

Safety Data Sheet

According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
Revision date: 04/10/2019 Date of issue: 21/11/2014

Version: 4.0

SECTION 1: Identification of the Substance/mixture and of the Company/Undertaking

1.1. Product Identifier

| | |
|--------------|-------------------|
| Product form | Mixture |
| Product Name | R4-1140 |
| Synonyms | Silicone Adhesive |

1.2. Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

1.2.1. Relevant Identified Uses

Use of the Substance/Mixture For professional use only.

1.2.2. Uses Advised Against

No additional information available

1.3. Details of the Supplier of the Safety Data Sheet

NuSil Technology Europe
1198 Avenue Maurice Donat
Le Natura Bt. 2
06250 Mougins
France
+33 4 92 96 93 31
ehs@nusil.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)
+(44)-870-8200418
+(353)-19014670

SECTION 2: Hazards Identification

2.1. Classification of the Substance or Mixture

Classification According to Regulation (EC) No. 1272/2008 [CLP]

Skin Corr. 1B H314

Eye Dam. 1 H318

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

2.2. Label Elements

Labelling According to Regulation (EC) No. 1272/2008 [CLP]

Hazard Pictograms (CLP)



GHS05

Signal Word (CLP)

Danger

Hazardous Ingredients

Silanetriol, ethyl-, triacetate

Hazard Statements (CLP)

H314 - Causes severe skin burns and eye damage.

Precautionary Statements (CLP)

P260 - Do not breathe vapours, mist, or spray

P264 - Wash hands, forearms and face thoroughly after handling

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P280 - Wear eye protection, face protection, protective clothing, protective 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.
P304+P340 - IF INHALED: Remove person to fresh air and keep 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.
P310 - Immediately call a POISON CENTER or doctor
P321 - Specific treatment (see SECTION 4 on this SDS)
P405 - Store locked up.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
EUH014 - Reacts violently with water.

EUH-statements

2.3. Other Hazards

Other Hazards Not Contributing to the Classification

Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

SECTION 3: Composition/Information on Ingredients

3.1. Substances

Not applicable

3.2. Mixture

| Name | Product Identifier | % | Classification According to Regulation (EC) No. 1272/2008 [CLP] |
|---------------------------------|--|------|--|
| Silanetriol, ethyl-, triacetate | (CAS-No.) 17689-77-9 (EC-No.) 241-677-4 | < 10 | Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 |
| Glycidoxypropyltrimethoxysilane | (CAS-No.) 2530-83-8 (EC-No.) 219-784-2 | < 1 | Eye Dam. 1, H318 |

Full text of H-statements: 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

When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

First-Aid Measures After Skin Contact

Remove contaminated clothing. Immediately flush skin with plenty of water for at least 30 minutes. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or doctor.

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First-Aid Measures After Eye Contact Rinse cautiously with water for at least 30 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.

First-Aid Measures After Ingestion Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

Symptoms/Effects Causes severe skin burns and eye damage.

Symptoms/Effects After Inhalation May be corrosive to the respiratory tract.

Inhalation

Symptoms/Effects After Skin Contact Causes severe irritation which will progress to chemical burns.

Contact

Symptoms/Effects After Eye Contact Causes permanent damage to the cornea, iris, or conjunctiva.

Contact

Symptoms/Effects After Ingestion May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

Chronic Symptoms None expected under normal conditions of use.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: Firefighting Measures

5.1. Extinguishing Media

Suitable Extinguishing Media Water spray, dry chemical, foam, carbon dioxide.

Unsuitable Extinguishing Media Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard Not considered flammable but may burn at high temperatures.

Explosion Hazard Product is not explosive.

Reactivity May react exothermically with water releasing heat. Adding an acid to a base or base to an acid may cause a violent reaction.

5.3. Advice for Firefighters

Precautionary Measures Fire Exercise caution when fighting any chemical fire.

Firefighting Instructions Use water spray or fog for cooling exposed containers.

Protection During Firefighting Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures Do not breathe vapour, mist or spray. Do not get in eyes, on skin, or on clothing.

6.1.1. For Non-Emergency Personnel

Protective Equipment Use appropriate personal protective equipment (PPE).

Emergency Procedures Evacuate unnecessary personnel.

6.1.2. For Emergency Responders

Protective Equipment Equip cleanup crew with proper protection.

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Emergency Procedures

Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Ventilate area.

6.2. Environmental Precautions

Prevent entry to sewers and public waters.

