Pyrolastic Fire Resistant Silicone

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Issue date: 12/9/2020 Version: 6.1

FIRE STOPPING & COMPARTMENTATION SYSTEMS

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

1.1. Product identifier

Product form	:	Mixture
Trade name	:	Pyrolastic Fire Resistant Silicone
Type of product	:	Adhesives, sealants
Product group	:	Trade product

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

1.2.1. Relevant identified uses

Main use category	:	Professional use
Industrial/Professional use spec	:	For professional use only
Use of the substance/mixture	:	Adhesives, binding agents Barrier (Sealant)
Function or use category	:	Adhesives, binding agents

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier
FSi LTD
Westminster Industrial Estate
Tamworth Road
DE12 7DS Measham - United Kingdom
T 01530 515130
technical@fsiltd.com - www.fsiltd.com

Importer
DFI Trading B.V.
Neptunusweg 38
8938AA Leeuwarden - Netherlands
T +31 58 288 15 12
fsi-sds@dfi-trading.com

1.4. Emergency telephone number

Emergency number	:	(+44) 01530515130 (Within GB Only) Language: English - Office hours only (+31) 58 288 15 12 (Within EU Only) Language: English/Dutch – Office hours only

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

EUH-statements	:	EUH210 - Safety data sheet available on request.

2.3. Other hazards

Contains PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
trimethoxyvinylsilane	(CAS-No.) 2768-02-7 (EC-No.) 220-449-8	1 - <5	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332
methanol	(CAS-No.) 67-56-1 (EC-No.) 200-659-6 (EC Index-No.) 603-001-00-X	0.1 - <1	Flam. Liq. 2, H225 Acute Tox. 3 (Inhalation), H331 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Oral), H301 STOT SE 1, H370
butan-1-ol; n-butanol	(CAS-No.) 71-36-3 (EC-No.) 200-751-6 (EC Index-No.) 603-004-00-6	0 - <1	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 STOT SE 3, H335 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H336
octamethylcyclotetrasiloxane substance listed as REACH Candidate (Octamethylcyclotetrasiloxane (D4)) PBT substance vPvB substance	(CAS-No.) 556-67-2 (EC-No.) 209-136-7 (EC Index-No.) 014-018-00-1	0.1 - <1	Flam. Liq. 3, H226 Repr. 2, H361f Aquatic Chronic 4, H413
Decamethylcyclopentasiloxane substance listed as REACH Candidate (Decamethylcyclopentasiloxane (D5)) PBT substance vPvB substance	(CAS-No.) 541-02-6 (EC-No.) 208-764-9	0.1 - <1	Not classified
Dodecamethylcyclohexasiloxane substance listed as REACH Candidate (Dodecamethylcyclohexasiloxane (D6)) PBT substance vPvB substance	(CAS-No.) 540-97-6 (EC-No.) 208-762-8	0.1 - <1	Not classified

Specific concentration limits:		
methanol	(CAS-No.) 67-56-1 (EC-No.) 200-659-6 (EC Index-No.) 603-001-00-X	(3 ≤C < 10) STOT SE 2, H371 (10 ≤C ≤ 100) STOT SE 1, H370

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Get medical attention if symptoms occur. Contaminated clothing to be placed in closed container until disposal or decontamination.

First-aid measures after inhalation : Move into fresh air and keep at rest.

First-aid measures after skin contact : Remove contaminated clothing and shoes. Wash with soap and water.

First-aid measures after eye contact : In the event of contact with the eyes, rinse thoroughly with clean water. Continue to rinse for at least 15 minutes.

First-aid measures after ingestion : Do not induce vomiting. Rinse mouth thoroughly.

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

No additional information available

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : dry chemical powder, alcohol-resistant foam, carbon dioxide (CO2).
Unsuitable extinguishing media : Water.

5.2. Special hazards arising from the substance or mixture

Fire hazard : For further information, refer to section 10: "Stability and Reactivity".

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers.
Protection during firefighting : Use self-contained breathing apparatus and chemically protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Use personal protective equipment. Do not breathe vapor. See Section 8 of the SDS for Personal Protective Equipment. Ventilate the area.

