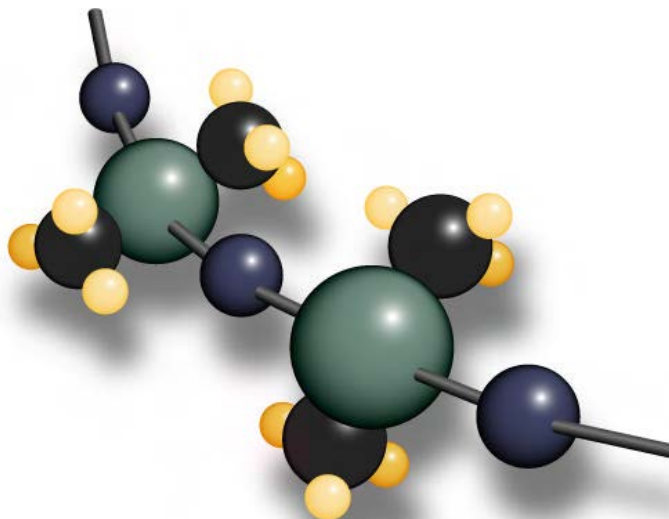


# Polymer Systems Technology Limited

UK & Ireland Distributor



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# MATERIAL SAFETY DATA SHEET

## MED1-1356

NuSil Technology LLC urges each customer or recipient of this MSDS to study it carefully to become aware of and understand the hazards associated with the product. The reader should consider consulting reference works or individuals who are experts in ventilation, toxicology, and fire prevention, as necessary or appropriate to the use and understanding of the data contained in this MSDS.

To promote safe handling, each customer or recipient should: (1) notify its employees, agents, contractors, and others whom it knows or believes will use this material of the information regarding hazards or safety; (2) furnish this same information to each of its customers for the product; and (3) request its customers to notify their employees, customers and other users of the product of this information.

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

|   |  |
|---|--|
| NuSil Technology LLC<br>1050 Cindy Lane<br>Carpinteria, California 93013<br>USA<br>(805) 684-8780 | <b>EMERGENCY TELEPHONE NUMBERS:</b> (800) 424-9300 <b>CHEMTREC</b><br>(805) 684-8780<br><br><b>OUTSIDE OF THE USA</b> (703) 527-3887 <b>CHEMTREC</b> |
|---|--|

**PRODUCT NAME: MED1-1356**  
**CHEMICAL NAME: N/A**  
**CHEMICAL FAMILY: Silicone Dispersion**  
**FORMULA: N/A**  
**MOLECULAR WEIGHT: N/A**  
**SYNONYMS: N/A**  
**CAS # : Mixture**

### 2. HAZARDOUS INGREDIENTS

| %  | <u>MATERIAL</u> | <u>CAS #</u> | <u>EXPOSURE VALUE</u> | <u>CLASSIFICATION</u> |
|----|-----------------|--------------|-----------------------|-----------------------|
| 50 | Ethyl acetate   | 00141-78-6   | See Section 8         | See Section 7         |

### 3. HAZARDS IDENTIFICATION

**EFFECTS OF SINGLE OVEREXPOSURE:**

**SWALLOWING:**

May cause irritation of the mouth, throat, esophagus and stomach, with headache, nausea, narcosis and unconsciousness. Aspiration into the lungs may occur during ingestion or vomiting, resulting in lung injury.

**SKIN ABSORPTION:**

No evidence of adverse effects from available information.

**INHALATION:**

Vapor may be irritating, experienced as nasal discomfort and discharge, with headache, nausea, dizziness, unconsciousness, liver and kidney damage, and pulmonary edema.

**SKIN CONTACT:**

Causes irritation with discomfort, seen as local redness and possible swelling. Prolonged contact may result in drying and cracking of the skin due to a defatting action.

**EYE CONTACT:**

Liquid causes irritation, experienced as stinging, excess blinking and tear production, with excess redness, swelling of the conjunctiva, and corneal clouding.

