Fire Rated Silicone - Safety Data Sheet

According to Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

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

1.1. Product identifier

Product Name: Fire Rated Silicone
Product Code: 732003
UFI: CQ8D-M3GU-H20Y-FKH1
Pure substance/mixture Mixture

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

Recommended use Sealant.
Uses advised against None known

1.3. Details of the supplier of the safety data sheet

Supplier:

T.I Midwood & Co. Ltd
TIMCO House
Green Lane
Wardle
Nantwich
CW5 6BJ

T.I Midwood & Co. Ltd
Aviemore House
Hill Street
Monahan
Ireland

Emergency Help Line: 01865 407333 (24 hour service)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Chronic aquatic toxicity	Category 3 - (H412)

2.2. Label elements

Signal word
None

Hazard statements
H412 - Harmful to aquatic life with long lasting effects.

EU Specific Hazard Statements
EUH208 - Contains 3-(Triethoxysilyl) propylamine. May produce an allergic reaction

Precautionary Statements - EU (§28, 1272/2008)
P273 - Avoid release to the environment
P501 - Dispose of contents/ container to an approved waste disposal plant

2.3. Other hazards

Small amounts of methanol (CAS 67-56-1) are formed by hydrolysis and released upon curing. Small amounts of ethanol (CAS 64-17-5) are formed by hydrolysis and released upon curing. Small amounts of 2-Pentanone oxime (CAS 623-40-5) are formed by hydrolysis and released upon curing.

PBT & vPvB
This mixture contains no substance considered to be persistent, bioaccumulating or toxic (PBT). This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical name	EC No.	CAS No.	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	REACH registration number
2-Pentandione, O,O',O''-(methylsilylidyne)trioxime	484-460-1	37859-55-5	1- <2.5	Acute Tox. 4 (H302) Eye Irrit. 2 (H319)		01-2120004323-76-XXXX
Titanium dioxide	236-675-5	13463-67-7	0.1 - <1	Carc. 2 (H351i)		01-2119489379-17-XXXX
3-(Triethoxysilyl) propylamine	213-048-4	919-30-2	0.1 - <1	Skin Corr. 1B (H314) Eye Dam. 1 (H318) Skin Sens. 1 (H317) Acute Tox. 4 (H302)		01-2119480479-24-XXXX
Octamethylcyclotetrasiloxane [D4]	209-136-7	556-67-2	0.01 - <0.1	Repr. 2 (H361f) Aquatic Chronic 1 (H410)Liq. 3 (H226) (M Factor Chronic = 10) PBT vPBT		01-2119529238-36-XXXX

Full text of H- and EUH-phrases: see section 16
Note: ^ indicates not classified, however, the substance is listed in section 3 as it has an OEL

This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance. If medical advice is needed, have product container or label at hand.

Inhalation Remove to fresh air. If symptoms persist, call a doctor.

Eye contact Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Consult an ophthalmologist.

Skin contact Wash skin with soap and water. In the case of skin irritation or allergic reactions see a doctor.

Ingestion Never give anything by mouth to an unconscious person. Rinse mouth thoroughly with

water. Drink 1 or 2 glasses of water. Do NOT induce vomiting.

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

Symptoms None known.

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

Note to doctors Small amounts of methanol (CAS 67-56-1) are formed by hydrolysis and released, when the product is exposed to moisture or water. Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam.

Unsuitable extinguishing media Full water jet.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical Thermal decomposition can lead to release of irritating gases and vapours.

Hazardous combustion products Carbon dioxide (CO2). Silicon dioxide. Thermal decomposition can lead to release of irritating and toxic gases and vapours.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters Wear self contained breathing apparatus for fire fighting if necessary.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Do not get in eyes, on skin, or on clothing. Use personal protective equipment as required. Ensure adequate ventilation.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions Prevent product from entering drains. Do not allow to enter into soil/subsoil. See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment Do not scatter spilled material with high pressure water streams.

