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

1.1 Product identifier

Commercial Product Name	**FIS VS 150 C**

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

Relevant identified uses	composite mortar
Recommended restrictions	None under normal processing. Observe technical data sheet.

1.3 Details of the supplier of the safety data sheet

Company designation	fischerwerke GmbH & Co. KG Klaus-Fischer-Straße 1 D-72178 Waldachtal Telephone: +49(0)7443 12-0 FAX: +49(0)7443 12-4222 Email: info-sdb@fischer.de
Marketer	Great Britain: Mrs Mirka Valovicova, fischer Fixing (UK) Ltd, Hithercroft Road, Wallingford, Oxfordshire, OX10 9AT, Tel. 01491 827 920, Fax 01491 827 950

1.4 Emergency telephone number

Emergency telephone number	+49(0)6132-84463 (24h)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

*Classification according to Regulation (EC) No. 1272/2008	Skin Irrit. 2; H315 Eye Dam. 1; H318 Skin Sens. 1; H317
*Classification according to Directive 67/548/EEC / 1999/45/EEC	R43 Xi; R41

2.2 Label elements

*Hazard pictogram

GHS05

GHS07

*Signal word

Danger

Hazardous component(s) to be indicated on label	tetramethylene dimethacrylate, portland cement, 2-hydroxypropyl methacrylate, dibenzoyl peroxide
H-statement(s)	H315: Causes skin irritation. H317: May cause an allergic skin reaction. H318: Causes serious eye damage.
P-statement(s)	P101: If medical advice is needed, have product container or label at hand. P102: Keep out of reach of children. P280: Wear protective gloves/protective clothing/eye protection/face protection. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310: Immediately call a POISON CENTER or doctor/physician.

2.3 Other hazards

Health hazard	None known.
Particular information pertaining specific risk for human / environment	None known.
Indication of danger	None known.
Hazard precautions	None known.

SECTION 3: Composition/information on ingredients

Hazardous ingredients

Ingredient		Classification (EEC) No 67/548 Classification (EC) 1272/2008	Concentration
tetramethylene dimethacrylate	CAS No.: 2082-81-7 EC-No.: 218-218-1 REACH No.: 02-2119849716-25	Xi; R43 Skin Sens. 1; H317	10.0 - 25.0 % by weight
portland cement	CAS No.: 65997-15-1 EC-No.: 266-043-4 REACH No.: The substance does not require registration according to Regulation (EC) No 1207/2006 [REACH].	Xi; R37/38-41 Skin Irrit. 2;H315 Eye Dam. 1; H318 STOT SE 3;H335	10.0 - 25.0 % by weight
2-hydroxypropyl methacrylate	CAS No.: 27813-02-1 EC-No.: 248-666-3 REACH No.: 01-2119490226-37	R43 Xi; R36 Skin Sens. 1; H317 Eye Irrit. 2; H319	2.5 - 10.0 % by weight
dibenzoyl peroxide	CAS No.: 94-36-0 EC-No.: 202-327-6 Index-No.: 617-008-00-0 REACH No.: 01-2119511472-50	E; R3 Xi; R36 R43 N; R50/53 Org. Perox. B; H241 Eye Irrit. 2; H319 Skin Sens. 1; H317 Aquatic Acute 1; H400	< 2.5 % by weight

Ingredient		Classification (EEC) No 67/548 Classification (EC) 1272/2008	Concentration
ethanediol, ethylene glycol	CAS No.: 107-21-1 EC-No.: 203-473-3 Index-No.: 603-027-00-1 REACH No.: 01-2119456816-28, 02-2119752517-33	Xn; R22 Acute Tox. 4; H302 STOT RE 2; H373	< 2.5 % by weight

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice	If symptoms persist, call a physician. Remove/Take off immediately all contaminated clothing.
If inhaled	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
In case of skin contact	IF ON SKIN: Gently wash with plenty of soap and water.
In case of eye contact	In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
If swallowed	If swallowed, seek medical advice immediately and show this container or label. Clean mouth with water and drink afterwards plenty of 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

Immediate medical attention	No data available
Special medical treatment	No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	Carbon dioxide (CO2) Dry powder Foam Water spray jet
Extinguishing media which must not be used for safety reasons	High volume water jet

5.2 Special hazards arising from the substance or mixture

Special exposure hazards arising from the substance or prepara-	Heating or fire can release toxic gas.

tion itself, its combustion products, or released gases

5.3 Advice for firefighters

Special protective equipment for firefighting	In the event of fire, wear self-contained breathing apparatus. In the event of fire and/or explosion do not breathe fumes.
Additional information on firefighting	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Keep containers and surroundings cool with water spray.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	Ensure adequate ventilation, especially in confined areas. Keep people away from and upwind of spill/leak.

