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SILISIL RTV ZCX 15-3 Base
Safety Data Sheet (April 2025)

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

1.1 Product identifier :
Product name: SILISIL ZCX 15-3 BASE
Article number: 90-29041

1.2 Relevant identified uses of the substance or mixture and uses advised against:
For industrial use only. Condensation silicone for mold making.

1.3 Details of the supplier providing the safety data sheet:

Name:	Silitech AG
Address:	Worbstrasse 173 CH-3073 Gümligen Switzerland
Phone:	+41 (0) 31 398 50 70
Email:	info@silitech.ch

1.4 Emergency number: +41 (0) 31 398 50 70 [Office hours]

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
According to Regulation (EC) No. 1272/2008 (CLP), the product is not classified as dangerous.

2.2 Label elements
No hazard pictograms required
No hazard statements required
No precautionary statements required
Special provisions: EUH210 Safety data sheet available on request.

2.3 Other hazards:
No respirable, free crystalline silica or treated silaneamines released during normal use. See Section 11.
no PBT, vPvB or endocrine disrupting substances ≥ 0.1%.

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SECTION 3: Composition/Information on ingredients

3.1 3.1 Substances:

Not applicable

3.2 Mixtures Hazardous ingredients:

Hazardous ingredients according to the CLP Regulation and associated classification:

Quant.	name	Identification number	Classification
≥ 13% - < 20%	Silanamine , 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica; pyrogenic, synthetic amorphous nanoscale, surface-treated silica	Index No.: 014-052-00-7 CAS: 68909-20-6 EC: 272-697-1	Classification: STOT RE 2 H373 (May cause damage to organs – lungs through prolonged or repeated exposure if inhaled), EUH066 (Repeated exposure may cause skin dryness or cracking)
≥ 8% - <10%:	Cristobalite	CAS: 14464-46-1 EC: 238-455-4	Classification: STOT RE 1 H372 (Causes damage to organs (lungs) through prolonged or repeated exposure if inhaled)
<0.09%	Octamethylcyclotetrasiloxane (D4)	Index No.: 014-018-00-1 CAS: 556-67-2, EC: 209-136-7	Classification: Flam. Liq . 3 H226 (Flammable liquid and vapor), Repr . 2 H361f (Suspected of damaging fertility), Aquatic Chronic 1 H410 (Very toxic to aquatic life with long-lasting effects), M=10

Substances in nanoform :
≥ 13 % - < 20 %: Silanamine , 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica; pyrogenic, synthetic amorphous nanoscale, surface-treated silica

Index No.: 014-052-00-7, CAS: 68909-20-6, EG: 272-697-1

SECTION 4: First aid measures

4.1 Description of first aid measures:

In case of skin contact: Wash with plenty of soap and water.
In case of eye contact: Rinse immediately with plenty of water and seek medical advice.
If swallowed: Do not induce vomiting. Get medical help IMMEDIATELY.
If inhaled: Remove affected person to fresh air and keep warm and at rest.

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4.2 Most important symptoms and effects, both acute and delayed: None known

4.3 Indication of any immediate medical attention and special treatment needed: Treatment: No special treatment required

SECTION 5: Firefighting measures

5.1 Extinguishing agent:
Suitable extinguishing media:Water
Carbon dioxide (CO_2)

Extinguishing media that must not be used for safety reasons:
No special restrictions known.

5.2 Special hazards arising from the substance or mixture:
Do not breathe explosion or combustion gases.
Fire will produce dense, black smoke.

5.3 Advice for firefighters:
Wear suitable breathing apparatus.
Collect contaminated fire-fighting water separately; do not allow it to enter sewers.
Remove undamaged containers from the hazard area, if possible.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:
For untrained personnel:
Wear personal protective equipment.
Bring people to safety.
See protective measures in sections 7 and 8.

For emergency personnel:
Wear personal protective equipment.

6.2 Environmental protection measures:
Do not allow to enter soil, groundwater or watercourses.
Collect contaminated rinse water and dispose of it properly.
Inform the relevant authorities in the event of gas leakage or penetration into water, soil or sewage system.
Suitable means for absorption: organic binder, sand.

6.3 Methods and materials for containment and cleanup:
Clean with plenty of water.

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6.4 Reference to other sections:
See also sections 8 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling:

Avoid contact with skin and eyes and avoid inhalation of vapors and mists.
See Section 8 for personal protection equipment.

Advice on general occupational hygiene:
Do not eat or drink while working.

7.2 Conditions for safe storage, including any incompatibilities:
Keep away from food, beverages, and animal feedingstuffs.
Incompatible materials:
See section 10.5.
Requirements for storage rooms and containers:
Use well-ventilated areas.