6.3. Methods and Materials for Containment and Cleaning Up

For Containment

Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. As an immediate precautionary measure, isolate spill or leak area in all directions.

Methods For Cleaning Up

Clean up spills immediately and dispose of waste safely. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill. Cautiously neutralize spilled liquid.

6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7: Handling And Storage

7.1. Precautions for Safe Handling

Additional Hazards When Processed

May release corrosive vapors.

Precautions for Safe Handling

Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not get in eyes, on skin, or on clothing. Handle empty containers with care because they may still present a hazard. Do not breathe vapours, mist, spray.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures Storage Conditions

Comply with applicable regulations.

Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store in original container or corrosive resistant and/or lined container.

Incompatible Materials

Strong acids, strong bases, strong oxidizers.

7.3. Specific End Use(S)

For bonding silicone elastomers to each other and some synthetics and metals. For professional use only.

SECTION 8: Exposure Controls/Personal Protection

8.1. Control Parameters

No additional information available

8.2. Exposure Controls

Appropriate Engineering Controls

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

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Personal Protective Equipment

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



Materials for Protective Clothing

Chemically resistant materials and fabrics. Corrosion-proof clothing.

Hand Protection

Wear protective gloves.

Eye Protection

Chemical safety goggles and face shield.

Skin and Body Protection

Wear suitable protective clothing.

Respiratory Protection

If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

Other Information

When using, do not eat, drink or smoke.

SECTION 9: Physical and Chemical Hazards

9.1. Information on Basic Physical and Chemical Properties

| | |
|---------------------------------------|-------------------|
| Physical State | Liquid |
| Colour | Colourless |
| Odour | No data available |
| Odour Threshold | No data available |
| pH | No data available |
| 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) | Not applicable |
| Vapour Pressure | No data available |
| Relative Vapour Density At 20 °C | No data available |
| Relative Density | 1,12 (water = 1) |
| Solubility | No data available |
| Partition Coefficient n-Octanol/Water | No data available |
| Viscosity, Kinematic | No data available |
| Viscosity, Dynamic | No data available |
| Explosive Properties | No data available |
| Oxidising Properties | No data available |
| Explosive Limits | Not applicable |

9.2. Other Information

VOC content < 1 %

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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.

10.2. Chemical Stability

Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility Of Hazardous Reactions

Hazardous polymerization will not occur.

10.4. Conditions To Avoid

Direct sunlight, extremely high or low temperatures, and incompatible materials.

10.5. Incompatible Materials

Strong acids, strong bases, strong oxidizers.

10.6. Hazardous Decomposition Products

Thermal decomposition generates: Corrosive vapors. Carbon oxides (CO, CO₂). Silicon oxides.

SECTION 11: Toxicological Information

11.1. Information On Toxicological Effects

Acute Toxicity Not classified (Based on available data, the classification criteria are not met)

| | |
|--|---------------|
| Silanetriol, ethyl-, triacetate (17689-77-9) | |
| LD50 Oral Rat | 1460 mg/kg |
| LD50 Oral | 1462 mg/kg |
| Glycidoxypropyltrimethoxysilane (2530-83-8) | |
| LD50 Oral Rat | 8025 mg/kg |
| LD50 Dermal Rabbit | 4250 mg/kg |
| LC50 Inhalation Rat | > 5,3 mg/l/4h |

| | |
|--|---|
| Skin Corrosion/Irritation | Causes severe skin burns and eye damage. |
| Eye Damage/Irritation | Causes serious eye damage. |
| Respiratory or Skin Sensitization | Not classified (Based on available data, the classification criteria are not met) |
| Germ Cell Mutagenicity | Not classified (Based on available data, the classification criteria are not met) |
| Carcinogenicity | Not classified (Based on available data, the classification criteria are not met) |
| Reproductive Toxicity | Not classified (Based on available data, the classification criteria are not met) |
| Specific Target Organ Toxicity (Single Exposure) | Not classified (Based on available data, the classification criteria are not met) |
| Specific Target Organ Toxicity (Repeated Exposure) | Not classified (Based on available data, the classification criteria are not met) |
| Aspiration Hazard | Not classified (Based on available data, the classification criteria are not met) |

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SECTION 12: Ecological Information

12.1. Toxicity

Ecology - General Not classified.

| | |
|---|---|
| Glycidoxypropyltrimethoxysilane (2530-83-8) | |
| LC50 Fish 1 | 55 mg/l (Exposure time: 96 h - Species: Cyprinus carpio) |
| EC50 Daphnia 1 | 710 mg/l (Exposure time: 48 h - Species: Daphnia magna) |
| ErC50 (Algae) | 350 mg/l Exposure time: 96 h - Species: Pseudokirchnerella subcapitata) |

12.2. Persistence and Degradability

| | |
|-------------------------------|------------------|
| R4-1140 | |
| Persistence and Degradability | Not established. |

12.3. Bioaccumulative Potential

| | |
|---------------------------|------------------|
| R4-1140 | |
| Bioaccumulative potential | Not established. |

12.4. Mobility in Soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other Adverse Effects

Other Information Avoid release to the environment.

