

Safety Data Sheet

According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
Revision date: 30/10/2018 Date of issue: 06/08/2013

Version: 3.0

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

1.1. Product Identifier

Product form	Substance
Product Name	XL-110
CAS-No.	68037-59-2
Synonyms	Silicone Crosslinker

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 LLC
1050 Cindy Lane
Carpinteria, California 93013
USA
(805) 684-8780
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)

SECTION 2: Hazards Identification

2.1. Classification of the Substance or Mixture

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

Skin Irrit. 2 H315

Eye Irrit. 2 H319

STOT SE 3 H335

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)



GHS07

Signal Word (CLP)

Warning

Hazard Statements (CLP)

H315 - Causes skin irritation.

H319 - Causes serious eye irritation.

H335 - May cause respiratory irritation.

Precautionary Statements (CLP)

P261 - Avoid breathing vapors, mist, or spray

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

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P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves, protective clothing, and eye protection
P302+P352 - IF ON SKIN: Wash with plenty of 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.
P312 - Call a POISON CENTRE or doctor if you feel unwell.
P321 - Specific treatment (see section 4 on this SDS)
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
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.

2.3. Other Hazards

Contains PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

Other Hazards Not Contributing Exposure may aggravate pre-existing eye, skin, or respiratory conditions to the Classification

SECTION 3: Composition/Information on Ingredients

3.1. Substances

Name	Product Identifier	%	Classification According to Regulation (EC) No. 1272/2008 [CLP]
Siloxanes and Silicones, dimethyl, methyl hydrogen	(CAS-No.) 68037-59-2	> 90	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
Octamethylcyclotetrasiloxane substance listed as REACH Candidate (Octamethylcyclotetrasiloxane (D4))	(CAS-No.) 556-67-2 (EC-No.) 209-136-7 (EC Index-No.) 014-018-00-1	< 3	Repr. 2, H361f Aquatic Chronic 4, H413
Dodecamethylcyclohexasiloxane substance listed as REACH Candidate (Dodecamethylcyclohexasiloxane (D6))	(CAS-No.) 540-97-6 (EC-No.) 208-762-8	< 3	Not classified

Full text of H-statements: see section 16

3.2. Mixture

Not applicable

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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. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.
First-Aid Measures After Eye Contact	Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical 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 serious eye irritation. Causes skin irritation. May cause respiratory irritation.
Symptoms/Effects After Inhalation	Irritation of the respiratory tract and the other mucous membranes.
Symptoms/Effects After Skin Contact	Redness, pain, swelling, itching, burning, dryness, and dermatitis.
Symptoms/Effects After Eye Contact	Contact causes severe irritation with redness and swelling of the conjunctiva.
Symptoms/Effects After Ingestion	Ingestion may cause adverse effects.
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	Hazardous reactions will not occur under normal conditions.
Hazardous Decomposition Products in Case of Fire	Carbon oxides (CO, CO ₂). Silicon oxides. Will decompose above 150 °C (> 300 °F) releasing formaldehyde vapours. Formaldehyde is a potential carcinogen and can act as a skin and respiratory sensitizer. Formaldehyde can also cause respiratory and eye irritation. May produce explosive hydrogen gas on contact with incompatibilities or upon thermal decomposition.

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5.3. Advice for Firefighters

Precautionary Measures Fire
Firefighting Instructions
Protection During Firefighting

Exercise caution when fighting any chemical fire.
Use water spray or fog for cooling exposed containers.
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 Avoid breathing (vapor, mist, spray). Avoid all contact with skin, eyes, or 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.
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.

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.

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

Precautions for Safe Handling Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid breathing vapors, mist, spray. Avoid contact with skin, eyes and clothing. Avoid contact with eyes, skin and clothing.

Hygiene Measures Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures Comply with applicable regulations.
Storage Conditions 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.

Incompatible Materials Strong acids, strong bases, strong oxidizers.

7.3. Specific End Use(S)

No additional information available

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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. Gloves. Protective clothing. Protective goggles.

Personal Protective Equipment



Materials for Protective Clothing

Chemically resistant materials and fabrics.

Hand Protection

Wear protective gloves.

Eye Protection

Chemical safety goggles.

