SAFETY DATA SHEET
Liquasil SF
According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758

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

1.1. Product identifier

Product name Liquasil SF

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

Identified uses Flexible coating

Uses advised against Use only for intended applications.

1.3. Details of the supplier of the safety data sheet

Supplier

Liquasil Ltd
Unit 3 Radway Industrial Estate
Radway Road
Solihull
West Midlands
B90 4NR
0121 709 5352
info@liquasil.com

1.4. Emergency telephone number

Emergency telephone 0121 709 5352 (office hours only)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Not Classified

Environmental hazards Not Classified

2.2. Label elements

Hazard statements NC Not Classified

Supplemental label information EUH208 Contains N-(3-(Trimethoxysilyl)propyl)ethylenediamine. May produce an allergic reaction.
EUH210 Safety data sheet available on request.

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB. Curing process releases 2-pentanone oxime. 2-Pentanone oxime is classified as harmful if swallowed, causes serious eye irritation, may cause damage to blood/spleen through prolonged/repeated exposure and is harmful to aquatic life with long lasting effects.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

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O,O',O''-(Methylsilylidyne)trioxime 2-pentanone		**3 - 7%**
CAS number: 37859-55-5	EC number: 484-460-1	REACH registration number: 01-2120004323-76-XXXX

Classification
Acute Tox. 4 - H302
Eye Irrit. 2 - H319

The full text for all hazard statements is displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information In all cases of doubt, or if symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

Inhalation Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if any discomfort continues.

Ingestion Rinse mouth thoroughly with water. Do not induce vomiting. Get medical attention if any discomfort continues.

Skin contact Wipe off excess material with cloth or paper. Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues. In the event of any sensitisation symptoms developing, ensure further exposure is avoided.

Eye contact Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

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

General information Curing process releases 2-pentanone oxime. 2-Pentanone oxime is classified as harmful if swallowed, causes serious eye irritation, may cause damage to blood/spleen through prolonged/repeated exposure. Curing process releases a small amount of methanol.

Inhalation No specific symptoms known.

Ingestion May cause discomfort if swallowed.

Skin contact Mild dermatitis, allergic skin rash.

Eye contact May cause temporary eye irritation.

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

Notes for the doctor Treat symptomatically.

Specific treatments Antidote for methanol poisoning is ethanol.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Water spray, fog or mist. Foam, carbon dioxide or dry powder.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards No unusual fire or explosion hazards noted.

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Hazardous combustion products Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

5.3. Advice for firefighters

Protective actions during firefighting Avoid breathing fire gases or vapours. Keep up-wind to avoid fumes.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions In case of spills, beware of slippery floors and surfaces. Wear appropriate protective clothing.

6.2. Environmental precautions

Environmental precautions Do not discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Absorb in vermiculite, dry sand or earth and place into containers.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health hazards. For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid contact with eyes and prolonged skin contact. Provide adequate ventilation.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

Usage description Pourable/Paintable Coating

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

Dioctyltin dilaurate

Long-term exposure limit (8-hour TWA): WEL 0.1 mg/m³
Short-term exposure limit (15-minute): WEL 0.2 mg/m³
as Sn
Sk

Toluene

Long-term exposure limit (8-hour TWA): WEL 50 ppm 191 mg/m³
Short-term exposure limit (15-minute): WEL 100 ppm 384 mg/m³
Sk

Methanol

Long-term exposure limit (8-hour TWA): WEL 200 ppm 266 mg/m³
Short-term exposure limit (15-minute): WEL 250 ppm 333 mg/m³
Sk

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WEL = Workplace Exposure Limit.
Sk = Can be absorbed through the skin.

O,O',O"-(Methylsilylidyne)trioxime 2-pentanone (CAS: 37859-55-5)

DNEL
Workers - Inhalation; Long term systemic effects: 0.229 mg/m³
Workers - Dermal; Long term systemic effects: 0.065 mg/kg

PNEC
Fresh water; 0.1 mg/l
marine water; 0.01 mg/l
STP; 2.15 mg/l
Sediment (Freshwater); 0.569 mg/kg
Sediment (Marinewater); 0.057 mg/kg
Soil; 0.044 mg/kg

Dioctyltin dilaurate (CAS: 3648-18-8)

DNEL
Workers - Inhalation; Long term systemic effects: 0.004 mg/m³

PNEC
Fresh water; 0.002 µg/l
Fresh water, Intermittent release; 0.018 µg/l
marine water; 0.0002 µg/l
STP; 100 mg/l
Sediment (Freshwater); 0.028 mg/kg
Sediment (Marinewater); 0.003 mg/kg
Soil; 0.006 mg/kg
Oral (food); 0.02 mg/kg