**EFFECTS OF REPEATED OVEREXPOSURE:**

Ethyl acetate is a mild eye and mucous membrane irritant, primary skin irritant, and central nervous system depressant. Repeated contact with Ethyl acetate produces eczematous and sensitization dermatitis. Acute inhalation may produce narcosis, anemia, liver and kidney damage, and pulmonary edema.

**MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:**

Because of its irritating and defatting properties, this material may aggravate an existing dermatitis. Preclude from exposure those individuals with diseases of the eyes, liver, kidneys and lungs.

**SIGNIFICANT LABORATORY DATA WITH POSSIBLE RELEVANCE TO HUMAN HEALTH HAZARD EVALUATION:**

None currently known.

**OTHER EFFECTS OF OVEREXPOSURE:**

None currently known.

|                              |
|------------------------------|
| <b>4. FIRST AID MEASURES</b> |
|------------------------------|

**EMERGENCY AND FIRST AID PROCEDURES:**

**SWALLOWING:**

If patient is fully conscious, give two glasses of water or milk at once. Do not induce vomiting. Obtain medical attention without delay.

**SKIN:**

Remove contaminated clothing and wash skin with soap and water. Wash clothing before reuse.

**INHALATION:**

Remove to fresh air. Give artificial respiration if not breathing. Oxygen may be given by qualified personnel if breathing is difficult. Obtain medical attention.

**EYES:**

Immediately flush eyes with water and continue washing for at least 15 minutes. Obtain medical attention if symptoms persist.

**NOTES TO PHYSICIAN:**

Any material aspirated during vomiting may cause lung injury. Therefore, emesis should not be induced mechanically or pharmacologically. If it is considered necessary to evacuate the stomach contents, this should be done by means least likely to cause aspiration (e.g., gastric lavage after endotracheal intubation).

|                                  |
|----------------------------------|
| <b>5. FIRE FIGHTING MEASURES</b> |
|----------------------------------|

**FLASH POINT** (test method(s)): 24°F (Tag closed cup)

**FLAMMABLE LIMITS IN AIR** (by volume):

LOWER: 2.2 %      UPPER: 11.0 %

**EXTINGUISHING MEDIA:** Apply alcohol-type or universal-type foams applied by manufacturer's recommended techniques for large fires. Use carbon dioxide or dry chemical for small fires.

**SPECIAL FIRE FIGHTING PROCEDURES:** Do not spray a solid stream of water or foam directly into a pool of hot, burning liquid as this may cause frothing, and may intensify the fire. Use self-contained breathing apparatus when fighting fire in an enclosed area.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Vapors form from this product and may travel or be moved by air currents and ignited by pilot lights, other flames, smoking, sparks, heaters, electrical equipment, static discharges or other ignition sources at locations distant from product handling point. Vapors from this product may settle in low or confined areas or travel a long distance to an ignition source and flash back explosively.

Flammable liquid. Vapor may be ignited by static sparks. Use proper bonding and grounding during liquid transfer as described in National Fire Protection Association document NFPA 77.

This product contains polydimethylsiloxane which can generate formaldehyde as a byproduct of oxidative thermal decomposition at temperatures greater than 150°C (300°F). See Section 10 for further information.

**6. ACCIDENTAL RELEASE MEASURES**

**STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:**

May be injurious to aquatic life if discharged to open waters. Confine spill with absorbent, transfer to a suitable container for disposal.

**WASTE DISPOSAL METHOD:** Dispose of in accordance with all Federal, State, and local regulations.

**7. HANDLING AND STORAGE**

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:**

Normal precautions common to safe manufacturing practice should be followed in handling and storage.

|   |            |
|---|------------|
| Keep container closed, in a cool dry place.                         | S3/S7/S8   |
| Keep well ventilated, do not breathe fumes, and avoid skin contact. | S9/S23/S24 |

|                                 |         |
|---------------------------------|---------|
| Flammable                       | R10     |
| Harmful if inhaled or swallowed | R20/R22 |

**WARNING:** Hot organic chemical vapors or mists are susceptible to sudden spontaneous combustion when mixed with air. Ignition may occur at temperatures below those published in the literature as "autoignition" or "ignition" temperatures. Ignition temperatures decrease with increasing vapor volume and vapor / air contact time, and are influenced by pressure changes.