SECTION 13: Disposal Considerations

13.1. Waste Treatment Methods

Product/Packaging Disposal Dispose of contents/container in accordance with local, regional, national, and international regulations.
Recommendations
Additional Information Container may remain hazardous when empty. Continue to observe all precautions.
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).






In accordance with ADR / RID / IMDG / IATA / ADN

| ADR | IMDG | IATA | ADN | RID |
|---|---|---|---|---|
| 14.1. UN Number | | | | |
| 1760 | 1760 | 1760 | 1760 | 1760 |
| 14.2. UN Proper Shipping Name | | | | |
| CORROSIVE LIQUID, N.O.S. (CONTAINS Silanetriol, ethyl-, triacetate) | CORROSIVE LIQUID, N.O.S. (CONTAINS Silanetriol, ethyl-, triacetate) | CORROSIVE LIQUID, N.O.S. (CONTAINS Silanetriol, ethyl-, triacetate) | CORROSIVE LIQUID, N.O.S. (CONTAINS Silanetriol, ethyl-, triacetate) | CORROSIVE LIQUID, N.O.S. (CONTAINS Silanetriol, ethyl-, triacetate) |

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| ADR | IMDG | IATA | ADN | RID |
|---|---|---|--|---|
| 14.3. Transport Hazard Class(Es) | | | | |
| 8 | 8 | 8 | 8 | 8 |
|  |  |  |  |  |
| 14.4. Packing Group | | | | |
| II | II | II | II | II |
| 14.5. Environmental Hazards | | | | |
| Dangerous for the environment : No | Dangerous for the environment : No Marine pollutant : No | Dangerous for the environment : No | Dangerous for the environment : No | Dangerous for the environment : No |

14.6. Special Precautions For User

No additional information available

14.7. Transport in Bulk According to Annex II of MARPOL and The IBC Code

Not applicable

SECTION 15: Regulatory Information

15.1. Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

15.1.2. National Regulations

No additional information available

15.2. Chemical Safety Assessment

No chemical safety assessment has been carried out

SECTION 16: Other Information

Indication of Changes

| Section | Section Header | Change | Date Changed |
|---------|--|----------|--------------|
| 1 | Identification of the substance/mixture and of the company/undertaking | Modified | 04/10/2019 |
| 2 | Hazards identification | Modified | 04/10/2019 |
| 3 | Composition/information on ingredients | Modified | 04/10/2019 |
| 4 | First aid measures | Modified | 04/10/2019 |
| 9 | Physical and chemical properties | Modified | 04/10/2019 |
| 11 | Toxicological information | Modified | 04/10/2019 |
| 14 | Transport information | Modified | 04/10/2019 |

Date of Preparation or Latest Revision 04/10/2019

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Data Sources

Information and data obtained and used in the authoring of this safety data sheet could come from database subscriptions, official government regulatory body websites, product/ingredient manufacturer or supplier specific information, and/or resources that include substance specific data and classifications according to GHS or their subsequent adoption of GHS.

Other Information

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Full Text of H- and EUH-statements:

| | |
|---------------------|---|
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| Eye Dam. 1 | Serious eye damage/eye irritation, Category 1 |
| Skin Corr. 1B | Skin corrosion/irritation, Category 1B |
| H302 | Harmful if swallowed. |
| H314 | Causes severe skin burns and eye damage. |
| H318 | Causes serious eye damage. |
| EUH014 | Reacts violently with water. |

