

MED-164

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Revision Date: 03/12/2024 Date of Issue: 12/27/2014



Version: 4.0

SECTION 1: Identification

1.1. Product Identifier

Product Form Mixture
Product Name MED-164
Synonyms Silicone Primer

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

Flammable liquids Category 2	H225
Skin corrosion/irritation Category 2	H315
Serious eye damage/eye irritation Category 1	H318
Specific target organ toxicity — Single exposure, Category 3, Narcosis	H336
Aspiration hazard Category 1	H304
Hazardous to the aquatic environment - Chronic Hazard Category 2	H411

2.2. Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US)



GHS02

GHS05

GHS07

GHS08

GHS09

Signal Word (GHS-US)

Danger

Hazard Statements (GHS-US)

H225 - Highly flammable liquid and vapor
H304 - May be fatal if swallowed and enters airways
H315 - Causes skin irritation
H318 - Causes serious eye damage
H336 - May cause drowsiness or dizziness
H411 - Toxic to aquatic life with long lasting effects

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Precautionary Statements (GHS-US)

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 - Keep container tightly closed.
P240 - Ground/Bond container and receiving equipment.
P241 - Use explosion-proof electrical, ventilating, and lighting equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P261 - Avoid breathing vapors, mist, or spray.
P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P273 - Avoid release to the environment.
P280 - Wear protective gloves, protective clothing, and eye protection.
P301+P310 - If swallowed: Immediately call a poison center or doctor.
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.
P310 - Immediately call a poison center or doctor.
P321 - Specific treatment (see section 4 on this SDS).
P331 - Do NOT induce vomiting.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P370+P378 - In case of fire: Use appropriate media (see section 5) to extinguish.
P391 - Collect spillage.
P403+P235 - Store in a well-ventilated place. Keep cool.
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 pre-existing eye, skin, or respiratory conditions. Repeated exposure may cause skin dryness or cracking. Flammable vapors can accumulate in head space of closed systems.

2.4. Unknown Acute Toxicity (GHS-US)

5 - 10% of the mixture consists of ingredients of unknown acute toxicity.

SECTION 3: Composition/Information On Ingredients

3.1. Substances

Not applicable

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3.2. Mixtures

Name	Product Identifier	%*	GHS-US Classification
Solvent naphtha, petroleum, light aliphatic	(CAS-No.) 64742-89-8	70 - 90	Flam. Liq. 2, H225 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
1-Butanol, titanium(4+) salt	(CAS-No.) 5593-70-4	< 10	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H336 STOT SE 3, H335
Silicic acid (H ₄ SiO ₄), tetrakis(2-methoxyethyl) ester	(CAS-No.) 2157-45-1	< 10	Skin Irrit. 2, H315 Eye Irrit. 2, H319

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 personnel should wear appropriate protective equipment during any rescue.

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

Immediately remove contaminated clothing. Immediately drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.

First-aid Measures After Eye Contact

Immediately rinse 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

Do NOT induce vomiting. Turn affected person(s) on their side and maintain in that position to prevent aspiration. Rinse mouth. Immediately call a POISON CENTER or doctor/physician.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

Symptoms/Injuries

May be fatal if swallowed and enters airways. Causes serious eye damage. Causes skin irritation. May cause drowsiness and dizziness.

Symptoms/Injuries After Inhalation

High concentrations may cause central nervous system depression such as dizziness, vomiting, numbness, drowsiness, headache, and similar narcotic symptoms.

Symptoms/Injuries After Skin Contact

Redness, pain, swelling, itching, burning, dryness, and dermatitis.

Symptoms/Injuries After Eye Contact

Causes permanent damage to the cornea, iris, or conjunctiva.

Symptoms/Injuries After Ingestion

Aspiration into the lungs can occur during ingestion or vomiting and may cause lung injury.

Chronic Symptoms

Repeated exposure may cause skin dryness or cracking.

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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 : Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂).

Unsuitable Extinguishing Media : Water is ineffective as it may generate flammable gases: n-Butanol and 2-Methoxyethanol.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard Highly flammable liquid and vapor. Vapors are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapors. Will float and can be reignited on water surface.