6.2 Environmental precautions

Environmental precautions	The product should not be allowed to enter drains, water courses or the soil. Prevent spreading over a wide area (e.g. by containment or oil barriers).

6.3 Methods and material for containment and cleaning up

Methods for cleaning up	Use mechanical handling equipment. Treat recovered material as described in the section "Disposal considerations".

6.4 Reference to other sections

Reference to other sections	See chapter 8/13

6.5 Additional information

Other information	Dispose of in accordance with local regulations.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling	None under normal processing. Caution: During machining in cured state dust is formed.
Advice on protection against fire and explosion	No special precautions required.

7.2 Conditions for safe storage, including any incompatibilities

Storage space and container requirements	Keep containers tightly closed in a cool, well-ventilated place. Store in accordance with local regulations. Keep only in original container.

Hints on storage assembly	Store in accordance with the particular national regulations.
German storage class	10-13 (TRGS 510)

7.3 Specific end use(s)

Specific use(s)	composite mortar Further information: see technical data sheet.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

portland cement

Great Britain

Long-term exposure value/ mg/m3	Remarks	Source
10	inhalable dust	100
4	respirable dust	100

Source: 100 - 100

dibenzoyl peroxide

Great Britain

Long-term exposure value/ mg/m3	Remarks	Source
5	R2, 36, 43	100

Source: 100 - 100

ethanediol, ethylene glycol

Great Britain

Long-term exposure value/ ppm	Long-term exposure value/ mg/m3	Short-term exposure value / ppm	Short-term exposure value / mg/m3	Remarks	Source
	10			particulate; Can be absorbed through the skin.	19
20	52	40	104	vapour; Can be absorbed through the skin.	19

Source: 19 - EH40/2005 Workplace exposure limits (2011)

Europe

Long-term exposure value/ mg/m3	Long-term exposure value/ ppm	Short-term exposure value / mg/m3	Short-term exposure value / ppm	Note	Issuing date	Source
52	20	104	40	Skin	2000/39	24

Source: 24 - DIRECTIVE 2009/161/EU

8.2 Exposure controls

Respiratory protection	No personal respiratory protective equipment normally required.
Hand protection	not required under normal use

Suitable material:	butyl-rubber, Chloroprene, Nitrile rubber
Unsuitable material:	PVC disposable gloves
Material thickness:	adjust to application and duration of use
Break through time:	adjust to application and duration of use
Remarks:	Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).
Reference substance:	Replace when worn.
Eye protection	Tightly fitting safety goggles
Skin and body protection	Wear suitable protective equipment.
Note:	Choose body protection according to the amount and concentration of the dangerous substance at the work place.
General protective and hygiene measures	Smoking, eating and drinking should be prohibited in the application area. Avoid contact with skin, eyes and clothing. Take off all contaminated clothing immediately. Wash hands before breaks and at the end of workday. Keep away from food, drink and animal feedingstuffs. Use protective skin cream before handling the product.
Information on environmental protection regulations	No special environmental precautions required.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	paste
Colour	grey
Odour	characteristic
Odour threshold	not determined
pH	No data available
Melting point [°C] / Freezing point [°C]	No data available
Boiling point [°C]	no data available
Flash point [°C]	> 100
Evaporation rate [kg/(s*m²)]	No data available
Flammability (solid, gas)	No data available

Explosion limits [Vol-%]	
Lower limit:	not determined
Upper limit:	not determined
Risk of explosion.	Not explosive
Vapour pressure [kPa]	No data available
*Density [g/cm³]	1,7-1,9
Temperature:	20 °C
Relative density	No data available
Water solubility [g/l]	not determined
Solubility [g/l]	No data available
Partition coefficient n-octanol / water (log P O/W)	No data available
Autoinflammability	not auto-flammable
Decomposition temperature [°C]	not determined
*Viscosity, dynamic [kg/(m*s)]	90 - 150
Temperature:	20 °C
Oxidising properties	No

9.2 Other information

Relative vapour density (air=1)	not determined

SECTION 10: Stability and reactivity

10.1 Reactivity

Thermal decomposition	No decomposition if stored and applied as directed.

