

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Revision date: 05/06/2024 Date of issue: 03/04/2014

Version: 4.0

SECTION 1: Identification

1.1. Product identifier

Product form : Mixture
Product name : FS1-3730
Synonyms : Fluorosilicone Adhesive

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

Use of the substance/mixture : For professional use only.

1.3. Details of the supplier of the safety data sheet

NuSil Technology LLC
1050 Cindy Lane
Carpinteria, California 93013
USA

(805) 684-8780

productstewardship@avantorsciencesgcc.com

www.nusil.com

1.4. Emergency telephone number

Emergency number : 800-424-9300 CHEMTREC (in US); +1 703-527-3887 CHEMTREC (International and Maritime)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Skin Corr. 1B H314

Eye Dam. 1 H318

STOT SE 3 H335

Repr. 2 H361

Full text of hazard classes and H-statements: see section 1.6

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H314 - Causes severe skin burns and eye damage

H335 - May cause respiratory irritation

H361 - Suspected of damaging fertility or the unborn child

Precautionary statements (GHS-US) : P201 - Obtain special instructions before use.

P202 - Do not handle until all safety precautions have been read and understood.

P260 - Do not breathe vapors, mist, or spray.

P264 - Wash hands, forearms, and exposed areas thoroughly after handling.

P271 - Use only outdoors or in a well-ventilated area.

P280 - Wear eye protection, protective clothing, protective

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gloves.

P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting.

P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 - If inhaled: Remove person to fresh air and keep at rest in a position comfortable for breathing.

P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308+P313 - If exposed or concerned: Get medical advice/attention.

P310 - Immediately call a poison center or doctor.

P321 - Specific treatment (see Section 4 on this SDS).

P363 - Wash contaminated clothing before reuse.

P403+P233 - Store in a well-ventilated place. Keep container tightly closed.

P405 - Store locked up.

P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

2.3. Other hazards

Other hazards not contributing to the classification : Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

2.4. Unknown acute toxicity (GHS US)

No data available

SECTION 3: Composition/Information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	GHS-US classification
Siloxanes and Silicones, methyl 3,3,3-trifluoropropyl, hydroxy-terminated	(CAS No) 68607-77-2	70 - 90	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335
Silanetriol, ethyl-, triacetate	(CAS No) 17689-77-9	< 10	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318
Trifluoropropylmethylcyclotrisiloxane	(CAS-No.) 2374-14-3	< 1	Repr. 2, H361 STOT RE 1, H372 STOT RE 2, H373
Dibutyltin diacetate	(CAS-No.) 1067-33-0	< 0.1	Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1B, H317 Muta. 2, H341 Repr. 1B, H360 STOT SE 1, H370 STOT RE 1, H372 Aquatic Chronic 1, H410

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : If inhaled, remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.
- First-aid measures after skin contact : Wash contaminated clothing before reuse. Immediately flush skin with plenty of water for at least 60 minutes. Obtain medical attention if irritation persists. Remove contaminated clothing.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 60 minutes. Immediately call a POISON CENTER or doctor/physician.
- First-aid measures after ingestion : Seek medical attention immediately. Rinse mouth. Do not induce vomiting.

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

- Symptoms/injuries : Causes severe skin burns and eye damage. May cause respiratory irritation. Suspected of damaging fertility. Suspected of damaging the unborn child.
- Symptoms/injuries after inhalation : Irritation of the respiratory tract and the other mucous membranes. May be corrosive to the respiratory tract.
- Symptoms/injuries after skin contact : Causes severe irritation which will progress to chemical burns.
- Symptoms/injuries after eye contact : Causes permanent damage to the cornea, iris, or conjunctiva.
- Symptoms/injuries after ingestion : May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.
- Chronic symptoms : Suspected of damaging fertility. Suspected of damaging the unborn child.

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

If medical advice is needed, have product container or label at hand.

SECTION 5: Fire-Fighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.
- Unsuitable extinguishing media : Do not use a heavy water stream. Application of water stream to hot product may cause frothing and increase fire intensity.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Not considered flammable but will burn at high temperatures.
- Explosion hazard : Product is not explosive.
- Reactivity : May hydrolyze with water to form acetic acid. Reacts with water and moisture in air liberating methanol.

5.3. Advice for firefighters

- Precautionary measures fire : Exercise caution when fighting any chemical fire. Under fire conditions, hazardous fumes will be present.

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- Firefighting instructions : Use water spray or fog for cooling exposed containers. Do not allow run-off from firefighting to enter drains or water courses.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.
- Other information : Refer to Section 9 for flammability properties.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Avoid all contact with skin, eyes, or clothing. Avoid breathing (vapor, mist, spray).

