

R-2160 Part A

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Revision Date: 09/25/2020 Date of Issue: 08/08/2014

SECTION 1: Identification

1.1. Product Identifier

Product Form	Mixture
Product Name	R-2160 Part A
Synonyms	Silicone 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
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

GHS-US Classification

Aquatic Acute 2 H401

Aquatic Chronic 2 H411

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

2.2. Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US)



GHS09

Hazard Statements (GHS-US)

H401 - Toxic to aquatic life

H411 - Toxic to aquatic life with long lasting effects

Precautionary Statements (GHS-US)

P273 - Avoid release to the environment.

P391 - Collect spillage.

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 pre-existing eye, skin, or respiratory conditions.

2.4. Unknown Acute Toxicity (GHS-US)

No data available

R-2160 Part A

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 3: Composition/Information On Ingredients

3.1. Substances

Not applicable

3.2. Mixture

Name	Product Identifier	%	GHS-US Classification
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	(CAS-No.) 68909-20-6	10 - 30	Not classified
Zinc oxide (ZnO)	(CAS-No.) 1314-13-2	< 5	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Iron oxides	(CAS-No.) 1332-37-2	< 5	Not classified

Full text of H-phrases: see section 16

The specific chemical identity and/or exact percentage of composition have been withheld as a trade secret [29 CFR 1910.1200].

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 5 minutes. Obtain medical attention if irritation develops or persists.
First-aid Measures After Eye Contact	Rinse cautiously with water for at least 5 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists.
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/Injuries	Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/Injuries After Inhalation	Prolonged exposure may cause irritation.
Symptoms/Injuries After Skin Contact	Prolonged exposure may cause skin irritation.
Symptoms/Injuries After Eye Contact	May cause slight irritation to eyes.
Symptoms/Injuries 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.

R-2160 Part A

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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. 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.

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.
Other Information Will decompose above 150 °C (> 300 °F) releasing formaldehyde vapors. Do not allow run-off from firefighting to enter drains or water courses.

SECTION 6: Accidental Release Measures

6.1. Personal Precautions, Protective Equipment And Emergency Procedures

- General Measures Avoid prolonged contact with eyes, skin and clothing. Avoid breathing (vapor, mist, spray).

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. Avoid release to the environment. Collect spillage.

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.

R-2160 Part A

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 7: Handling And Storage

7.1. Precautions for Safe Handling

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

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)

High temperature adhesive/sealant. 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).

Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica (68909-20-6)		
USA OSHA	OSHA PEL (TWA) (mg/m ³)	6 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	20 mppcf (80mg/m ³ /%SiO ₂)
Zinc oxide (ZnO) (1314-13-2)		
USA ACGIH	ACGIH TWA (mg/m ³)	2 mg/m ³ (respirable particulate matter)
USA ACGIH	ACGIH STEL (mg/m ³)	10 mg/m ³ (respirable particulate matter)
USA OSHA	OSHA PEL (TWA) (mg/m ³)	5 mg/m ³ (fume) 15 mg/m ³ (total dust) 5 mg/m ³ (respirable fraction)
Iron oxides (1332-37-2)		
USA ACGIH	ACGIH TWA (mg/m ³)	5 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	10 mg/m ³ Iron Oxide fume

8.2. Exposure Controls

Appropriate Engineering Controls Suitable eye/body wash equipment should be available in the vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

Personal Protective Equipment Gloves. Protective clothing. Protective goggles.



Materials For Protective Clothing Chemically resistant materials and fabrics.

Hand Protection Wear protective gloves.

R-2160 Part A

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Eye And Face 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 Properties

9.1. Information on Basic Physical and Chemical Properties

Physical State	Liquid
Color	Dark brown to black
Odor	Odorless
Odor 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
Vapor Pressure	No data available
Relative Vapor Density at 20 °C	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

No additional information available

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.