10.2 Chemical stability

Chemical stability	Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions	No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Conditions to avoid	No decomposition if used as directed.

10.5 Incompatible materials

Materials to avoid	Not applicable.

10.6 Hazardous decomposition products

Hazardous decomposition products	No decomposition if used as directed.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Hazardous ingredients

Tetramethylen dimethacrylate

Oral toxicity [mg/kg]	Test criterion	Test species	Source
> 2000	LD50	rat	100

Source: 100 - 100

Dermal toxicity [mg/kg]	Test criterion	Test species	Source
> 3000	LD50	rabbit	100

Source: 100 - 100

Inhalative toxicity [mg/l]	Source
No data available	2

Source: 2 - SimChem

Sensitization	Hautsensibilisierend.
Carcinogenic effects	keine carcinogenic effects
Mutagenicity	Not applicable.
Reproduction toxicity	Not applicable.
Caustic effect	keine Corrosion

Specific target organ toxicity (single exposure) [mg/kg]	Specific effects	Source
	keine	2

Source: 2 - SimChem

Specific target organ toxicity (repeated exposure) [mg/kg]	Specific effects	Source
	keine	2

Source: 2 - SimChem

portland cement

Oral toxicity [mg/kg]	Test criterion	Remarks	Source
> 2000	LD50	literature value	100

Source: 100 - 100

Dermal toxicity [mg/kg]	Test criterion	Test species	Remarks	Source
> 2000	LD50	rabbit	Limit test 2000 mg/kg	100

Source: 100 - 100

Inhalative toxicity [mg/l]	Test criterion	Test species	Note	Source
> 5	LC50	rat	Limit Test 5 g/m³	100

Source: 100 - 100

Sensitization: May cause an allergic skin reaction.

Carcinogenic effects: Not applicable.

Mutagenicity: Not applicable.

Reproduction toxicity: Not applicable.

Caustic effect: No data available

Specific target organ toxicity (single exposure) [mg/kg]	Specific effects	Source
	Irritating to respiratory system. (dust)	100

Source: 100 - 100

Specific target organ toxicity (repeated exposure) [mg/kg]	Remarks	Source
	Not applicable.	100

Source: 100 - 100

2-hydroxypropyl methacrylate

Oral toxicity [mg/kg]	Test criterion	Test species	Remarks	Source
> 2000	LD50	rat	OECD 401 Limit Test.	100

Source: 100 - 100

Dermal toxicity [mg/kg]	Test criterion	Test species	Source
> 5000	LD50	rabbit	100

Source: 100 - 100

Inhalative toxicity [mg/l]	Source
No data available	100

Source: 100 - 100

Sensitization: Hautsensibilisierend.

Carcinogenic effects: Not applicable.

Mutagenicity: Not applicable.

Reproduction toxicity: Not applicable.

Caustic effect: keine Corrosion

Specific target organ toxicity (single exposure) [mg/kg]	Remarks	Source
	Not applicable.	100

Source: 100 - 100

Specific target organ toxicity (repeated exposure) [mg/kg]	Remarks	Source
	Not applicable.	100

Source: 100 - 100

dibenzoyl peroxide

Oral toxicity [mg/kg]	Test criterion	Test species	Source
> 5000	LD50	rat	100

Source: 100 - 100

Inhalative toxicity [mg/l]	Test criterion	Test species	Note	Source
24300	LC50	rat	(dust)	100

Source: 100 - 100

ethanediol, ethylene glycol

Oral toxicity [mg/kg]	Source
Harmful if swallowed.	100

Source: 100 - 100

Dermal toxicity [mg/kg]	Test criterion	Test species	Source
> 3500	LD50	rabbit	100