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Collect spillage. Do not discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up

For containment : Containers with collected spillage must be properly labelled with correct contents and hazard symbol. Container must be kept tightly closed.
Methods for cleaning up : Absorb with sand or other inert absorbent. To clean the floor and all objects contaminated by this material, use an appropriate solvent.(cf. : § 9) Flush area with plenty of water. Incinerate in suitable combustion chamber.

6.4. Reference to other sections

Caution: Contaminated surfaces may be slippery. For waste disposal, see Section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Adequate ventilation should be provided so that exposure limits are not exceeded.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Avoid discharge into drains, water courses or onto the ground. Store in tightly closed original container. Store in a cool, dry place with adequate ventilatio.
Incompatible materials : Keep away from incompatible materials, open flames, and high temperatures. Avoid contact with oxidizing agents. Vulcanizes at room temperature on contact with moisture in the air. For further information, refer to section 10: "Stability and Reactivity".
Packaging materials : Suitable containers: Steel drums coated with epoxy-resin.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

methanol (67-56-1)	
IOELV TWA (mg/m³)	260 mg/m³
IOELV TWA (ppm)	200 ppm
WEL TWA (mg/m³)	266 mg/m³
WEL TWA (ppm)	200 ppm
WEL STEL (mg/m³)	333 mg/m³
WEL STEL (OEL STEL) [ppm]	250 ppm

butan-1-ol; n-butanol (71-36-3)	
WEL TWA (mg/m³)	154 mg/m³
WEL TWA (ppm)	50 ppm

8.2. Exposure controls

Appropriate engineering controls:
Provide adequate ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of vapors. Use engineering controls to reduce air contamination to permissible exposure level.

Personal protective equipment:
Safety glasses. Gloves. Dust formation: dust mask.

Eye protection:
Chemical goggles or safety glasses

Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Paste.
Colour	:	white.
Odour	:	slight.
Odour threshold	:	No data available

pH	:	No data available
Relative evaporation rate (butylacetate=1)	:	No data available
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	117 °C (Closed cup according to method Afnor T 60103.)
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	No data available
Vapour pressure	:	No data available
Relative vapour density at 20 °C	:	No data available
Relative density	:	No data available
Density	:	1.4 kg/l (20 °C)
Solubility	:	practically insoluble. Ethanol: Slightly Soluble Acetone: Partially Soluble
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	According to the data on the components (evaluation by structure-activity relationship) Not considered as oxidizing.
Explosive limits	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Vulcanizes at room temperature on contact with moisture in the air.

10.2. Chemical stability

Stable at room temperature provided it is not in contact with air.

10.3. Possibility of hazardous reactions

During use or in contact with water, may generate hazardous substances.

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

Oxidizing agent. Incompatible with water, humid air.

10.6. Hazardous decomposition products

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors. Amorphous silica.During use or in contact with water, may generate hazardous substances.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	:	No effects expected (assessment based on ingredients).
Acute toxicity (dermal)	:	No effects expected (assessment based on ingredients).
Acute toxicity (inhalation)	:	No effects expected (assessment based on ingredients).

trimethoxyvinylsilane (2768-02-7)	
LC50 Inhalation - Rat	16.8 mg/l/4h (Rat, Female, Male)

methanol (67-56-1)	
LC50 Inhalation - Rat	128.2 mg/l/4h (Rat, Female, Male, 4 h): 128,2 mg/l Vapour

octamethylcyclotetrasiloxane (556-67-2)	
LC50 Inhalation - Rat	> 36 mg/l/4h

Decamethylcyclopentasiloxane (541-02-6)	
LC50 Inhalation - Rat	8.67 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity), Guideline: EPA OTS 798.1150 (Acute inhalation toxicity), 95% CL: 7,3 - 10,32

butan-1-ol; n-butanol (71-36-3)	
LC50 Inhalation - Rat (Vapours)	17.76 mg/l/4h

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

Reproductive toxicity : Not classified

trimethoxyvinylsilane (2768-02-7)	
NOAEL (animal/male, F0/P)	1000 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Combined Repeated Dose and Reproductive / Developmental Toxicity Screening Test (Precursor Protocol of GL 422)
NOAEL (animal/female, F0/P)	250 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Combined Repeated Dose and Reproductive / Developmental Toxicity Screening Test (Precursor Protocol of GL 422)
NOAEL (animal/male, F1)	None
NOAEL (animal/female, F1)	None

octamethylcyclotetrasiloxane (556-67-2)	
NOAEL (animal/female, F0/P)	3.64 mg/l
NOAEL (animal/male, F1)	None
NOAEL (animal/female, F1)	None