Ignition may occur at typical elevated-temperature process conditions, especially in processes operating under vacuum if subjected to sudden ingress of air, or outside process equipment operating under elevated pressure if sudden escape of vapors or mists to the atmosphere occurs.

Any proposed use of this product in elevated-temperature processes should be thoroughly evaluated to assure that safe operating conditions are established and maintained.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**OCCUPATIONAL EXPOSURE VALUES AND SOURCE:**

Ethyl acetate: 400 ppm - 8 hours TWA (ACGIH, OSHA, NIOSH)

**RESPIRATORY PROTECTION:**

Use approved respirator or self-contained breathing apparatus as needed to maintain personnel exposure below established Occupational Exposure Value.

**VENTILATION:**

General (mechanical) room ventilation with local ventilation as needed to maintain exposure levels below established Occupational Exposure Value.

**PROTECTIVE GLOVES:** PVC-coated.

**EYE PROTECTION:** Use safety goggles.

**OTHER PROTECTIVE EQUIPMENT:** Eye bath and safety shower.

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| <b>9. PHYSICAL AND CHEMICAL PROPERTIES (based on typical material)</b> |
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**BOILING POINT:** >400° F

**SPECIFIC GRAVITY (H<sub>2</sub>O = 1):** 1.05

**FREEZING POINT:** N/A

**VAPOR PRESSURE:** 1.5mm @ 160°C

**VAPOR DENSITY (air = 1):** 21.8

**EVAPORATION RATE (Butyl Acetate = 1):** <1

**SOLUBILITY IN WATER (By wt):** Insoluble.

**APPEARANCE:** Translucent yellow.

**ODOR:** Characteristic

**PHYSICAL STATE:** Liquid

**PERCENT VOLATILES (by wt):** See Section 15

Note: The above information is not intended for use in preparing product specifications.

|  |
|--|
| <b>10. STABILITY AND REACTIVITY DATA</b> |
|--|

**STABILITY:** Stable

**CONDITIONS TO AVOID:** Avoid open flames, hot surfaces and electric arcs and other sources of ignition.

**INCOMPATIBILITY:**

Ignites on contact with potassium tert-butoxide. Violent reaction with chlorosulfonic acid. Avoid contact with oleum, acids, oxidizers, strong alkalis and nitrates.

**HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS:**

Burning can produce oxides of carbon, oxides of silicon, hydrogen chloride and phosgene (small amounts). Carbon monoxide is highly toxic if inhaled; carbon dioxide in sufficient concentrations can act as an asphyxiant. Acute overexposure to the products of combustion may result in irritation of the respiratory tract.

Traces of formaldehyde may be generated due to oxidative thermal decomposition at temperatures greater than 150°C (300°F). Exposure to formaldehyde can cause adverse effects such as skin and respiratory sensitization and eye and throat irritation. Formaldehyde is a potential carcinogen. Evaluate and control exposure to formaldehyde when warranted by conditions of use.

**HAZARDOUS POLYMERIZATION:** Will not occur.

## 11. TOXICOLOGICAL INFORMATION

**COMPONENT:**

MED1-1356:

|   |   |
|---|---|
| Acute Oral LD <sub>50</sub> (mg/kg):      | 500-5000 (Rat) Inferred from ingredient hazard(s)   |
| Acute Dermal LD <sub>50</sub> (mg/kg):    | 1000-2000 (Rbt.) Inferred from ingredient hazard(s) |
| Acute Inhalation LC <sub>50</sub> (mg/l): | 2-20 (Rat) Inferred from ingredient hazard(s)       |
| Other:                                    | N/A.  |
| Ames Test:                                | N/A.  |

Refer to Section 3 for further discussion of the health hazards associated with this preparation.

