Polymer Systems Technology Limited

UK & Ireland Distributor

NuSil SILICONE TECHNOLOGY®

Creative Partners in a Material World

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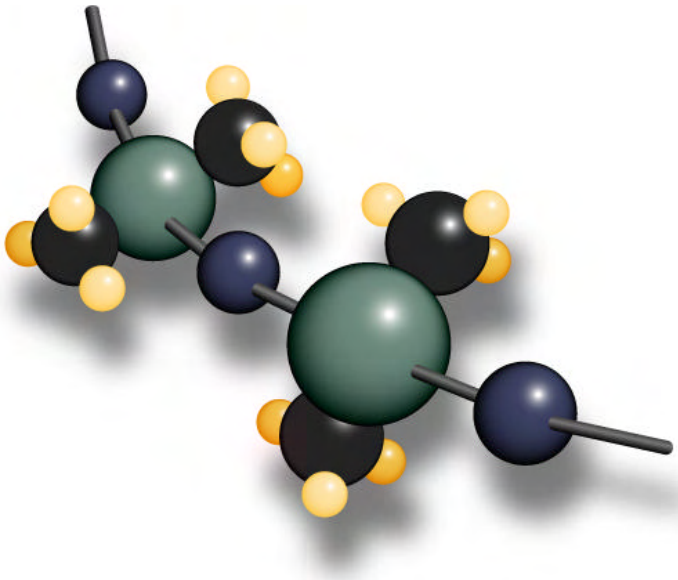

MATERIAL SAFETY DATA SHEET
MED-1037

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 1050 Cindy Lane Carpinteria, California 93013 USA (805) 684-8780	**EMERGENCY** TELEPHONE NUMBERS: (800) 424-9300 **CHEMTREC** (805) 684-8780 OUTSIDE OF THE USA (703) 527-3887 **CHEMTREC**

PRODUCT NAME: **MED-1037**
CHEMICAL NAME: N/A
CHEMICAL FAMILY: Silicone
FORMULA: Proprietary
MOLECULAR WEIGHT: N/A
SYNONYMS: N/A
CAS # : Mixture

2. HAZARDOUS INGREDIENTS

%	MATERIAL	CAS #	EXPOSURE VALUE	CLASSIFICATION
20	Silica, amorphous	07631-86-9	See Section 8	See Section 7
5	Methyltriacetoxysilane	04253-34-3	None Established	See Section 7
5	Ethyltriacetoxysilane	17689-77-9	None Established	See Section 7
Trace	Acetic Acid (given off during cure)	00064-19-7	See Section 8	See Section 7

3. HAZARDS IDENTIFICATION

EFFECTS OF SINGLE OVEREXPOSURE:

SWALLOWING:

Moderately toxic. Swallowing large volumes may cause irritation of the mouth and throat, esophagus and stomach, with nausea, abdominal and chest pain, vomiting, diarrhea, dizziness, faintness, weakness, drowsiness and collapse. Aspiration into the lungs may occur during ingestion or vomiting, resulting in lung injury.

SKIN ABSORPTION:

Prolonged or widespread skin contact may result in absorption of potentially harmful amounts of material.

INHALATION:

Vapor is irritating, experienced as nasal discomfort and discharge with chest pain and coughing. Dizziness and drowsiness may occur. Eye irritation may occur. Severe overexposure may result in permanent lung damage.

SKIN CONTACT:
Brief contact with bare skin may cause mild irritation, seen as excess redness and possibly swelling at the site of contact. Prolonged contact, as from clothing wet with the material, may result in skin irritation.

EYE CONTACT:
Causes irritation, experienced as discomfort or pain, excess blinking and tear production, marked excess redness and swelling of the conjunctiva, and chemical irritation of the eye.

EFFECTS OF REPEATED OVEREXPOSURE:
No injury from silica or other dust should occur during reasonable use. If use creates respirable particles, then some respiratory system injury may occur. However, since the silica in this product is compounded into the polymer matrix, it is not expected to present the same hazard as neat silica.

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:
Because of its irritating and defatting properties, this material may aggravate an existing dermatitis. Breathing of vapor or mist may aggravate asthma and inflammatory or fibrotic pulmonary disease.

SIGNIFICANT LABORATORY DATA WITH POSSIBLE RELEVANCE TO HUMAN HEALTH HAZARD EVALUATION:
None currently known.

OTHER EFFECTS OF OVEREXPOSURE:
None currently known.

4. FIRST AID MEASURES

EMERGENCY AND FIRST AID PROCEDURES:
SWALLOWING:
If patient is fully conscious, give two glasses of water. Do not induce vomiting. Obtain medical attention.

