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

1.1 Product identifier

Universal sealant
Article number: 196957, 196958

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

Ferdinand Bilstein GmbH + Co. KG
Wilhelmstr. 47
58256 Ennepetal / GERMANY
Phone +49 2333 911-0
Fax +49 2333 911-444
Homepage www.febi.com
E-mail info@febi.com

Address enquiries to

Technical information info@febi.com

Safety Data Sheet info@febi.com

1.4 Emergency telephone number

Advisory body +49 (0)89-19240 (24h) (English)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture [REGULATION (GB) CLP]

not determined

2.2 Label elements

The product is required to be labelled in accordance with regulation CLP.

Hazard pictograms none

Signal word none

Special labelling EUH210 Safety data sheet available on request.

2.3 Other hazards

Environmental hazards The mixture contains the following substances which fulfill the PBT and/or vPvB criteria according to REACH criteria, Annex XIII: CAS 541-02-6/ CAS 540-97-6/ CAS 556-67-2

Other hazards Further hazards were not determined with the current level of knowledge.

SECTION 3: Composition / Information on ingredients

3.1 Substances

not applicable

3.2 Mixtures

The product is a mixture.

Range [%]	Substance
10 - < 25	Hydrocarbons, C15-C20, n-alkanes, isoalkanes, cyclics, < 0.03% aromatics
	CAS: 1335203-17-2, EINECS/ELINCS: 934-956-3, Reg-No.: 01-2119827000-58-XXXX
	GHS/CLP: Asp. Tox. 1: H304
1 - < 5	Triacetoxyethylsilane
	CAS: 17689-77-9, EINECS/ELINCS: 241-677-4, Reg-No.: 01-2119881778-15-XXXX
	GHS/CLP: Acute Tox. 4: H302 - Skin Corr. 1B: H314 - Eye Dam. 1: H318 - EUH014
< 0,1	2-Octyl-2H-isothiazol-3-one
	CAS: 26530-20-1, EINECS/ELINCS: 247-761-7, EU-INDEX: 613-112-00-5
	GHS/CLP: Acute Tox. 3: H301 H311 - Acute Tox. 2: H330 - Skin Corr. 1: H314 - Eye Dam. 1: H318 - Skin Sens. 1A: H317 - Aquatic Acute 1: H400 - Aquatic Chronic 1: H410 - EUH071, M-Factor (acute): 100, M-Factor (chronic): 100
	SCL [%]: >= 0,0015: Skin Sens. 1: H317

Comment on component parts For full text of H-statements: see SECTION 16.
*) NOTE N

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 Take up product with suitable papertissues before.
When in contact with the skin, clean 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 Seek medical advice immediately.
Do not induce vomiting.
Rinse mouth.

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.
Forward this sheet to your doctor.

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

Risk of formation of toxic pyrolysis products.

5.3 Advice for firefighters

Use self-contained breathing apparatus.

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

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.

6.2 Environmental precautions

Prevent spread over a wide area (e.g. by containment or oil barriers).
Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Pick up with absorbent material (e.g. sand, universal absorbent, diatomaceous earth).
Dispose of absorbed material in accordance within the regulations.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Use only in well-ventilated areas.

Wash hands before breaks and after work.
Use barrier skin cream.
Do not eat, drink or smoke when using this product.
Take off contaminated clothing and wash before reuse.

7.2 Conditions for safe storage, including any incompatibilities

Keep only in original container.
Do not use metal containers.

Protect from heat/overheating.
Keep in a cool place. Store in a dry place.
Recommended storage temperature: +5°C - +25°C

7.3 Specific end use(s)

This product is not recommended for use in joints which will be in contact with either pure oxygen or steam.

SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Ingredients with occupational exposure limits to be monitored (UK)

not relevant

Ingredients with occupational exposure limits to be monitored EU (2004/37/EG)

not relevant

DNEL

Substance
Hydrocarbons, C15-C20, n-alkanes, isoalkanes, cyclics, < 0.03% aromatics, CAS: 1335203-17-2
There are no DNEL values established for the substance.
Triacetoxyethylsilane, CAS: 17689-77-9
Industrial, inhalative, Long-term - local effects, 32,5 mg/m³
Industrial, inhalative, Acute - local effects, 32,5 mg/m³
general population, inhalative, Long-term - local effects, 6,5 mg/m³

PNEC

Substance
Hydrocarbons, C15-C20, n-alkanes, isoalkanes, cyclics, < 0.03% aromatics, CAS: 1335203-17-2
There are no PNEC values established for the substance.
Triacetoxyethylsilane, CAS: 17689-77-9
freshwater, 0.2 mg/L (AF=50)
seawater, 0.02 mg/L (AF=500)
sewage treatment plants (STP), 1 mg/L (AF=100)
sediment (freshwater), 0.74 mg/kg dw
sediment (seawater), 0.074 mg/kg dw
soil, 0.031 mg/kg dw