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Ensure adequate ventilation.

General hygiene considerations Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Take off all contaminated clothing and wash it before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Protect from moisture. Keep away from food, drink and animal feedingstuffs.

7.3. Specific end use(s)

Specific use(s)
Sealant.

Identified uses
Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

Other information Observe technical data sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits Small amounts of ethanol (CAS 64-17-5) are formed by hydrolysis and released upon curing Small amounts of methanol (CAS 67-56-1) are formed by hydrolysis and released upon curing Small amounts of 2-butanone, oxime (CAS 96-29-7) are formed by hydrolysis and released upon curing

Chemical name	European Union	United Kingdom
Limestone 1317-65-3	-	TWA: 10 mg/m³ TWA: 4 mg/m³ STEL: 30 mg/m³ STEL: 12 mg/m³
Ethanol 64-17-5	-	TWA: 1000 ppm TWA: 1920 mg/m³ STEL: 3000 ppm STEL: 5760 mg/m³
Methyl alcohol 67-56-1	TWA: 200 ppm TWA: 260 mg/m³ *	TWA: 200 ppm TWA: 266 mg/m³ STEL: 250 ppm STEL: 333 mg/m³ Sk*
Titanium dioxide 13463-67-7	-	TWA: 10 mg/m³ TWA: 4 mg/m³ STEL: 30 mg/m³ STEL: 12 mg/m³

Chemical name	European Union	Ireland	United Kingdom
Methyl alcohol 67-56-1	-	15 mg/L (urine - Methanol end of shift)	-

Derived No Effect Level (DNEL) No information available

Derived No Effect Level (DNEL)			
Titanium dioxide (13463-67-7)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
worker Long term Local health effects	Inhalation	10 mg/m³	

3-(Triethoxysilyl) propylamine (919-30-2)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor

worker Long term Systemic health effects	Inhalation	59 mg/m³	
worker Short term Systemic health effects	Inhalation	59 mg/m³	
worker Long term Systemic health effects	Dermal	8.3 mg/kg bw/d	
worker Short term Systemic health effects	Dermal	8.3 mg/kg bw/d	

Derived No Effect Level (DNEL)			
Titanium dioxide (13463-67-7)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Consumer Long term Systemic health effects	Oral	700 mg/kg bw/d	

3-(Triethoxysilyl) propylamine (919-30-2)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Consumer Long term Systemic health effects	Inhalation	17 mg/m³	
Consumer Short term Systemic health effects	Inhalation	17.4 mg/m³	
Consumer Long term Systemic health effects	Dermal	5 mg/kg bw/d	
Consumer Short term Systemic health effects	Dermal	5 mg/kg bw/d	

Predicted No Effect Concentration (PNEC) No information available.

Predicted No Effect Concentration (PNEC)	
Titanium dioxide (13463-67-7)	
Environmental compartment	Predicted No Effect Concentration (PNEC)
Marine water	0.0184 mg/l
Freshwater sediment	1000 mg/kg
Freshwater	0.184 mg/l
Marine sediment	100 mg/kg
Soil	100 mg/kg
Microorganisms in sewage treatment	100 mg/l
Freshwater - intermittent	0.193 mg/l

3-(Triethoxysilyl) propylamine (919-30-2)	
Environmental compartment	Predicted No Effect Concentration (PNEC)
Freshwater	0.33 mg/l
Marine water	0.033 mg/l

8.2. Exposure controls

Engineering controls Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles). Eye protection must conform to standard EN 166.
Hand protection	Wear suitable gloves. Recommended Use:. Neoprene™. Nitrile rubber. Butyl rubber. Glove thickness > 0.7mm. The breakthrough time for the mentioned glove material is in general greater than 480 min. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves. Gloves must conform to standard EN 374
Skin and body protection	None under normal use conditions.
Respiratory protection	In case of inadequate ventilation wear respiratory protection. Wear a respirator conforming to EN 140 with Type A/P2 filter or better. Ensure adequate ventilation, especially in confined areas.
Recommended filter type:	Organic gases and vapours filter conforming to EN 14387. White. Brown.