6.1.1. For non-emergency personnel

- Protective equipment : Use appropriate personal protection equipment (PPE).
- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Stop leak if safe to do so. Eliminate ignition sources. Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
- Methods for cleaning up : Absorb and/or contain spill with inert material, then place in suitable container.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Any proposed use of this product in elevated-temperature processes should be thoroughly evaluated to assure that safe operating conditions are established and maintained. When heated, material emits irritating fumes. May release corrosive vapors. Reacts with water and moisture in air liberating methanol.
- Hygiene measures : Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Comply with applicable regulations.
- Storage conditions : Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.
- Incompatible products : Alcohols. Strong acids, strong bases, strong oxidizers. Water.

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7.3. Specific end use(s)

For professional use only.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), or OSHA (PEL).

Tin organic compounds		
USA ACGIH	ACGIH OEL TWA	0.1 mg/m ³
USA ACGIH	ACGIH OEL STEL	0.2 mg/m ³
USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carcinogen, Skin - potential significant contribution to overall exposure by the cutaneous route
USA NIOSH	NIOSH REL (TWA)	0.1 mg/m ³ (except Cyhexatin)
USA OSHA	OSHA PEL (TWA) [1]	0.1 mg/m ³

8.2. Exposure controls

Appropriate engineering controls

- Ensure adequate ventilation, especially in confined areas. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure all national/local regulations are observed.

Personal protective equipment

- Protective goggles. Gloves. Protective clothing. Face shield. Insufficient ventilation: wear respiratory protection.



Materials for protective clothing

- Corrosion-proof clothing.

Hand protection

- Wear chemically resistant protective gloves.

Eye protection

- Chemical goggles or face shield.

Skin and body protection

- Wear suitable protective clothing.

Respiratory protection

- Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

Environmental exposure controls

- Do not allow the product to be released into the environment.

Other information

- When using, do not eat, drink or smoke.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Colorless to white
Odor	: Acetic acid
Odor threshold	: No data available
pH	: No data available

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Evaporation Rate	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: > 135 °C (> 275 °F)
Auto-ignition Temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Specific Gravity	: > 1
Solubility	: No data available
Partition coefficient: n-octanol/water	: No data available
Viscosity	: No data available

9.2. Other information

VOC content : < 1%

SECTION 10: Stability and reactivity

10.1. Reactivity

May react exothermically with water releasing heat. Adding an acid to a base or base to an acid may cause a violent reaction. May hydrolyze with water to form acetic acid. Reacts with water and moisture in air liberating methanol.

10.2. Chemical stability

Stable at standard temperature and pressure.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Incompatible materials.

10.5. Incompatible materials

Alcohols. Strong acids. Strong bases. Strong oxidizers. Water.

10.6. Hazardous decomposition products

Silicon oxides. Carbon oxides (CO, CO₂). Halogenated compounds. Oxides of tin. Silicon oxides. Corrosive vapors. Will decompose above 150 °C (> 300 °F) releasing formaldehyde vapors. Formaldehyde is a potential carcinogen and can act as a potential skin and respiratory sensitizer. Formaldehyde can also cause respiratory and eye irritation.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Silanetriol, ethyl-, triacetate (17689-77-9)	
LD50 oral rat	1460 mg/kg
Trifluoropropylmethylcyclotrisiloxane (2374-14-3)	
LD50 Oral Rat	3995 – 5433 mg/kg
LD50 Dermal Rabbit	> 20000 mg/kg

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Skin corrosion/irritation	: Causes severe skin burns and eye damage.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Suspected of damaging fertility. Suspected of damaging the unborn child
Specific target organ toxicity (single exposure)	: May cause respiratory irritation.
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Symptoms/injuries after inhalation	: Irritation of the respiratory tract and the other mucous membranes. May be corrosive to the respiratory tract.
Symptoms/injuries after skin contact	: Causes severe irritation which will progress to chemical burns.
Symptoms/injuries after eye contact	: Causes permanent damage to the cornea, iris, or conjunctiva.
Symptoms/injuries after ingestion	: May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract
Chronic symptoms	: Suspected of damaging fertility. Suspected of damaging the unborn child.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - General : Not classified.

Dibutyltin diacetate (1067-33-0)	
EC50 Chronic	0.035 mg/l Exposure time: 72 hour (Species: Skeletonema costatum)
NOEC (Acute)	0.65 mg/l
NOEC Chronic Crustacea	0.32 mg/l (48-Hour EC50 Daphnia magna)

12.2. Persistence and degradability

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Persistence and degradability	Not established.

12.3. Bioaccumulative potential

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Bioaccumulative potential	Not established.

Dibutyltin diacetate (1067-33-0)	
Partition coefficient n-octanol/water (Log Pow)	3.39 at 20 °C (at pH 5)

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : Avoid release to the environment.