Toluene (CAS: 108-88-3)

DNEL
Workers - Inhalation; Long term systemic effects: 192 mg/m³
Workers - Inhalation; Short term systemic effects: 384 mg/m³
Workers - Inhalation; Long term local effects: 192 mg/m³
Workers - Inhalation; Short term systemic effects: 384 mg/m³
Workers - Dermal; Long term systemic effects: 384 mg/kg/day

PNEC
- Fresh water; 0.68 mg/l
- marine water; 0.68 mg/l
- Intermittent release; 0.68 mg/l
- STP; 13.61 mg/l
- Sediment (Freshwater); 16.39 mg/kg
- Sediment (Marinewater); 16.39 mg/kg
- Soil; 2.89 mg/kg

Methanol (CAS: 67-56-1)

DNEL
Workers - Inhalation; Long term systemic effects: 130 mg/m³
Workers - Inhalation; Short term systemic effects: 130 mg/m³
Workers - Inhalation; Long term local effects: 130 mg/m³
Workers - Inhalation; Short term local effects: 130 mg/m³
Workers - Dermal; Long term systemic effects: 20 mg/kg/day
Workers - Dermal; Short term systemic effects: 20 mg/kg/day

8.2. Exposure controls

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Protective equipment

Appropriate engineering controls	All handling should only take place in well-ventilated areas. In case of insufficient ventilation, wear suitable respiratory equipment.
Eye/face protection	Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with European Standard EN166.
Hand protection	Use protective gloves. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material.
Hygiene measures	Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes contaminated.
Respiratory protection	Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Various colours.
Odour	Slight.
Odour threshold	No information available.
pH	No information available.
Melting point	No information available.
Initial boiling point and range	No information available.
Flash point	No information available.
Evaporation rate	No information available.
Evaporation factor	No information available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	No information available.
Vapour pressure	No information available.
Vapour density	No information available.
Relative density	1.0 @ 20°C
Solubility(ies)	Insoluble in water.
Partition coefficient	No information available.
Auto-ignition temperature	No information available.
Decomposition Temperature	Not determined.
Viscosity	<300 P @ 20°C

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Explosive properties Not considered to be explosive.

Oxidising properties The mixture itself has not been tested but none of the ingredient substances meet the criteria for classification as oxidising.

9.2. Other information

Other information Not known.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity See the other subsections of this section for further details.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Will not polymerise.

10.4. Conditions to avoid

Conditions to avoid Avoid excessive heat for prolonged periods of time.

10.5. Incompatible materials

Materials to avoid Strong oxidising agents. Strong acids.

10.6. Hazardous decomposition products

Hazardous decomposition products Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Does not decompose when used and stored as recommended.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological effects There are no data available on this product.

Acute toxicity - oral

Notes (oral LD_{50}) Based on available data the classification criteria are not met.

ATE oral (mg/kg) 29,585.23

Acute toxicity - dermal

Notes (dermal LD_{50}) Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC_{50}) Based on available data the classification criteria are not met.

Skin corrosion/irritation

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

Serious eye damage/irritation

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

Respiratory sensitisation

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

Skin sensitisation

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Skin sensitisation	Based on available data the classification criteria are not met. The product contains a small amount of a sensitising substance which may cause an allergic reaction in sensitive individuals.

Germ cell mutagenicity

Summary	Based on available data the classification criteria are not met.

Carcinogenicity

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

Reproductive toxicity

Reproductive toxicity - fertility	Based on available data the classification criteria are not met.
Reproductive toxicity - development	Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure	Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard	Based on available data the classification criteria are not met.

General information	Curing process releases 2-pentanone oxime. 2-Pentanone oxime is classified as harmful if swallowed, causes serious eye irritation, may cause damage to blood/spleen through prolonged/repeated exposure. Curing process may release a small amount of methanol which is irritating to mucous membranes and has skin drying and narcotic effects.
Inhalation	No specific health hazards known.
Ingestion	May cause discomfort if swallowed.
Skin contact	May cause sensitisation by skin contact.
Eye contact	May cause temporary eye irritation.
Acute and chronic health hazards	Product may cause an allergic reaction in hypersensitive persons.
Route of exposure	Skin and/or eye contact
Target organs	Skin
Medical symptoms	Allergic rash.
Medical considerations	Skin disorders and allergies.

Toxicological information on ingredients.