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

Odourless

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

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

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Oxidising Properties No data available

Explosive Limits No data available

9.2. Other Information

VOC content < 1 %

SECTION 10: Stability and Reactivity

10.1. Reactivity

Hazardous reactions will not occur under normal conditions.

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

Will decompose above 150 °C (> 300 °F) releasing formaldehyde vapours. Formaldehyde is a potential carcinogen and can act as a potential skin and respiratory sensitizer. Formaldehyde can also cause respiratory and eye irritation. May produce explosive hydrogen gas on contact with incompatibilities or upon thermal decomposition.

SECTION 11: Toxicological Information

11.1. Information On Toxicological Effects

Acute Toxicity Not classified

Octamethylcyclotetrasiloxane (556-67-2)	
LD50 Oral Rat	1540 mg/kg
LD50 Dermal Rabbit	794 µl/kg
LC50 Inhalation Rat	36 g/m ³ (Exposure time: 4 h)
Dodecamethylcyclohexasiloxane (540-97-6)	
LD50 Oral Rat	> 50 g/kg

Skin Corrosion/Irritation	Causes skin irritation.
Eye Damage/Irritation	Causes serious eye irritation.
Respiratory or Skin Sensitization	Not classified
Germ Cell Mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive Toxicity	Not classified
Specific Target Organ Toxicity (Single Exposure)	May cause respiratory irritation.
Specific Target Organ Toxicity (Repeated Exposure)	Not classified
Aspiration Hazard	Not classified

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SECTION 12: Ecological Information

12.1. Toxicity

Ecology - General Not classified.

Octamethylcyclotetrasiloxane (556-67-2)	
LC50 Fish 1	> 500 mg/l (Exposure time: 96 h - Species: Brachydanio rerio)
LC50 Fish 2	> 1000 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus)

12.2. Persistence and Degradability

XL-110 (68037-59-2)	
Persistence and Degradability	Not established.

12.3. Bioaccumulative Potential

XL-110 (68037-59-2)	
Bioaccumulative potential	Not established.
Octamethylcyclotetrasiloxane (556-67-2)	
BCF Fish 1	12400
Log Pow	5,1

12.4. Mobility in Soil

No additional information available

12.5. Results of PBT and vPvB assessment

Octamethylcyclotetrasiloxane (556-67-2)	
This substance/mixture meets the PBT criteria of REACH regulation, annex XIII	
This substance/mixture meets the vPvB criteria of REACH regulation, annex XIII	
Dodecamethylcyclohexasiloxane (540-97-6)	
This substance/mixture meets the PBT criteria of REACH regulation, annex XIII	
This substance/mixture meets the vPvB criteria of REACH regulation, annex XIII	

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, Recommendations 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.

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

14.1. UN Number	
Not regulated for transport	
14.2. UN Proper Shipping Name	
Not regulated for transport	

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14.3. Transport Hazard Class(Es)
Not regulated for transport
14.4. Packing Group
Not regulated for transport
14.5. Environmental Hazards
Not regulated for transport
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

No REACH Annex XVII restrictions

XL-110 is not on the REACH Candidate List

Contains a substance on the REACH candidate list in concentration $\geq 0.1\%$ or with a lower specific limit: Octamethylcyclotetrasiloxane (D4) (EC 209-136-7, CAS 556-67-2),

Dodecamethylcyclohexasiloxane (D6) (EC 208-762-8, CAS 540-97-6)

XL-110 is not on the REACH Annex XIV List

Octamethylcyclotetrasiloxane (556-67-2)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Dodecamethylcyclohexasiloxane (540-97-6)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical 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 No additional information available

Date of Preparation or Latest Revision 30/10/2018

Revision

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:

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Aquatic Chronic 4	Hazardous to the aquatic environment — Chronic Hazard, Category 4
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Repr. 2	Reproductive toxicity, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H361f	Suspected of damaging fertility.
H413	May cause long lasting harmful effects to aquatic life.

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
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 Límite Ambiental Exposición de Corta Duración
VLA-ED - Valor Límite 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

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INCLUDING WITHOUT LIMITATION, FOR LOSS OF PROFITS, REPUTATIONAL DAMAGE, PRODUCT RECALL OR BUSINESS INTERRUPTION.



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