Explosion Hazard May form flammable or explosive vapor-air mixture.

Reactivity Reacts violently with strong oxidizers. Increased risk of fire or explosion. Reacts with water to form n-butanol, 2-Methoxyethanol and titanium dioxide.

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. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

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

Hazardous Combustion Products Carbon oxides (CO, CO₂). Silicon oxides. Metal oxides.

Other Information Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6: Accidental Release Measures

6.1. Personal Precautions, Protective Equipment And Emergency Procedures

General Measures Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. Use special care to avoid static electric charges. Do not get in eyes, on skin, or on clothing. Do not breathe vapor, mist or spray.

6.1.1. For Non-Emergency Personnel

Protective Equipment Use appropriate personal protective equipment (PPE).

Emergency Procedures Evacuate unnecessary personnel. Stop leak if safe to do so.

6.1.2. For emergency responders

Protective Equipment Equip cleanup crew with proper protection.

Emergency Procedures Eliminate ignition sources first, then ventilate the area. 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.

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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

As an immediate precautionary measure, isolate spill or leak area in all directions. 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. Use only non-sparking tools. Absorb and/or contain spill with inert material. Do not take up in combustible material such as: saw dust or cellulosic material. 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

Additional Hazards When Processed

Flammable vapors may accumulate in the head space of closed systems. Container may remain hazardous when empty.

Precautions for Safe Handling

Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing vapors, mist, spray. Do not get in eyes, on skin, or on clothing. 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

Use explosion-proof electrical, ventilating, and lighting equipment. Take action to prevent static discharges. Ground and bond container and receiving equipment. Comply with applicable regulations.

Storage Conditions

Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store locked up/in a secure area. Store in a well-ventilated place. Keep container tightly closed. Keep in fireproof place.

Incompatible Materials

Strong acids, strong bases, strong oxidizers. Water.

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).

8.2. Exposure Controls

Appropriate Engineering Controls

Ensure adequate ventilation, especially in confined areas. Use explosion-proof equipment. Proper grounding procedures to avoid static electricity should be followed. Gas detectors should be used when flammable gases or vapors may be released. 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. Gloves. Protective clothing. Protective goggles. Insufficient ventilation: wear respiratory protection.

Personal Protective Equipment



Materials For Protective Clothing
Hand Protection
Eye And Face Protection
Skin And Body Protection
Respiratory Protection

Chemically resistant materials and fabrics. Wear fire/flammable resistant/retardant clothing.
Wear protective gloves.
Chemical safety goggles.
Wear suitable protective clothing.
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	Yellow
Odor	Solvent
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	99 °C (210.2 °F)
Flash Point	17 °C (62.6 °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

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9.2. Other Information

VOC Content 70 – 90%

SECTION 10: Stability and Reactivity

10.1. Reactivity

Reacts violently with strong oxidizers. Increased risk of fire or explosion. Reacts with water to form n-butanol, 2-Methoxyethanol and titanium dioxide.

10.2. Chemical Stability

Highly flammable liquid and vapor. May form flammable or explosive vapor-air mixture.

10.3. Possibility of Hazardous Reactions

Hazardous polymerization will not occur.

10.4. Conditions to Avoid

Direct sunlight, extremely high or low temperatures, heat, hot surfaces, sparks, open flames, incompatible materials, and other ignition sources.

10.5. Incompatible Materials

Strong acids, strong bases, strong oxidizers. Water.

10.6. Hazardous Decomposition Products

Thermal decomposition may produce: Carbon oxides (CO, CO₂). Silicon oxides. Metal oxides. Hydrolyzes in water to form n-butanol, 2-Methoxyethanol and titanium dioxide.

SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity (Oral) Not classified

Acute Toxicity (Dermal) Not classified

Acute Toxicity (Inhalation) Not classified

Solvent naphtha, petroleum, light aliphatic (64742-89-8)	
LD50 Oral Rat	> 5000 mg/kg
LD50 Dermal Rabbit	> 2000 mg/kg (no deaths)
1-Butanol, titanium(4+) salt (5593-70-4)	
LD50 Oral Rat	> 2000 mg/kg

Skin Corrosion/Irritation	Causes skin irritation.
Serious Eye Damage/Irritation	Causes serious eye damage.
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 drowsiness or dizziness.
Specific Target Organ Toxicity (Repeated Exposure)	Not classified
Aspiration Hazard	May be fatal if swallowed and enters airways.
Symptoms/Injuries After Inhalation	High concentrations may cause central nervous system depression such as dizziness, vomiting, numbness, drowsiness, headache, and similar narcotic symptoms.
Symptoms/Injuries After Skin Contact	Redness, pain, swelling, itching, burning, dryness, and dermatitis.

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Symptoms/Injuries After Eye Contact	Causes permanent damage to the cornea, iris, or conjunctiva.
Symptoms/Injuries After Ingestion	Aspiration into the lungs can occur during ingestion or vomiting and may cause lung injury.
Chronic Symptoms	Repeated exposure may cause skin dryness or cracking.

SECTION 12: Ecological Information

12.1. Toxicity

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

1-Butanol, titanium(4+) salt (5593-70-4)	
EC50 - Crustacea [1]	680 mg/l

12.2. Persistence and Degradability

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Persistence and Degradability	May cause long-term adverse effects in the environment.

12.3. Bioaccumulative Potential

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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.

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	Handle empty containers with care because residual vapors are flammable.
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	PETROLEUM DISTILLATES, N.O.S.
Hazard Class	3
Identification Number	UN1268
Label Codes	3
Packing Group	II
Marine Pollutant	Marine pollutant
ERG Number	128



14.2. In Accordance with IMDG

Proper Shipping Name	PETROLEUM DISTILLATES, N.O.S.
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Hazard Class 3
Identification Number UN1268
Packing Group II
Label Codes 3
EmS-No. (Fire) F-E
EmS-No. (Spillage) S-E
Marine Pollutant Marine pollutant



14.3. In Accordance with IATA

Proper Shipping Name PETROLEUM DISTILLATES, N.O.S.
Packing Group II
Identification Number UN1268
Hazard Class 3
Label Codes 3
ERG Code (IATA) 3H



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 are not disclosed due to CBI requirements or disclosure rules according to the relevant regulation.

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SARA Section 311/312 Hazard Classes	Health hazard - Specific target organ toxicity (single or repeated exposure) Health hazard - Skin corrosion or Irritation Physical hazard - Flammable (gases, aerosols, liquids, or solids) Health hazard - Serious eye damage or eye irritation Health hazard - Aspiration hazard

15.2. US State Regulations

Solvent naphtha, petroleum, light aliphatic (64742-89-8)
U.S. - Texas - Effects Screening Levels - Long Term U.S. - Texas - Effects Screening Levels - Short Term U.S. - California - Safer Consumer Products - Initial List of Candidate Chemicals and Chemical Groups
1-Butanol, titanium(4+) salt (5593-70-4)
U.S. - Texas - Effects Screening Levels - Long Term U.S. - Texas - Effects Screening Levels - Short Term
Silicic acid (H4SiO4), tetrakis(2-methoxyethyl) ester (2157-45-1)
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 03/12/2024

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

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GHS Full Text Phrases:

Flam. Liq. 2	Flammable liquids Category 2
Flam. Liq. 3	Flammable liquids Category 3
Asp. Tox. 1	Aspiration hazard Category 1
Skin Irrit. 2	Skin corrosion/irritation Category 2
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
H225	Highly flammable liquid and vapor
H226	Flammable liquid and vapor
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H411	Toxic to aquatic life with long lasting effects

NFPA Health Hazard

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

NFPA Fire Hazard

3 - Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions.

NFPA Reactivity Hazard

1 - Materials that in themselves are normally stable but can become unstable at elevated temperatures and pressures.

HMIS III Rating

Health

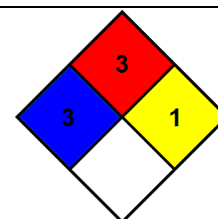
3 Serious Hazard

Flammability

3 Serious Hazard

Physical

1 Slight Hazard



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