Abbreviations and Acronyms

ACGIH – American Conference of Governmental Industrial Hygienists
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
BEI - Biological Exposure Indices (BEI)
BOD – Biochemical Oxygen Demand
CAS No. - Chemical Abstracts Service Number
CLP – Classification, Labeling and Packaging Regulation (EC) No 1272/2008
COD – Chemical Oxygen Demand
EC – European Community
EC50 - Median Effective Concentration
EEC – European Economic Community
EINECS – European Inventory of Existing Commercial Chemical Substances
EmS-No. (Fire) - IMDG Emergency Schedule Fire
EmS-No. (Spillage) - IMDG Emergency Schedule Spillage
EU – European Union
ErC50 - EC50 in Terms of Reduction Growth Rate
GHS – Globally Harmonized System of Classification and Labeling of Chemicals
IARC - International Agency for Research on Cancer
IATA - International Air Transport Association
IBC Code - International Bulk Chemical Code
IMDG - International Maritime Dangerous Goods
IPRV - Ilgalaikio Poveikio Ribinis Dydis
IOELV – Indicative Occupational Exposure Limit Value
LC50 - Median Lethal Concentration
LD50 - Median Lethal Dose
LOAEL - Lowest Observed Adverse Effect Level
LOEC - Lowest-Observed-Effect Concentration
Log Koc - Soil Organic Carbon-water Partitioning Coefficient
Log Kow - Octanol/water Partition Coefficient
Log Pow - Ratio of the equilibrium concentration (C) of a dissolved substance in a two-phase system consisting of two largely immiscible solvents, in this case octanol and water
MAK – Maximum Workplace Concentration/Maximum Permissible Concentration
MARPOL - International Convention for the Prevention of Pollution

NDS - Najwyższe Dopuszczalne Stezenie
NDSCh - Najwyższe Dopuszczalne Stezenie Chwilowe
NDSP - Najwyższe Dopuszczalne Stezenie Pulapowe
NOAEL - No-Observed Adverse Effect Level
NOEC - No-Observed Effect Concentration
NRD - Nevirsytinas Ribinis Dydis
NTP – National Toxicology Program
OEL - Occupational Exposure Limits
PBT - Persistent, Bioaccumulative and Toxic
PEL - Permissible Exposure Limit
pH – Potential Hydrogen
REACH – Registration, Evaluation, Authorisation, and Restriction of Chemicals
RID – Regulations Concerning the International Carriage of Dangerous Goods by Rail
SADT - Self Accelerating Decomposition Temperature
SDS - Safety Data Sheet
STEL - Short Term Exposure Limit
STOT - Specific Target Organ Toxicity
TA-Luft - Technische Anleitung zur Reinhaltung der Luft
TEL TRK – Technical Guidance Concentrations
ThOD – Theoretical Oxygen Demand
TLM - Median Tolerance Limit
TLV - Threshold Limit Value
TPRD - Trumpalaikio Poveikio Ribinis Dydis
TRGS 510 - Technische Regel für Gefahrstoffe 510 - Lagerung von Gefahrstoffen in ortsbeweglichen Behältern
TRGS 552 – Technische Regeln für Gefahrstoffe - N-Nitrosamine
TRGS 900 - Technische Regel für Gefahrstoffe 900 – Arbeitsplatzgrenzwerte
TRGS 903 - Technische Regel für Gefahrstoffe 903 - Biologische Grenzwerte
TSCA - Toxic Substances Control Act
TWA - Time Weighted Average
VOC – Volatile Organic Compounds
VLA-EC - Valor Limite Ambiental Exposición de Corta Duración
VLA-ED - Valor Limite Ambiental Exposición Diaria
VLE – Valeur Limite D'exposition
VME – Valeur Limite De Moyenne Exposition
vPvB - Very Persistent and Very Bioaccumulative
WEL – Workplace Exposure Limit
WGK - Wassergefährdungsklasse

Nusil EU GHS SDS

The information provided in this Safety Data Sheet (SDS) was prepared based on data believed to be accurate as of the date of this SDS. TO THE GREATEST EXTENT PERMITTED BY LAW, NUSIL TECHNOLOGY LLC AND ITS AFFILIATED COMPANIES ("NUSIL") EXPRESSLY DISCLAIMS ANY AND ALL REPRESENTATIONS AND WARRANTIES REGARDING THE INFORMATION CONTAINED HEREIN INCLUDING, WITHOUT LIMITATION, AS TO ACCURACY, COMPLETENESS, FITNESS FOR PURPOSE OR USE, MERCHANTABILITY, NON-INFRINGEMENT, PERFORMANCE, SAFETY, SUITABILITY AND STABILITY. This SDS is intended as a guide to the appropriate use, handling, storage and disposal of the product to which it relates by properly trained personnel, and is not intended to be comprehensive. Users of NuSil's products are advised to perform their own tests and to exercise

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