Decamethylcyclopentasiloxane (541-02-6)	
LOAEL (animal/female, F0/P)	3.64 mg/l
LOAEL (animal/male, F1)	None
LOAEL (animal/female, F1)	None

butan-1-ol; n-butanol (71-36-3)	
NOAEL (animal/male, F0/P)	9.6 mg/l
NOAEL (animal/male, F1)	9.6 mg/l

Dodecamethylcyclohexasiloxane (540-97-6)	
NOAEL (animal/female, F0/P)	≥ 1000 mg/kg
NOAEL (animal/female, F1)	≥ 1000 mg/kg

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

trimethoxyvinylsilane (2768-02-7)	
LOAEL (oral, rat, 90 days)	62.5 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
NOAEL (oral, rat, 90 days)	< 62.5 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
NOAEC (inhalation, rat, vapour, 90 days)	0.0605 mg/l (Rat(Female, Male), Inhalation - vapour)

methanol (67-56-1)	
LOAEL, rat, Inhalation, rat	1.3 mg/l ((Vapour))

octamethylcyclotetrasiloxane (556-67-2)	
NOAEC (inhalation, rat, dust/mist/fume, 90 days)	1820 mg/l
, NOAEL (dermal, rat/rabbit)	960 mg/Kg ((OECD 411 method))

Decamethylcyclopentasiloxane (541-02-6)	
NOAEL (oral, rat, 90 days)	≥ 1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
NOAEL (dermal, rat/rabbit, 90 days)	≥ 1600 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)
NOAEL, rat, Inhalation	≥ 2.42 mg/l ((Vapour))

butan-1-ol; n-butanol (71-36-3)	
NOAEL, rat, oral	125 mg/Kg
NOAEL, rat, Inhalation	2.35 mg/l (Vapour)

Dodecamethylcyclohexasiloxane (540-97-6)	
NOAEL (oral, rat, 90 days)	1000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
NOAEL, rat, Inhalation	0.0182 mg/l ((OECD 413 method), (Vapour))

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

Not rapidly degradable

trimethoxyvinylsilane (2768-02-7)	
LC50 fish 1	191 mg/l (Oncorhynchus mykiss, 96 h)
EC50 Daphnia 1	168.7 mg/l Test organisms (species): Daphnia magna
EC50, algae, Chronic, algae	210 mg/l (7d)
EC10, algae, Chronic	25 mg/l (7 days)

methanol (67-56-1)	
LC50 fish 1	15400 mg/l (Bluegill Sunfish, 96 h)
EC50 Daphnia 1	18260 mg/l (Water flea (Daphnia magna), 48 h)
NOEC chronic fish	446.7 mg/l (Fish, 28 d):
NOEC chronic crustacea	208 mg/l (Aquatic invertebrates, 21 d)
EC50, algae, Chronic	22000 mg/l (96 Hours, Pseudokirchneriella subcapitata)

octamethylcyclotetrasiloxane (556-67-2)	
LC50 fish 1	≥ 0.022 mg/l (Oncorhynchus mykiss, 96 h)
EC50 Daphnia 1	> 0.015 mg/l (Water flea (Daphnia magna), 48h)
NOEC chronic fish	≥ 0.0044 mg/l (Oncorhynchus mykiss, 93 d)
NOEC chronic crustacea	0.015 mg/l (Water flea (Daphnia magna), 21 d)
EC50, algae, Chronic, algae	> 0.022 mg/l

Decamethylcyclopentasiloxane (541-02-6)	
NOEC chronic fish	≥ 0.014 mg/l (Oncorhynchus mykiss, 90 d):

butan-1-ol; n-butanol (71-36-3)	
LC50 fish 1	1376 mg/l (Fathead Minnow, 96 h)
EC50 Daphnia 1	1328 mg/l (Water flea (Daphnia magna), 48 h)
NOEC chronic crustacea	4.1 mg/l (Water flea (Daphnia magna), 21 d)
NOEC chronic algae	129 mg/l (Algae (Pseudokirchneriella subcapitata), 96 h)
EC50, algae	225 mg/l (96 Hours, (Pseudokirchneriella subcapitata))