7.3 Specific end uses:
See section 1.2.

SECTION 8: Exposure controls / Personal protective equipment

8.1 Control parameters:

Cristobalite – CAS: 14464-46-1

OEL Code	TWA	Length of time	Notes
EU	0.1 mg/m³	8 hours	inhalable dust
TLV	0.1 mg/m³	8 hours	inhalable dust
ACGIH	0.025 mg/m³	8 hours	(R), A2 – pulmonary fibrosis, lung cancer

Silanamine , 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silicic acid – CAS: 68909-20-6
No specific limit values available.

Octamethylcyclotetrasiloxane (D4) – CAS: 556-67-2
No occupational exposure limits available.

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DNEL values: Not available

PNEC values: Not available

8.2 Exposure controls and personal protective equipment:

Precautions:
Ensure adequate ventilation of the rooms where the product is stored or processed.

Eye protection:
Wear tight-fitting safety goggles in accordance with EN 166.

Body protection:
Wear work clothing and safety shoes in accordance with EN 14605.

Hand
protection: Wear protective gloves in accordance with EN 374. When selecting suitable gloves,
consider permeability, material compatibility, wear, and duration of use. Resistance should be tested before use.

Respiratory protection:
If ventilation is inadequate or during prolonged exposure, use appropriate respiratory protection. Respiratory protection is required if engineering controls are not sufficient to reduce exposure below the threshold value (e.g., TLV-TWA).

Thermal hazards:
None

Environmental protection measures:
No special requirements

Technical protective measures:
No further action required

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Characteristics	Value	method	note
Physical condition	Viscous liquid	--	--
Color	White	--	--
Odor	Characteristic	--	--
Melting point/freezing point	Not available	--	--
Boiling point or initial boiling point and boiling range	Not available	--	--
Flammability	Not available	--	--
Lower and upper explosion limits	Not available	--	--
Flash point	> 130 °C	--	--
Autoignition temperature	Not available	--	--
Decomposition temperature	Not available	--	--

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PH value	Not available	--	--
Kinematic viscosity	Not available	--	--
Water solubility	Insoluble	--	--
Oil solubility	Not available	--	--
Partition coefficient n- octanol /water (log value)	Not available	--	--
vapor pressure	Not available	--	--
Density and/or relative density	1.2 g/ mL	--	--
Relative vapor density	Not available	--	--
Particle properties	Particle size: Not available	--	--
Nanoforms	See nanoform information in Section 3	--	--

SECTION 10: Stability and reactivity

10.1 Reactivity:
Stable under normal conditions.

10.2 Chemical stability:
Stable under normal conditions.

10.3 Possibility of hazardous reactions:
None known.

10.4 Conditions to avoid:
Stable under normal conditions.

10.5 Incompatible materials:
None known.

10.6 Hazardous decomposition products:
None known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects according to Regulation (EC) No. 1272/2008:

According to Annex I, Section 1.1.1.5 of Regulation (EC) No. 1272/2008: "For the purposes of health hazard classification (Part 3), routes of exposure, information on mechanisms of action, and metabolism studies are useful for assessing the relevance of effects to humans. If this information casts doubt on the relevance to humans, a lower classification may be justified despite legitimate and high-quality data. If there is scientific evidence that the mechanism of action is not relevant to humans, the substance or mixture should not be classified."
Monitoring activities within the company regarding possible inhalation exposure showed dust levels below the detection limit of the method within the framework of occupational health standards for paste and liquid products. Therefore, no exposure is expected within the scope of the use mentioned in Section 1.2. However, the actual dust exposure in the workplace must be verified by

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appropriate measurements in accordance with regulations to protect the health and safety of employees.

Toxicological information about the product:
SILISIL ZCX 15-3 BASE

a) Acute toxicity:
Not classified

b) Skin corrosion/irritation:
Not classified

Not classified for EUH066. According to report 2100-RAZ-23128, the product does not cause skin dryness or cracking.

c) Serious eye damage/irritation:
Not classified

d) Respiratory or skin sensitization:
Not classified

e) Germ cell mutagenicity:
Not classified

f) Carcinogenicity :
Not classified

g) Reproductive toxicity:
Not classified

h) STOT – single exposure:
Not classified

i) STOT – repeated exposure:
Not classified

j) Aspiration hazard:
Not classified

Toxicological information on the main components:
Cristobalite – CAS: 14464-46-1

i) STOT – repeated exposure:
Route of exposure: Inhalation – Note: Silicosis, pulmonary fibrosis – Target organ: Lungs – Source: Supplier's safety data sheet