R-2160 Part A

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

10.6. Hazardous Decomposition Products

None expected under normal conditions of use. Thermal decomposition generates: Carbon oxides (CO, CO₂). Silicon oxides. Zinc oxide. 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

Zinc oxide (ZnO) (1314-13-2)	
LD50 Oral Rat	> 5000 mg/kg
LD50 Dermal Rat	> 2000 mg/kg
Skin Corrosion/Irritation	Not classified
Serious Eye Damage/Irritation	Not classified
Respiratory or Skin Sensitization	Not classified
Germ Cell Mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive Toxicity	: Not classified
Specific Target Organ Toxicity (Single Exposure)	: Not classified
Specific Target Organ Toxicity (Repeated Exposure)	: Not classified
Aspiration Hazard	Not classified
Symptoms/Injuries After Inhalation	Prolonged exposure may cause irritation.
Symptoms/Injuries After Skin Contact	Prolonged exposure may cause skin irritation.
Symptoms/Injuries After Eye Contact	May cause slight irritation to eyes.
Symptoms/Injuries After Ingestion	Ingestion may cause adverse effects.
Chronic Symptoms	None expected under normal conditions of use.

SECTION 12: Ecological Information

12.1. Toxicity

Ecology - General Toxic to aquatic life with long lasting effects.

Zinc oxide (ZnO) (1314-13-2)	
LC50 Fish 1	970 µg/l (780 ug Zn/L; Exposure time: 96 h - Species: Pimephales promelas)
LC50 Fish 2	1.793 mg/l (Exposure time: 96 h - Species: Zebrafish)
NOEC Chronic Fish	0.026 mg/l (Species: Jordanella floridae)

12.2. Persistence and Degradability

R-2160 Part A	
Persistence and Degradability	May cause long-term adverse effects in the environment.

12.3. Bioaccumulative Potential

R-2160 Part A	
Bioaccumulative Potential	Not established.

12.4. Mobility In Soil

No additional information available

12.5. Other Adverse Effects

Other Information Avoid release to the environment.

R-2160 Part A

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 13: Disposal Considerations

13.1. Waste Treatment Methods

Waste Disposal Recommendations	Dispose of contents/container in accordance with local, regional, national, and international regulations.
Additional Information	Container may remain hazardous when empty. Continue to observe all precautions.
Ecology - Waste Materials	Avoid release to the environment. This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

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.

14.1. In Accordance with DOT

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (Zinc oxide)
Hazard Class	9
Identification Number	UN3082
Label Codes	9
Packing Group	III
Marine Pollutant	Marine pollutant
ERG Number	171



14.2. In Accordance with IMDG

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Zinc oxide)
Hazard Class	9
Identification Number	UN3082
Packing Group	III
Label Codes	9
EmS-No. (Fire)	F-A
EmS-No. (Spillage)	S-F
Marine Pollutant	Marine pollutant



14.3. In Accordance with IATA

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Zinc oxide)
Packing Group	III
Identification Number	UN3082
Hazard Class	9
Label Codes	9
ERG Code (IATA)	9L



R-2160 Part A

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 15: Regulatory Information

15.1. US Federal Regulations

All components in this mixture are listed on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, have been exempted, or not disclosed due to CBI requirements or disclosure rules according to the relevant regulation.

15.2. US State Regulations

Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica (68909-20-6)
U.S. - Texas - Effects Screening Levels - Long Term U.S. - Texas - Effects Screening Levels - Short Term
Zinc oxide (ZnO) (1314-13-2)
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min) U.S. - Connecticut - Hazardous Air Pollutants - HLVs (8 hr) U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs) U.S. - Idaho - Occupational Exposure Limits - TWAs RTK - U.S. - Massachusetts - Right To Know List U.S. - Massachusetts - Toxics Use Reduction Act U.S. - Michigan - Occupational Exposure Limits - STELs U.S. - Michigan - Occupational Exposure Limits - TWAs U.S. - Minnesota - Hazardous Substance List U.S. - Minnesota - Permissible Exposure Limits - STELs U.S. - Minnesota - Permissible Exposure Limits - TWAs 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 RTK - U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - New York - Occupational Exposure Limits - TWAs U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 1-Hour U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 8-Hour U.S. - Oregon - Permissible Exposure Limits - TWAs RTK - U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List RTK - U.S. - Pennsylvania - RTK (Right to Know) List U.S. - Tennessee - Occupational Exposure Limits - STELs U.S. - Tennessee - Occupational Exposure Limits - TWAs U.S. - Texas - Effects Screening Levels - Long Term U.S. - Texas - Effects Screening Levels - Short Term U.S. - Vermont - Permissible Exposure Limits - STELs U.S. - Vermont - Permissible Exposure Limits - TWAs U.S. - Washington - Permissible Exposure Limits - STELs U.S. - Washington - Permissible Exposure Limits - TWAs
Iron oxides (1332-37-2)
U.S. - Texas - Effects Screening Levels - Long Term U.S. - Texas - Effects Screening Levels - Short Term