8.2 Exposure controls

Additional advice on system design	Ensure adequate ventilation on workstation.
Eye protection	safety glasses (EN 166:2001)
Hand protection	The details concerned are recommendations. Please contact the glove supplier for further information. > 0,4 mm: Viton, >480 min (EN 374-1/-2/-3).
Skin protection	light protective clothing
Other	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	No dangerous reactions known if used as directed.
Thermal hazards	not applicable
Delimitation and monitoring of the environmental exposition	Comply with applicable environmental regulations limiting discharge to air, water and soil.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	solid
Form	pasty
Color	grey
Odor	acetic
Odour threshold	No information available.
pH-value	not applicable
pH-value [1%]	not applicable
Boiling point or initial boiling point and boiling range [°C]	No information available.
Flash point [°C]	> 100
Flammability	No information available.
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	No information available.
Density [g/cm³]	0,98 (20 °C / 68,0 °F)
Relative density	not determined
Bulk density [kg/m³]	not applicable
Solubility in water	virtually insoluble
Solubility other solvents	No information available.
Partition coefficient n-octanol/water (log value)	No information available.
Kinematic viscosity	> 20,5 mm²/S (40°C)
Relative vapour density	No information available.
Melting point [°C]	No information available.
Auto-ignition temperature [°C]	No information available.
Decomposition temperature [°C]	No information available.
Particle characteristics	No information available.

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 acids, alkalies and oxidizing agents.
Reactions with reducing agents.

10.4 Conditions to avoid

Strong heating.
Sensitive to moisture.

10.5 Incompatible materials

See SECTION 10.3.

10.6 Hazardous decomposition products

Acetic acid.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute oral toxicity

Substance
Hydrocarbons, C15-C20, n-alkanes, isoalkanes, cyclics, < 0.03% aromatics, CAS: 1335203-17-2
LD50, oral, Rat, >5000 mg/kg (OECD 401)
Triacetoxyethylsilane, CAS: 17689-77-9
LD50, oral, Rat, 1460 mg/kg bw, OECD 401
2-Octyl-2H-isothiazol-3-one, CAS: 26530-20-1
ATE-mix, oral, 125 mg/kg

Acute dermal toxicity

Substance
Hydrocarbons, C15-C20, n-alkanes, isoalkanes, cyclics, < 0.03% aromatics, CAS: 1335203-17-2
LD50, dermal, Rabbit, >3160 mg/kg (OECD 402)
2-Octyl-2H-isothiazol-3-one, CAS: 26530-20-1
ATE-mix, dermal, 311 mg/kg

Acute inhalational toxicity

Substance
Hydrocarbons, C15-C20, n-alkanes, isoalkanes, cyclics, < 0.03% aromatics, CAS: 1335203-17-2
LC50, inhalative, Rat, >5266 mg/m³ (4h) (OECD 403)
2-Octyl-2H-isothiazol-3-one, CAS: 26530-20-1
ATE-mix, inhalativ (mist), 0,27 mg/L

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

Substance
2-Octyl-2H-isothiazol-3-one, CAS: 26530-20-1
Eye, Causes serious eye damage.

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

Substance
Triacetoxyethylsilane, CAS: 17689-77-9
Rabbit, OECD 405, corrosive
2-Octyl-2H-isothiazol-3-one, CAS: 26530-20-1
dermal, corrosive

Respiratory or skin sensitisation Based on the available information, the classification criteria are not fulfilled.

Product
dermal, Guinea pig, OECD 406, non-sensitizing
dermal, Based on the available information, the classification criteria are not fulfilled.

Substance
2-Octyl-2H-isothiazol-3-one, CAS: 26530-20-1
dermal, sensitising

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

Substance
2-Octyl-2H-isothiazol-3-one, CAS: 26530-20-1
adverse effect observed

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

Substance
Hydrocarbons, C15-C20, n-alkanes, isoalkanes, cyclics, < 0.03% aromatics, CAS: 1335203-17-2
NOAEL, oral, Rat, 5000 mg/kg bw/day

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

Substance
Triacetoxyethylsilane, CAS: 17689-77-9
Ames-test, negativ
2-Octyl-2H-isothiazol-3-one, CAS: 26530-20-1
in vitro, negativ
in vivo, negativ

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

- Fertility

Substance
Triacetoxyethylsilane, CAS: 17689-77-9
NOAEL, oral, Rat, 3048,62 mg/kg bw/day, OECD 422

- Development

Substance
Triacetoxyethylsilane, CAS: 17689-77-9
NOAEL, oral, Rat, 3048,62 mg/kg bw/day, OECD 422

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 There are in vivo skin and eye irritation tests available for preparations containing a mixture of approximately 5% triacetoxyethylsilane and the related triacetoxymethylsilane that show that, although small reversible effects were observed, the criteria for classification were not met.

