII — This product contains one or more substances subject to authorization (Regulation (EC) No 1907/2006, (REACH), Annex XVII).

Verwendungsbeschränkungen

Chemical description	CAS-No.	Restricted substance according to REACH Annex XVII
Dioctyltin oxide	870-08-6	20

Water hazard class — Class: 1 (slightly hazardous to water)
Classification according to VwVwS

::: Additional regulations, restrictions and prohibition edicts:

Ordinance on Industrial Safety and Health
(German Betriebssicherheitsverordnung BetrSichV)
No flammable liquid according to BetrSichV.

Material safety assessment — No information available.

16. Other information

The data within this safety data sheet are based on our present knowledge. They shall not constitute a guarantee for any specific product feature nor justify warranty claims and shall not establish a legally valid contractual relationship. Any previous data sheet issues have now become invalid.

Relevant EUH phrases

H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H411	Toxic to aquatic life with long lasting effects.

R22	Harmful if swallowed.
R34	Causes burns.
R36	Irritating to eyes.
R41	Risk of serious damage to eyes.
R43	May cause sensitisation by skin contact.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Information can be obtained from: Technical division (Tel.: +49(0)391-7352-0)

Abbreviation and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

BCF: Bioconcentration factors

CAS: Chemical Abstracts Service (division of the American Chemical Society)

CMR: Carcinogenic, mutagenic, reprotoxic

DNEL: Derived no-effect level

IMDG: International Maritime Code for Dangerous Goods

EAK: European Waste Catalogue / Europäische Abfallkatalog

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

NOEC: No observed effect concentration

NOEL: No Observed Effect Concentration

OEL: Occupational exposure limit

PBT: Persistent, Bioaccumulative and Toxic

PNEC: Predicted no effect concentration

STOT: Specific target organ toxicity

SVHC: Substances of Very High Concern

VOC: Volatile Organic Compounds (USA, EU)

vPvB: very Persistent and very Bioaccumulative