Octamethylcyclotetrasiloxane (D4) – CAS: 556-67-2

a) Acute toxicity:
Test: LC50 – Species: Rat – 36 mg/l (OECD 403, GLP, Rat, 4 h, ECHA dossier)
Test: LD50 – Application route: Skin – Species: Rat – > 2000 mg/kg (analogous to OECD 402, ECHA dossier)
Test: LD50 – Application route: Oral – Species: Rat – 4800 mg/kg (analogous to OECD 401, ECHA dossier)

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11.2 Information on other hazards
Properties of endocrine disruptors:
No endocrine disruptors are contained in a concentration ≥ 0.1%.

SECTION 12: Environmental information

The product is not classified as chronically hazardous to the aquatic environment: A test according to OECD Method 29 for the release/bioavailability of D4 from the silicone polymer showed that the amount of D4 released from 100 mg of polymer was below the detection limit of the method (i.e., 4.4 ppb). This value is well below the threshold values for classification as chronically hazardous to the aquatic environment (NOEC 0.0044 mg/l for fish, 0.0079 mg/l for aquatic invertebrates).
Therefore, it is not classified in this hazard class.

12.1 Toxicity
Good occupational health and safety measures must be observed to prevent release of the product into the environment.

SILISIL ZCX 15-3 BASE
No classification.

Octamethylcyclotetrasiloxane (D4) – CAS: 556-67-2
a) Acute aquatic toxicity:

IC50 (algae, 72 h): > 0.0022 mg/l (EPA OTS 797.1050, Selenastrum capricornutum , freshwater, ECHA dossier)

LC50 (fish): > 0.0022 mg/l (Oncorhynchus mykiss , GLP, ECHA dossier)

NOEC (fish): > 0.0044 mg/l (Oncorhynchus mykiss , GLP, publication, ECHA dossier)

Long-term toxicity to aquatic invertebrates:

NOEC (Daphnia magna, 21 days): 7.9 µg/l (EPA OTS 797.1330, ECHA dossier)

12.2 Persistence and degradability
Cristobalite – CAS: 14464-46-1: Not readily biodegradable.

12.3 Bioaccumulative potential
Cristobalite – CAS: 14464-46-1: No bioaccumulative potential
D4 – CAS: 556-67-2: Partition coefficient (Log Pow): 6.49 (ECHA dossier)

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
PBT substances: < 0.1 % Octamethylcyclotetrasiloxane (D4)
vPvB substances: < 0.1 % Octamethylcyclotetrasiloxane (D4)

12.6 Properties of endocrine disrupting substances
No substances with endocrine disruption contained in a concentration ≥ 0.1%.

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12.7 Other adverse effects
None known

SECTION 13: Disposal considerations

13.1 Waste treatment methods:
If possible, provide for recovery of the product.
Disposal must comply with applicable local and national regulations.

SECTION 14: Transport information

14.1 UN number or identification number
Not classified as dangerous goods within the meaning of transport regulations.

14.2 UN proper shipping name
Not available

14.3 Hazard classes for transport
Not available

14.4 Packing group
Not available

14.5 Environmental hazards
ADR – Environmentally hazardous substance: No
IMDG – Marine pollutant: No

14.6 Special precautions for user
Not available

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code
Not applicable

SECTION 15: Legislation

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

Directive 98/24/EC (Risks from chemical agents at work)
Directive 2000/39/EC (Workplace exposure limits)
Regulation (EC) No. 1907/2006 (REACH)
Regulation (EC) No. 1272/2008 (CLP)
Regulation (EC) No. 790/2009 (ATP 1 CLP) and (EU) No. 758/2013
Regulation (EU) No. 2020/878
Regulation (EU) No. 286/2011 (ATP 2 CLP)
Regulation (EU) No. 618/2012 (ATP 3 CLP)
Regulation (EU) No. 487/2013 (ATP 4 CLP)
Regulation (EU) No. 944/2013 (ATP 5 CLP)
Regulation (EU) No. 605/2014 (ATP 6 CLP)
Regulation (EU) No. 2015/1221 (ATP 7 CLP)

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Regulation (EU) No. 2016/918 (ATP 8 CLP)
Regulation (EU) No. 2016/1179 (ATP 9 CLP)
Regulation (EU) No. 2017/776 (ATP 10 CLP)
Regulation (EU) No. 2018/669 (ATP 11 CLP)
Regulation (EU) No. 2018/1480 (ATP 13 CLP)
Regulation (EU) No. 2019/521 (ATP 12 CLP)
Regulation (EU) No. 2020/217 (ATP 14 CLP)
Regulation (EU) No. 2020/1182 (ATP 15 CLP)
Regulation (EU) No. 2021/643 (ATP 16 CLP)