Source: 100 - 100

Inhalative toxicity [mg/l]	Test criterion	Duration of dosage	Test species	Note	Source
> 2,5	LC50	6 h	rat	(as aerosol)	100

Source: 100 - 100

Sensitization	not sensitising.
Carcinogenic effects	keine carcinogenic effects
Mutagenicity	Not applicable.
Reproduction toxicity	Not applicable.
Caustic effect	No data available

Specific target organ toxicity (repeated exposure) [mg/kg]	Route of exposure	Organs affected	Specific effects	Source
	Ingestion	Niere	Causes damage to organs through prolonged or repeated exposure.	2
	Skin contact	Niere	Causes damage to organs through prolonged or repeated exposure.	2

Source: 2 - SimChem

Irritant effect on skin	Irritating to skin and mucous membranes
Irritant effect on eyes	Irritating to eyes.

11.2 Additional information

Other information (chapter 11.)	The product itself has not been tested.

SECTION 12: Ecological information

12.1 Toxicity

Hazardous ingredients

Tetramethylen dimethacrylate

Toxicity to fish [mg/l]	Test criterion	Measuring method	Exposure duration	Source
32,5	LC50	DIN 38412	48 h	100

Source: 100 - 100

Toxicity to algae [mg/l]	Test criterion	Test species	Measuring method	Source
9,79	EC50	Scenedesmus capricornutum (fresh water algae)	OECD Test Guideline 201	100

Source: 100 - 100

NOEC (daphnia) [mg/l]	Test species	Measuring method	Source
7,51	Daphnia magna (Big water flea).	OECD 211	100

Source: 100 - 100

Biodegradability	Readily biodegradable.

portland cement

Toxicity to fish [mg/l]	Test criterion	Source
> 100	LC50	100

Source: 100 - 100

Toxicity to daphnia [mg/l]	Test criterion	Test species	Source
> 100	LC50	Daphnia magna (Water flea)	100

Source: 100 - 100

Toxicity to algae [mg/l]	Test criterion	Source
> 100	EC50	100

Source: 100 - 100

Biodegradability	Not applicable. (inorganic)

2-hydroxypropyl methacrylate

Toxicity to fish [mg/l]	Test criterion	Test species	Measuring method	Exposure duration	Source
493	LC50	Leuciscus idus (Golden orfe)	DIN 38412	48 h	100

Source: 100 - 100

Toxicity to daphnia [mg/l]	Test criterion	Test species	Exposure duration	Measuring method	Source
> 130	EC50	Daphnia magna (Water flea)	48 h	OECD Test Guideline 202	100

Source: 100 - 100

Toxicity to algae [mg/l]	Test criterion	Test species	Exposure duration	Measuring method	Source
345	EC50	Selenastrum capricornutum	72 h	OECD Test Guideline 201	100

Source: 100 - 100

NOEC (daphnia) [mg/l]	Duration of dosage	Test species	Measuring method	Test criterion	Source
24,1	21 d	Daphnia magna (Big water flea).	OECD 202	NOEC	100

Source: 100 - 100

Biodegradability Readily biodegradable.

dibenzoyl peroxide

Toxicity to fish [mg/l]	Test criterion	Exposure duration	Source
0,06	LC50	96 h	100

Source: 100 - 100

Toxicity to daphnia [mg/l]	Test criterion	Test species	Exposure duration	Source
0,11	EC50	Daphnia magna (Water flea)	48 h	100

Source: 100 - 100

Toxicity to algae [mg/l]	Test criterion	Exposure duration	Source
0,06	EC50	72 h	100

Source: 100 - 100

ethanediol, ethylene glycol

Toxicity to fish [mg/l]	Test criterion	Test species	Exposure duration	Source
72860	LC50	Pimephales promelas (Pimephales promelas (fathead minnow))	96 h	100

Source: 100 - 100

Toxicity to daphnia [mg/l]	Test criterion	Test species	Exposure duration	Source
> 100	EC50	Daphnia magna (Water flea)	48 h	100

Source: 100 - 100

Toxicity to algae [mg/l]	Test criterion	Test species	Exposure duration	Source
> 6500	EC50	Selenastrum capricor-nutum	96 h	100

Source: 100 - 100

NOEC (fish) [mg/l]	Test criterion	Duration of dosage	Test species	Source
15380	NOEC	7 d	Pimephales promelas (fathead minnow)	100

Source: 100 - 100

NOEC (daphnia) [mg/l]	Duration of dosage	Test criterion	Source
8590	7 d	NOEC	100

Source: 100 - 100

Biodegradability 90 - 100 %

12.2 Persistence and degradability

Elimination and distribution mechanisms: There is no data available for this product.