Dodecamethylcyclohexasiloxane (540-97-6)	
NOEC chronic crustacea	≥ 0.0046 mg/l (Water flea (Daphnia magna), 21 d)
NOEC chronic algae	≥ 0.002 mg/l (Pseudokirchneriella subcapitata), 72 h)
EC50, algae	> 0.002 mg/l ((Algae (Pseudokirchneriella subcapitata), 96 h))

12.2. Persistence and degradability

trimethoxyvinylsilane (2768-02-7)	
Persistence and degradability	51 % biodegradation (28 d, OECD 301 F). Not readily biodegradable.

methanol (67-56-1)	
Persistence and degradability	95 % biodegradation . Readily biodegradable.

octamethylcyclotetrasiloxane (556-67-2)	
Persistence and degradability	3.7 % biodegradation (29 d). Not readily biodegradable.

Decamethylcyclopentasiloxane (541-02-6)	
Persistence and degradability	0.14 % biodegradation (28 d). Not readily biodegradable.

butan-1-ol; n-butanol (71-36-3)	
Persistence and degradability	92 % biodegradation (20 d). Readily biodegradable.

Dodecamethylcyclohexasiloxane (540-97-6)	
Persistence and degradability	4.5 % biodegradation (28 d, OECD 310) T. Not readily biodegradable.

12.3. Bioaccumulative potential

methanol (67-56-1)	
Bioaccumulative potential	The product is not considered to have a bioaccumulative potential.

octamethylcyclotetrasiloxane (556-67-2)	
Bioconcentration factor (BCF REACH)	12400 Fathead Minnow, Bioconcentration Factor (BCF)

Decamethylcyclopentasiloxane (541-02-6)	
Bioconcentration factor (BCF REACH)	7060 Fathead Minnow, Bioconcentration Factor (BCF)

butan-1-ol; n-butanol (71-36-3)	
Bioconcentration factor (BCF REACH)	3.16 Bioconcentration Factor (BCF)

Dodecamethylcyclohexasiloxane (540-97-6)	
Bioconcentration factor (BCF REACH)	2860 Fathead Minnow, Bioconcentration Factor (BCF)
Bioaccumulative potential	Bioaccumulative potential.

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Component	
octamethylcyclotetrasiloxane (556-67-2)	This substance meets the PBT criteria of REACH regulation, annex XIII This substance meets the vPvB criteria of REACH regulation, annex XIII
Decamethylcyclopentasiloxane (541-02-6)	This substance meets the PBT criteria of REACH regulation, annex XIII This substance meets the vPvB criteria of REACH regulation, annex XIII
Dodecamethylcyclohexasiloxane (540-97-6)	This substance meets the PBT criteria of REACH regulation, annex XIII This substance meets the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste) : Disposal must be done according to official regulations.

Waste treatment methods : Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. Incinerate.

Product/Packaging disposal recommendations : Contaminated packages should be as empty as possible. Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. Recycle following cleaning or dispose of at an authorised site.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available				

14.6. Special precautions for user

Overland transport
Not applicable

Transport by sea
Not applicable

Air transport
Not applicable

Inland waterway transport
Not applicable

Rail transport
Not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions
Contains a substance on the REACH candidate list in concentration ≥ 0.1% or with a lower specific limit: Octamethylcyclotetrasiloxane (D4) (EC 209-136-7, CAS 556-67-2), Decamethylcyclopentasiloxane (D5) (EC 208-764-9, CAS 541-02-6), Dodecamethylcyclohexasiloxane (D6) (EC 208-762-8, CAS 540-97-6)
Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.
Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of H- and EUH-statements:	
Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 4	Hazardous to the aquatic environment — Chronic Hazard, Category 4
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Flam. Liq. 2	Flammable liquids, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Repr. 2	Reproductive toxicity, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 1	Specific target organ toxicity — single exposure, Category 1
STOT SE 2	Specific target organ toxicity — Single exposure, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H361f	Suspected of damaging fertility.
H370	Causes damage to organs.
H371	May cause damage to organs.
H413	May cause long lasting harmful effects to aquatic life.

EUH210	Safety data sheet available on request.

SDS_EU_REACH_FSI_CUSTOM

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.