SECTION 16: Other Information, Including Date of Preparation or Last Revision

Date of Preparation or Latest Revision 09/25/2020

R-2160 Part A

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Other Information

This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

The specific chemical identity and/or exact percentage of composition have been withheld as a trade secret [29 CFR 1910.1200].

GHS Full Text Phrases:

Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Acute 2	Hazardous to the aquatic environment - Acute Hazard Category 2
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Comb. Dust	Combustible Dust
H400	Very toxic to aquatic life
H401	Toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic life with long lasting effects

NFPA Health Hazard

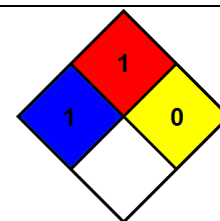
1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.

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

1 Slight Hazard - Irritation or minor reversible injury possible

Flammability

1 Slight Hazard

Physical

0 Minimal Hazard

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 their own judgment to determine the safety, suitability and appropriate use, handling, storage and disposal of each product and product combination for their own purposes and uses. TO THE GREATEST EXTENT PERMITTED BY LAW, NUSIL DISCLAIMS LIABILITY FOR, AND BY USING NUSIL'S PRODUCTS PURCHASER AGREES THAT UNDER NO CIRCUMSTANCES SHALL NUSIL BE LIABLE FOR, SPECIAL, INDIRECT, INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGES OF ANY TYPE OR KIND, INCLUDING WITHOUT LIMITATION, FOR LOSS OF PROFITS, REPUTATIONAL DAMAGE, PRODUCT RECALL OR BUSINESS INTERRUPTION.

NuSil US GHS SDS

R-2160 Part B

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Revision date: 09/25/2020

Revision date: 12/30/2013

Version: 4.0

SECTION 1: Identification

1.1. Product identifier

Product Form : Mixture
Product Name : R-2160 Part B
Synonyms : Silicone 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
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

GHS-US classification

Skin Irrit. 2 H315
Eye Irrit. 2A H319
STOT SE 3 H335
Repr. 2 H361

Full text of hazard classes and H-statements: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) : Warning
Hazard statements (GHS-US) : H315 - Causes skin irritation
H319 - Causes serious eye irritation
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.
P264 - Wash hands, forearms, and exposed areas thoroughly after handling.

R-2160 Part B

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear eye protection, face protection, protective clothing, protective gloves.
P302+P352 - If on skin: Wash with plenty of water.
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.
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.

2.3. Other hazards

Other hazards not contributing to the classification : Exposure may aggravate 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. Substances

Not applicable

3.2. Mixture

Name	Product identifier	%	GHS-US classification
Siloxanes and Silicones, dimethyl, methyl hydrogen	(CAS No) 68037-59-2	40 - 60	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	(CAS No) 68909-20-6	10 - 30	Not classified
Octamethylcyclotetrasiloxane	(CAS-No.) 556-67-2	< 1	Flam. Liq. 3, H226 Repr. 2, H361 Aquatic Chronic 4, H413

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.

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.

R-2160 Part B

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

- First-aid measures after eye contact : Immediately rinse with water for a prolonged period (at least 15 minutes) while holding the eyelids wide open. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists.
- 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/Injuries : Suspected of damaging fertility or the unborn child.
- Symptoms/Injuries After Inhalation : Inhalation of fumes or vapors may cause respiratory irritation.
- Symptoms/Injuries After Skin Contact : Causes skin irritation.
- Symptoms/Injuries After Eye Contact : Causes eye irritation.
- Symptoms/Injuries After Ingestion : Ingestion may cause adverse effects.

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: Fire-Fighting 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.

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 : 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.

R-2160 Part B

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

6.2. Environmental precautions

Prevent entry to sewers and 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 : 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.
- 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)

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).

Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica (68909-20-6)		
USA OSHA	OSHA PEL (TWA) (mg/m ³)	6 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	20 mppcf (80 mg/m ³ /%SiO ₂)

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.
- Personal protective equipment : Gloves. Protective clothing. Protective goggles.



- Materials for protective clothing : Chemically resistant materials and fabrics.
- Hand protection : Wear protective gloves.

R-2160 Part B

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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 properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Brown
Odor	: Odorless
Odor 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
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

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.

R-2160 Part B

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

10.6. Hazardous decomposition products

Carbon oxides (CO, CO₂). Silicon oxides. 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

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)

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Causes serious eye irritation.

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Suspected of damaging fertility or 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/effects after inhalation : Inhalation of fumes or vapors may cause respiratory irritation.

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.

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

R-2160 Part B	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

R-2160 Part B	
Bioaccumulative potential	Not established.

Octamethylcyclotetrasiloxane (556-67-2)	
BCF Fish 1	12400
Log Pow	5.1

R-2160 Part B

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

12.4. Mobility in soil

No additional information available

12.5. 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.
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.

14.1. In Accordance with DOT Not regulated for transport

14.2. In Accordance with IMDG Not regulated for transport

14.3. In Accordance with IATA Not regulated for transport

SECTION 15: Regulatory information

15.1. US Federal regulations

All components in this mixture are listed on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, have been exempted, or not disclosed due to CBI requirements or disclosure rules according to the relevant regulation.

R-2160 Part B	
SARA Section 311/312 Hazard Classes	Health hazard - Reproductive toxicity

15.2. US State regulations

Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica (68909-20-6)
U.S. - Texas - Effects Screening Levels - Long Term U.S. - Texas - Effects Screening Levels - Short Term
Octamethylcyclotetrasiloxane (556-67-2)
U.S. - Maine - Chemicals of High Concern U.S. - Minnesota - Chemicals of High Concern U.S. - Minnesota - Chemicals of High Concern - Persistent Bioaccumulative Toxins U.S. - Oregon - Priority Persistent Pollutant - Tier I - Persistent Pollutants U.S. - California - Safer Consumer Products - Initial List of Candidate Chemicals and Chemical Groups U.S. - Texas - Effects Screening Levels - Long Term U.S. - Texas - Effects Screening Levels - Short Term

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

Date of Preparation or Latest Revision : 09/25/2020

Revision

R-2160 Part B

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Other information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Full text of H-phrases:

Aquatic Chronic 4	Hazardous to the aquatic environment - Chronic Hazard Category 4
Flam. Liq. 3	Flammable liquids Category 3
Repr. 2	Reproductive toxicity Category 2
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H226	Flammable liquid and vapor
H361	Suspected of damaging fertility or the unborn child
H413	May cause long lasting harmful effects to aquatic life
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation

NFPA health hazard : 1 - Materials that, under emergency conditions, can cause significant irritation.

NFPA fire hazard : 1 - Materials that must be preheated before ignition can occur.

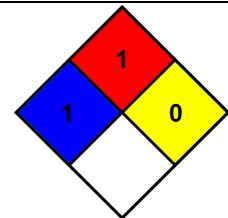
NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.

HMIS III Rating
Health

: 1 Slight Hazard - Irritation or minor reversible injury possible
* Chronic - Chronic (long-term) health effects may result from repeated overexposure

Flammability
Physical

: 1 Slight Hazard
: 0 Minimal Hazard



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 their own judgment to determine the safety, suitability and appropriate use, handling, storage and disposal of each product and product combination for their own purposes and uses. TO THE GREATEST EXTENT PERMITTED BY LAW, NUSIL DISCLAIMS LIABILITY FOR, AND BY USING NUSIL'S PRODUCTS PURCHASER AGREES THAT UNDER NO CIRCUMSTANCES SHALL NUSIL BE LIABLE FOR, SPECIAL, INDIRECT, INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGES OF ANY TYPE OR KIND, INCLUDING WITHOUT LIMITATION, FOR LOSS OF PROFITS, REPUTATIONAL DAMAGE, PRODUCT RECALL OR BUSINESS INTERRUPTION.

NuSil US GHS SDS