Toxicological data of complete product are not available.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties Contains no ingredients with endocrine-disrupting properties.

11.2.2 Other information none

SECTION 12: Ecological information

12.1 Toxicity

Product
No toxic effects occur within the range of solubility.

Substance
Hydrocarbons, C15-C20, n-alkanes, isoalkanes, cyclics, < 0.03% aromatics, CAS: 1335203-17-2
EL50, (72h), Skeletonema costatum, > 10000 mg/l (ISO 10253)
LL50, (96h), Scophthalamus maximus, > 1028 mg/l (OECD 203)
LL50, (48h), Acartia tonsa, > 3193 mg/l (ISO 14669)
Triacetoxyethylsilane, CAS: 17689-77-9
LC50, (96h), Danio rerio, 251 mg/l
EC50, (48h), Daphnia magna, 62 mg/l
IC50, (72h), Pseudokirchneriella subcapitata, 73 mg/l
2-Octyl-2H-isothiazol-3-one, CAS: 26530-20-1
LC50, (96h), Fish, 122 µg/L
LC50, (48h), Daphnia magna, 181 µg/L
LC50, (96h), Algae, 150 µg/L

12.2 Persistence and degradability

Behaviour in environment compartments

Behaviour in sewage plant not determined

Biological degradability not determined

Substance
2-Octyl-2H-isothiazol-3-one, CAS: 26530-20-1
OECD 309, The product is not biodegradable.

12.3 Bioaccumulative potential

Product has having no bioaccumulation potential.

Substance
2-Octyl-2H-isothiazol-3-one, CAS: 26530-20-1
log Kow, 2,92, OECD 117

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 Endocrine disrupting properties

Contains no ingredients with endocrine-disrupting properties.

12.7 Other adverse effects

Do not discharge product unmonitored into the environment.
The product is insoluble in water.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. 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 disposal contractor/authorities if necessary.

Waste no. (recommended) 080410

Contaminated packaging

Uncontaminated packaging may be taken for recycling.
Contaminated packing should be disposed of as product waste.

Waste no. (recommended) 150102
150104

SECTION 14: Transport information

14.1 UN number or ID 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 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

EEC-REGULATIONS	2008/98/EG (2000/532/EC); 2010/75/EU; 2004/42/EG; (EG) 648/2004; (EC) 1907/2006 (REACH); (EU) 1272/2008; 75/324/EWG ((EC) 2016/2037); (EU) 2020/878; (EU) 2016/131; (EU) 517/2014; (EU) 2019/1148; (EU) 2019/1021, (EU) 2023/707
- Comment on component parts	Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.
- Annex XIV (REACH)	According to Annex XIV of Regulation (EC) 1907/2006 (REACH) the product does not contain any substances ≥ 0.1% that are subject to authorisation.
- Annex XVII (REACH)	According to Annex XVII of Regulation (EC) 1907/2006 (REACH) the product contains ≥ 0.1% of substances with the following restrictions. 75
	According to Annex XVII of Regulation (EC) 1907/2006 (REACH) the product is not subject to any restrictions.
TRANSPORT-REGULATIONS	ADR (2023); IMDG-Code (2023, 41. Amdt.); IATA-DGR (2024)
NATIONAL REGULATIONS (UK):	EH40/2005 Workplace exposure limits (Second edition, published December 2011); UK REACH; GB CLP.
- Observe employment restrictions for people	no
- VOC (2010/75/CE)	< 0,1% (< 0,2 g/l)

15.2 Chemical safety assessment

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

SECTION 16: Other information

16.1 Hazard statements (SECTION 3)

EUH071 Corrosive to the respiratory tract.
H410 Very toxic to aquatic life with long lasting effects.
H400 Very toxic to aquatic life.
H317 May cause an allergic skin reaction.
H330 Fatal if inhaled.
H301+H311 Toxic if swallowed or in contact with skin.
EUH014 Reacts violently with water.
H318 Causes serious eye damage.
H314 Causes severe skin burns and eye damage.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.

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
EL50 = Median effective loading
ELINCS = European List of Notified Chemical Substances
EmS = Emergency Schedules
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
IVIS = In vitro irritation score
LC50 = Lethal concentration, 50%
LD50 = Median lethal dose
LC0 = lethal concentration, 0%
LOAEL = lowest-observed-adverse-effect level
LL50 = Median lethal loading
LQ = Limited Quantities
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

Customs Tariff	not determined
Classification procedure	
Modified position	none