Environmental exposure controls Do not allow uncontrolled discharge of product into the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid
Appearance	Paste
Colour	See section 1 for more information
Odour	Characteristic
Odour threshold	No information available

Property	**Values**	**Remarks • Method**
pH	.	Not applicable Insoluble in water
pH (as aqueous solution)	No data available	
Melting point / freezing point	No data available	
Initial boiling point and boiling range	No data available	
Flash point	> 100 °C	
Evaporation rate	No data available	
Flammability	No data available	
Flammability Limit in Air		
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapour pressure	No data available	
Relative vapour density	No data available	
Relative density	No data available	
Water solubility	Immiscible in water	
Solubility(ies)	No data available	
Partition coefficient	No data available	
Autoignition temperature	No data available	
Decomposition temperature	No data available	
Kinematic viscosity	> 21 mm^2/s	
Dynamic viscosity	No data available	
Explosive properties	No data available	
Oxidising properties	No data available	

9.2. Other information

Solid content (%)	No information available
VOC Content (%)	
Density	1.22

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity Product cures with moisture.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid Product cures with moisture. Protect from moisture. Exposure to air or moisture over prolonged periods. Do not freeze. Keep away from open flames, hot surfaces and sources of ignition.

10.5. Incompatible materials

Incompatible materials Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Small amounts of methanol (CAS 67-56-1) are formed by hydrolysis and released upon curing. Small amounts of ethanol (CAS 64-17-5) are formed by hydrolysis and released upon curing.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure

Product Information .

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

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

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

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

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Numerical measures of toxicity

Acute toxicity
The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	53,682.70 mg/kg
ATEmix (dermal)	72,427.30 mg/kg

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
2-Pentandione, O,O',O''-(methylsilylidyne)trioxime 37859-55-5	LD50 =1234 mg/kg bw (Rattus)(OECD guideline 425)	LD50 > 2000 mg/kg (Rattus) EU Method B.3	
Titanium dioxide 13463-67-7	>10000 mg/kg (Rattus)	LD50 > 10000 mg/Kg	>5 mg/l
3-(Triethoxysilyl) propylamine 919-30-2	LD50 = 1490 mg/kg (Rat, female) EPA OTS 798.1175	LD50 = 4076 mg/kg (Oryctolagus cuniculus) EPA OTS 798.1100	LC50 >144 mg/L (6h) Rat (Vapour)
Octamethylcyclotetrasiloxane [D4] 556-67-2	LD50 > 4800 mg/kg (Rattus) OECD 401	LD50 > 2400 mg/kg (Rattus) OECD 402	=36 g/m^3 (Rattus) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

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

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

Chemical name	European Union
Titanium dioxide 13463-67-7	Carc. 2

The table below indicates whether each agency has listed any ingredient as a carcinogen.

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

Chemical name	European Union
Octamethylcyclotetrasiloxane [D4] 556-67-2	Repr. 2

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.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disrupting properties No information available.

11.2.2. Other information

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity Harmful to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea	M-Factor	M-Factor (long-term)
2-Pentandione, O,O',O''-(methylsilylidyne)trioxime 37859-55-5	EC50 (72h) = 88 mg/L (Pseudokirchneriella subcapitata) OECD 201	LC50 (96h) >113 mg/L (Oncorhynchus mykiss) Static (OECD Guideline 203)	-	EC50 (48h) >100 mg/L (Daphnia magna) static (OECD guideline 202)		
Titanium dioxide 13463-67-7	LC50 (96h) >10000 mg/l (Cyprinodon variegatus) OECD 203	-	-	-		
3-(Triethoxysilyl) propylamine 919-30-2	EC50 (72h) >1000 mg/L Green algae (desmodesmus subspicatus) (OECD TG 201)	LC50 (96h) >934 mg/L (Brachydanio rerio) (OECD TG 203)	-	EC50 (48h) =331 mg/L Daphnia magna (OECD TG 202)		
Octamethylcyclotetrasiloxane [D4] 556-67-2	-	LC50: >1000mg/L (96h, Lepomis macrochirus) LC50: >500mg/L (96h, Brachydanio rerio)	-	EC50: =25.2mg/L (24h, Daphnia magna)		10

12.2. Persistence and degradability

Persistence and degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulation There is no data for this product.