Elimination in purification plant: There is no data available for this product.

12.3 Bioaccumulative potential

Bioaccumulation: There is no data available for this product.

Bioconcentration factor (BCF): There is no data available for this product.

12.4 Mobility in soil

Distribution in the environment: There is no data available for this product.

Mobility

Mobility: There is no data available for this product.

12.5 Results of PBT and vPvB assessment

Results of PBT characteristics determination: This preparation contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

12.6 Other adverse effects

Further information on ecology: The product itself has not been tested.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Disposal considerations	The product should not be allowed to enter drains, water courses or the soil. Dispose of waste according to applicable legislation. Empty remaining contents.
Waste Code	According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. The following Waste Codes are only suggestions: Product (Mortar and Curing agent) 200127 - paint, inks, adhesives and resins containing dangerous substances 080409 - waste adhesives and sealants containing organic solvents or other dangerous substances cured material and completely squeezed cartridges 200000 - MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS

SECTION 14: Transport information

	Land transport ADR/RID	Marine transport IMDG	Air transport ICAO/IATA
14.1 UN-No	Not applicable.	Not applicable.	Not applicable.
14.2 Description of the goods	No dangerous good according to ADR	No dangerous good according to IMDG	No dangerous good according to IATA
14.2 UN proper shipping name		Non dangerous good	Non dangerous good
14.3 Transport hazard class(es)	Not applicable.	Not applicable.	Not applicable.
14.4 Packaging group	Not applicable.	Not applicable.	Not applicable.
14.5 Environmental hazards	Not applicable.	Not applicable.	Not applicable.
Danger releasing substance	Not applicable.	Not applicable.	Not applicable.

14.6 Special precautions for user

Precautions	not required under normal use

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	not applicable

14.8 Additional information

Other information (chapter 14.)	Not dangerous goods in the meaning of ADR/RID, ADNR, IMDG-Code, ICAO/IATA-DGR

SECTION 15: Regulatory information

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

Restriction of occupation.	-
Additional regulations	Not applicable.

15.2 Chemical safety assessment

Safety assessment	Not relevant. Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Relevant R-phrases	R22: Harmful if swallowed. R36: Irritating to eyes. R37/38: Irritating to respiratory system and skin. R41: Risk of serious damage to eyes. R43: May cause sensitisation by skin contact. R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Relevant H-phrases	H241: Heating may cause a fire or explosion. H302: Harmful if swallowed. H315: Causes skin irritation. H317: May cause an allergic skin reaction. H318: Causes serious eye damage. H319: Causes serious eye irritation. H335: May cause respiratory irritation. H373: May cause damage to organs through prolonged or repeated exposure . H400: Very toxic to aquatic life.
Wording of the hazard classes	Skin Irrit.: Skin irritation Eye Dam.: Serious eye damage Skin Sens.: Skin sensitization STOT SE: Specific target organ toxicity - single exposure Eye Irrit.: Serious eye irritation Org. Perox.: Organic peroxide Aquatic Acute: Hazardous to the aquatic environment Acute Tox.: Acute toxicity STOT RE: Specific target organ toxicity - repeated exposure
*Modifications since last version	Modifications of the previous version are denoted with an asterisk (*).

*Classification for mixtures and used evaluation method

Classification	Evaluation
Skin Irrit. 2; H315	Calculated
Eye Dam. 1; H318	Calculated
Skin Sens. 1; H317	Calculated

according to regulation (EC)
1207/2008 [CLP]

Recommended restrictions None under normal processing. Observe technical data sheet.

This information is provided in accordance with the current status of our knowledge and experience. The Safety Data Sheet describes products with a view to relevant safety requirements. This information does not constitute a warranty of properties, features or qualities.