Restrictions according to Annex XVII of Regulation (EC) No. 1907/2006 (REACH) and subsequent amendments:
Restrictions related to the product:

Restriction 3
Restriction 40

Restrictions on substances contained:
Restriction 70
Restriction 75

SVHC substances (Substances of Very High Concern):
Candidate list according to Art. 59 of the REACH Regulation:
Octamethylcyclotetrasiloxane (D4) – classified as PBT and vPvB

Regulations according to Directive 2012/18/EU (Seveso III):
Category according to Annex I, Part 1: No classification

WGK (water hazard class – according to administrative regulations for substances hazardous to water):
Not specified

Storage class according to TRGS 510:
LGK 10: Flammable liquids

Export reporting obligation according to Regulation (EC) No. 649/2012:
No substances subject to reporting

California Proposition 65:
Contains cristobalite – listed as a carcinogen

15.2 Chemical Safety Assessment

No chemical safety assessment has been carried out for this mixture.
Substances for which a chemical safety assessment is available:
None

SECTION 16: Other information

Text of the hazard statements mentioned in section 3:
H226: Flammable liquid and vapor

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H361f: Limited evidence of impaired fertility
H410: Very toxic to aquatic life with long lasting effects

Hazard classes and categories:	**code**	**Description**
Flam. Liq . 3	2.6/3	Flammable liquid, Category 3
Repr . 2	3.7/2	Reproductive toxicity category 2
STOT RE 1	3.9/1	Specific target organ toxicity – repeated exposure, Cat. 1
STOT RE 2	3.9/2	Specific target organ toxicity – repeated exposure, Cat. 2
Aquatic Chronic 1	4.1/C1	Chronic water hazard, category 1
Aquatic Chronic 3	4.1/C3	Chronic water hazard, category 3

Classification and procedure for deriving the classification for mixtures according to Regulation (EC) No. 1272/2008 [CLP]:

Classification for mixtures according to Regulation (EC) No. 1272/2008 [CLP]:	**Classification procedure**
Aquatic Chronic	According to Article 12 of the CLP Regulation: "Where the assessment referred to in Article 9 reveals the following properties or effects, manufacturers, importers and downstream users shall take them into account when classifying the substance or mixture: [...] (b) conclusive scientific experimental data show that the substance or mixture is not biologically available and these data have been accepted as adequate and reliable." Based on a release study of D4 using OECD Test 29 on polymeric products, it was found that the value that would lead to classification as chronically hazardous to the aquatic environment (NOEC of 0.0044 mg/l for fish and 0.0079 mg/l for aquatic invertebrates) is not reached.

Author's note: This document was prepared by a competent person who has received appropriate training.

Main literature sources:
ECHA – European Chemicals Agency
GESTIS – Hazardous Substances Information System of the German Social Accident

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Insurance
IARC – International Agency for Research on Cancer
IPCS INCHEM – International Programme on Chemical Safety
ISS – Istituto Superiore di Sanità
PubChem – Open Chemistry Database of the National Institutes of Health (NIH)

The information contained herein is based on our knowledge as of the date above. It relates exclusively to the product named and does not constitute a guarantee of specific properties. It is the responsibility of the user to ensure that this information is suitable and complete for the intended use. This safety data sheet supersedes all previous editions.

Abbreviations and terms:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE: Acute Toxicity Estimate
ATEmix : Acute Toxicity Estimate (Mixtures)
CAS: Chemical Abstracts Service (a division of the American Chemical Society)
CLP: Classification, Labelling and Packaging
DNEL: Derived No - Effect Level
EINECS: European Inventory of Existing Commercial Chemical Substances
GefStoffVO : Ordinance on Hazardous Substances (Germany)
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
IATA: International Air Transport Association
IATA-DGR: IATA Dangerous Goods Regulations
ICAO: International Civil Aviation Organization
ICAO-TI: ICAO Technical Instructions
IMDG: International Maritime Dangerous Goods Code
INCI: International Nomenclature of Cosmetic Ingredients
KSt : Explosive Index
LC50: Lethal Concentration for 50% of test animals
LD50: Lethal Dose for 50% of test animals
PNEC: Predicted No-Effect Concentration Effect
RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
STEL: Short-term exposure limit
STOT: Specific Target Organ Toxicity
TLV: Workplace Exposure
Limit TWA: Time-weighted average
WGK: Water hazard class (Germany)