Component Information

Chemical name	Partition coefficient	Bioconcentration factor (BCF)
2-Pentandione, O,O',O''-(methylsilylidyne)trioxime 37859-55-5	1.25	3.1
3-(Triethoxysilyl) propylamine 919-30-2	1.7	3.4
Octamethylcyclotetrasiloxane [D4] 556-67-2	6.49	12400

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment

Chemical name	PBT and vPvB assessment
2-Pentandione, O,O',O''-(methylsilylidyne)trioxime 37859-55-5	The substance is not PBT / vPvB
Titanium dioxide 13463-67-7	The substance is not PBT / vPvB PBT assessment does not apply
3-(Triethoxysilyl) propylamine 919-30-2	The substance is not PBT / vPvB
Octamethylcyclotetrasiloxane [D4] 556-67-2	PBT & vPvB

12.6. Other adverse effects

Other adverse effects No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Uncured product should be disposed of as hazardous waste. Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable.

Contaminated packaging Handle contaminated packages in the same way as the product itself.

European Waste Catalogue 08 04 09* waste adhesives and sealants containing organic solvents or other dangerous substances

Other information Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1 UN number or ID number Not regulated
14.2 Proper Shipping Name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated
14.5 Environmental hazards Not applicable
14.6 Special Provisions None

IMDG

14.1 UN number or ID number Not regulated
14.2 Proper Shipping Name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated
14.5 Marine pollutant NP
14.6 Special Provisions None
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code Not applicable

Air transport (ICAO-TI / IATA-DGR)

14.1 UN number or ID number Not regulated
14.2 Proper Shipping Name Not regulated
14.3 Transport hazard class(es) Not regulated

14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special Provisions	None

Section 15: REGULATORY INFORMATION

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

European Union

Registration, Evaluation, Authorization, and Restriction of Chemicals (REACh) Regulation (EC 1907/2006)

SVHC: Substances of Very High Concern for Authorisation:
This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59)

EU-REACH (1907/2006) - Annex XVII - Substances subject to Restriction
This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII).

Substance subject to authorisation per REACH Annex XIV
This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV)

Ozone-depleting substances (ODS) regulation (EC) 1005/2009
Not applicable

Persistent Organic Pollutants
Not applicable

National regulations

15.2. Chemical safety assessment

Chemical Safety Assessments have been carried out by the Reach registrants for substances registered at >10 tpa. No Chemical Safety Assessment has been carried out for this mixture

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3
H226 - Flammable liquid and vapour
H302 - Harmful if swallowed
H314 - Causes severe skin burns and eye damage
H317 - May cause an allergic skin reaction
H318 - Causes serious eye damage
H319 - Causes serious eye irritation
H361f - Suspected of damaging fertility
H410 - Very toxic to aquatic life with long lasting effects

Legend

TWA	TWA (time-weighted average)
STEL	STEL (Short Term Exposure Limit)

Ceiling	Ceiling Limit Value
*	Skin designation
SVHC	Substance(s) of Very High Concern
PBT	Persistent, Bioaccumulative, and Toxic (PBT) Chemicals
vPvB	Very Persistent and very Bioaccumulative (vPvB) Chemicals
STOT RE	Specific target organ toxicity - Repeated exposure
STOT SE	Specific target organ toxicity - Single exposure
EWC	European Waste Catalogue

Key literature references and sources for data
No information available

Revision note	Not applicable.
Training Advice	No information available
Further information	No information available

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

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