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

- Waste disposal recommendations : Dispose of waste material in accordance with all local, regional, national, and international regulations.
- Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued. Except by transportation by aircraft, the transport classification does not apply to packages smaller than 1.0 L (0.3 gallons).

14.1. In Accordance with DOT

Proper Shipping Name CORROSIVE LIQUID, N.O.S. (Silanetriol, ethyl-, triacetate)
Hazard Class 8
Identification Number UN1760
Label Codes 8
Packing Group II
ERG Number 154



14.2. In Accordance with IMDG

Proper Shipping Name CORROSIVE LIQUID, N.O.S. (Silanetriol, ethyl-, triacetate)
Hazard Class 8
Identification Number UN1760
Packing Group II
Label Codes 8
EmS-No. (Fire) F-A
EmS-No. (Spillage) S-B



14.3. In Accordance with IATA

Proper Shipping Name CORROSIVE LIQUID, N.O.S. (Silanetriol, ethyl-, triacetate)
Packing Group II
Identification Number UN1760
Hazard Class 8
Label Codes 8
ERG Code (IATA) 8L



SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed or exempted from being listed on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

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SARA Section	Health hazard - Serious eye damage or eye irritation
311/312 Hazard	Health hazard - Specific target organ toxicity (single or repeated exposure)
Classes	Health hazard - Skin corrosion or Irritation
	Health hazard - Reproductive toxicity

15.2. US State regulations

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Silanetriol, ethyl-, triacetate (17689-77-9)

U.S. - Texas - Effects Screening Levels - Long Term

U.S. - Texas - Effects Screening Levels - Short Term

Dibutyltin diacetate (1067-33-0)

RTK - U.S. - Massachusetts - Right To Know List

U.S. - Texas - Effects Screening Levels - Long Term

U.S. - Texas - Effects Screening Levels - Short Term

Tin organic compounds

U.S. - Minnesota - Hazardous Substance List

U.S. - Tennessee - Occupational Exposure Limits - TWAs

U.S. - Tennessee - Occupational Exposure Limits - Skin Designations

U.S. - Vermont - Permissible Exposure Limits - TWAs

U.S. - Connecticut - Hazardous Air Pollutants - HLVs (8 hr)

U.S. - Vermont - Permissible Exposure Limits - Skin Designations

U.S. - Washington - Permissible Exposure Limits - TWAs

U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min)

U.S. - Washington - Permissible Exposure Limits - STELs

U.S. - Washington - Permissible Exposure Limits - Skin Designations

U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs)

U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations

U.S. - New York - Occupational Exposure Limits - TWAs

U.S. - New York - Occupational Exposure Limits - Skin Designations

U.S. - Michigan - Occupational Exposure Limits - TWAs

U.S. - Michigan - Occupational Exposure Limits - Skin Designations

U.S. - Minnesota - Permissible Exposure Limits - Skin Designations

U.S. - Minnesota - Permissible Exposure Limits - TWAs

U.S. - Oregon - Permissible Exposure Limits - TWAs

U.S. - Texas - Effects Screening Levels - Long Term

U.S. - Texas - Effects Screening Levels - Short Term

U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 75 Feet or Greater

U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 40 Feet to Less Than 75 Feet

U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 25 Feet to Less Than 40 Feet

U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights Less Than 25 Feet

U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 1-Hour

U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 8-Hour

U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour

U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual

Trifluoropropylmethylcyclotrisiloxane (2374-14-3)

U.S. - Texas - Effects Screening Levels - Long Term

U.S. - Texas - Effects Screening Levels - Short Term

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SECTION 16: Other information, including date of preparation or last revision

NFPA Health Hazard

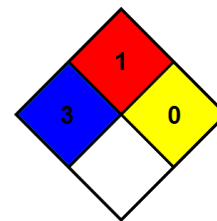
3 - Materials that, under emergency conditions, can cause serious or permanent injury.

NFPA Fire Hazard

1 - Materials that must be preheated before ignition can occur.

NFPA Reactivity Hazard

0 - Material that in themselves are normally stable, even under fire conditions.



HMIS III Rating
Health

3 Serious Hazard

* Chronic - Chronic (long-term) health effects may result from repeated overexposure

Flammability
Physical

1 Slight Hazard

0 Minimal Hazard

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
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.
H341	Suspected of causing genetic defects.
H360	May damage fertility or the unborn child.
H361	Suspected of damaging fertility. Suspected of damaging the unborn child.
H370	Causes damage to organs.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.
Muta. 2	Germ cell mutagenicity, Category 2
Repr. 1B	Reproductive toxicity, Category 1B
Repr. 2	Reproductive toxicity, Category 2
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1B	Skin sensitisation, category 1B
STOT RE 1	Specific target organ toxicity — Repeated exposure, Category 1
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
STOT SE 1	Specific target organ toxicity — single exposure, Category 1
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation

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