## 12. ECOLOGICAL INFORMATION

|                               |   |
|-------------------------------|---|
| ECOTOXICOLOGICAL INFORMATION: | Complete information not yet available. |
| CHEMICAL FATE INFORMATION:    | Complete information not yet available. |

## 13. DISPOSAL CONSIDERATIONS

**STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:**

Extinguish and do not turn on any ignition source until the area is determined to be free from explosion or fire hazards. See section 5, "Unusual Fire and Explosion Hazards".

Spills should be contained. Large spill removed by vacuum. Smaller spills may be soaked up with absorbent material.

WASTE DISPOSAL METHOD: Dispose of in accordance with all Federal, State, and local regulations.

## 14. TRANSPORT INFORMATION

**DOT HAZARD CLASSIFICATION:**

Proper Shipping Name: Flammable liquid n.o.s. (Ethyl acetate solution)  
 Hazard Class: 3  
 Hazard Label: Flammable liquid  
 UN Number: UN1993  
 Packaging Group: II

**I.A.T.A. HAZARD CLASSIFICATION:**

Proper Shipping Name: Ethyl acetate solution  
 Hazard Class: 3  
 Hazard Label: Flammable Liquid  
 UN Number: UN1173  
 Packing Group: II

## 15. REGULATORY INFORMATION

**STATUS ON SUBSTANCE LISTS:**

The concentrations shown are maximum or ceiling levels (weight %) to be used for calculations for regulations. Trade Secrets are indicated by "TS".

|                      |
|----------------------|
| C.H.I.P. REGULATIONS |
|----------------------|

Chemicals (Hazard Information and Packaging for Supply) Regulations 2008 requires physico-chemical and health hazard determination of all substances and preparations manufactured, transported, stored, modified, or consumed within the U.K. Components present in this product at a level, which could require reporting under the statute, are:

| <u>MATERIAL</u> | <u>CAS NUMBER</u> | <u>UPPER BOUND<br/>CONCENTRATION</u> |
|-----------------|-------------------|--------------------------------------|
| Ethyl acetate   | 00141-78-6        | 50 %                                 |

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|             |
|-------------|
| FEDERAL EPA |
|-------------|

Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA) requires notification of the National Response Center of release of quantities of Hazardous Substances equal to or greater than the reportable quantities (RQ's) in 40 CFR 302.4. Components present in this product at a level which could require reporting under the statute are:

| <u>MATERIAL</u> | <u>CAS NUMBER</u> | <u>UPPER BOUND<br/>CONCENTRATION</u> |
|-----------------|-------------------|--------------------------------------|
| Ethyl acetate   | 00141-78-6        | 50 %                                 |

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Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on Threshold Planning Quantities (TPQ's) and release reporting based on Reportable Quantities (RQ's) in 40 CFR 355 (used for SARA 302, 304, 311, and 312). Components present in this product at a level which could require reporting under the statute are:

\*\*\*\* NONE \*\*\*\*

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Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372 (for SARA 313). This information must be included in all MSDS's that are copied and distributed for this material. Components present in this product at a level which could require reporting under this statute are:

\*\*\*\* NONE \*\*\*\*

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#### INVENTORY STATUS

The ingredients of this product are listed on, or are exempt from listing on, the TSCA inventory.

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#### STATE-RIGHT-TO-KNOW

##### CALIFORNIA Proposition 65

This product contains no levels of listed substances, which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute.

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##### MASSACHUSETTS 105 CMR 670.000 Right-To-Know, Substance List (MSL)

Hazardous Substances and Extraordinarily Hazardous Substances on the MSL must be identified when present in products. Components present in this product at a level which could require reporting under the statute are:

| <u>MATERIAL</u> | <u>CAS NUMBER</u> | <u>UPPER BOUND<br/>CONCENTRATION</u> |
|-----------------|-------------------|--------------------------------------|
| Ethyl acetate   | 00141-78-6        | 50 %                                 |

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