O,O',O''-(Methylsilylidyne)trioxime 2-pentanone

Acute toxicity - oral

Summary	Harmful if swallowed.
Acute toxicity oral (LD_{50} mg/kg)	1,234.0
Species	Rat

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ATE oral (mg/kg) 1,234.0

Acute toxicity - dermal

Notes (dermal LD_{50}) LD_{50} >1782 mg/kg, Dermal, Rat Read-across data.

Serious eye damage/irritation

Summary Causes serious eye irritation.

Serious eye damage/irritation OECD 405 Acute eye irritation / corrosion: Irritating (rabbit)

SECTION 12: Ecological information

Ecotoxicity In cross-linked state not soluble in water. Easily separable from water by filtration. Curing process releases 2-pentanone oxime. 2-Pentanone oxime is classified as harmful to aquatic life with long lasting effects.

12.1. Toxicity

Toxicity There are no data for the product.

Acute aquatic toxicity

Summary Based on available data the classification criteria are not met.

Chronic aquatic toxicity

Summary Based on available data the classification criteria are not met.

Ecological information on ingredients.

O,O',O"-(Methylsilylidyne)trioxime 2-pentanone

Acute aquatic toxicity

Acute toxicity - fish LC_{50}, 96 hours: >113 mg/l, Oncorhynchus mykiss (Rainbow trout) Read-across data.

Acute toxicity - aquatic invertebrates EC_{50}, 48 hours: >113 mg/l, Daphnia magna Read-across data.

Acute toxicity - aquatic plants EC_{50}, 72 hours: 100 mg/l, Pseudokirchneriella subcapitata

12.2. Persistence and degradability

Persistence and degradability The product is not readily biodegradable.

Ecological information on ingredients.

O,O',O"-(Methylsilylidyne)trioxime 2-pentanone

Persistence and degradability Not readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential Bioaccumulation is unlikely to be significant because of the low water-solubility of this product.

Partition coefficient No information available.

Ecological information on ingredients.

O,O',O"-(Methylsilylidyne)trioxime 2-pentanone

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Bioaccumulative potential BCF: 3.103 L/kg, QSAR

12.4. Mobility in soil

Mobility The product is insoluble in water.

Ecological information on ingredients.

O,O',O''-(Methylsilylidyne)trioxime 2-pentanone

Adsorption/desorption coefficient - Koc: 20.9 @ 20°C

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects Not known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information When handling waste, the safety precautions applying to handling of the product should be considered.

Disposal methods Dispose of contents/container in accordance with national regulations.

Waste class Recommended EWC Code 08 04 10

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

Not applicable.

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

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

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SECTION 15: Regulatory information

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

National regulations

The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, UK SI 2019/758, UK SI 2019/858 and UK SI 2019/1144. The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020, UK SI 2020/1577.
The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019, UK SI 2019/720. The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2020, UK SI 2020/1567.
Health and Safety at Work etc. Act 1974 (as amended).
The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"].
Control of Substances Hazardous to Health Regulations 2002 (as amended).

EU legislation

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

Guidance

Workplace Exposure Limits EH40.

Health and environmental listings

Dioctyltin dilaurate is on the EU Candidate List of Substances of Very High Concern (SVHCs) for Authorisation.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

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Abbreviations and acronyms used in the safety data sheet

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
ATE: Acute Toxicity Estimate.
BCF: Bioconcentration Factor.
CAS: Chemical Abstracts Service.
DNEL: Derived No Effect Level.
EC_{50}: 50% of maximal Effective Concentration.
GHS: Globally Harmonized System.
IATA: International Air Transport Association.
IBC: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk (International Bulk Chemical Code).
ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air.
IMDG: International Maritime Dangerous Goods.
Kow: Octanol-water partition coefficient.
LC_{50}: Lethal Concentration to 50 % of a test population.
LD_{50}: Lethal Dose to 50% of a test population (Median Lethal Dose).
LOAEC: Lowest Observed Adverse Effect Concentration.
LOAEL: Lowest Observed Adverse Effect Level.
LOEC: Lowest Observed Effect Concentration.
MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.
NOAEC: No Observed Adverse Effect Concentration.
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 Regulation (EC) No 1907/2006.
RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
SVHC: Substances of Very High Concern.
vPvB: Very Persistent and Very Bioaccumulative.

Key literature references and sources for data

Source: European Chemicals Agency, http://echa.europa.eu/ SDS from supplier.

Revision comments

Revised formulation. Revised classification.

Revision date

03/02/2022

Revision

3

Supersedes date

31/01/2022

SDS number

20363

SDS status

Approved.

Hazard statements in full

H302 Harmful if swallowed.
H319 Causes serious eye irritation.