SKIN:
Immediately flush skin with plenty of water while removing contaminated clothing and shoes. Obtain medical attention. Wash clothing before wearing again. Discard shoes.

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 without delay, preferably from an ophthalmologist.

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).

5. FIRE FIGHTING MEASURES

FLASH POINT (test method(s)): >300° F (PMCC)

FLAMMABLE LIMITS IN AIR (by volume):
LOWER: N/A UPPER: N/A

EXTINGUISHING MEDIA: Use water spray, carbon dioxide, dry chemical, alcohol-type or universal-type foams applied by manufacturer's recommended technique.

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:
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:
Spills should be contained with mechanical barriers. Transfer spilled material 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
Do not breathe fumes and avoid contact with skin and eyes.	S23/S24/S25
Use only in well-ventilated areas	S51
Harmful by inhalation.	R20
Avoid contact with skin and eyes.	R36/R38

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:

Silica, amorphous:	10 mg/m^3 - 8 hours TWA (ACGIH)
	6 mg/m^3 - 8 hours TWA (OSHA)
	6 mg/m^3 - 8 hours TWA (NIOSH)
Acetic Acid:	10 ppm - 8 hours TWA (ACGIH)
	15 ppm - STEL (ACGIH, OSHA)

RESPIRATORY PROTECTION:
Use NIOSH approved respirator or self-contained breathing apparatus as needed to maintain personnel exposure below established Occupational Exposure Values.

VENTILATION:
General (mechanical) room ventilation with local ventilation as needed to maintain exposure below established Occupational Exposure Values.

PROTECTIVE GLOVES: Use acid resistant gloves.

EYE PROTECTION: Use safety goggles.

OTHER PROTECTIVE EQUIPMENT: Eye bath and safety shower.

9. PHYSICAL AND CHEMICAL PROPERTIES (based on typical material)

BOILING POINT: N/A
SPECIFIC GRAVITY (H_2O=1): 1.06
FREEZING POINT: N/A
VAPOR PRESSURE : N/A
VAPOR DENSITY (air=1): N/A
EVAPORATION RATE (Butyl Acetate=1): N/A
SOLUBILITY IN WATER (By wt): Insoluble
APPEARANCE: Translucent
ODOR: Very Little Odor
PHYSICAL STATE: Liquid
PERCENT VOLATILES (by wt): See Section 15

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

10. STABILITY AND REACTIVITY DATA

STABILITY: Stable.

CONDITIONS TO AVOID: None.

INCOMPATIBILITY: Oxidizing materials can cause a reaction.

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS:
Burning can produce carbon monoxide, carbon dioxide, oxides of silicon, and hydrocarbons. 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

<u>COMPONENT:</u>
MED-1037:

Acute Oral LD_{50} (mg/kg):	50-500 (Rat) Inferred from ingredient hazard(s)
Acute Dermal LD_{50} (mg/kg):	200-1000 (Rbt.) Inferred from ingredient hazard(s)
Acute Inhalation LC_{50} (mg/l):	0.5-2 (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

Dispose of in accordance with all Federal, State, and local regulations.

14. TRANSPORT INFORMATION

DOT HAZARD CLASSIFICATION: None (not regulated)

I.A.T.A. HAZARD CLASSIFICATION: None (not regulated).

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:

MATERIAL	CAS NUMBER	UPPER BOUND CONCENTRATION
Acetic Acid	00064-19-7	Trace

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:

MATERIAL	CAS NUMBER	UPPER BOUND CONCENTRATION
Acetic Acid	00064-19-7	Trace

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 ****

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 ****

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

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.

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:

MATERIAL	CAS NUMBER	UPPER BOUND CONCENTRATION
Silica, amorphous	07631-86-9	20 %
Acetic Acid	00064-19-7	Trace

PENNSYLVANIA Right-To-Know, Hazardous Substance List
Hazardous Substances and Special Hazardous Substances on the List must be identified when present in products. Components present in this product at a level which could require reporting under the statute are:

MATERIAL	CAS NUMBER	UPPER BOUND CONCENTRATION
Silica, amorphous	07631-86-9	20 %
Acetic Acid	00064-19-7	Trace

CALIFORNIA SCAQMD RULE 443.1 VOC'S:
Volatile Organic Components (VOC's) = Substances with vapor pressure of $\geq$ 0.5 mm Hg at 104°C (219.2°F).
This product contains 28.9 g/L VOC's.

OTHER REGULATORY INFORMATION:
EPA Hazard Categories: Immediate Health Hazard.

C.H.I.P. Regulations:

Designation:	**MED-1037**
Symbol:	Xi
Indication of Danger:	Irritant
Safety Phrases:	S3/S7/S8/S23/S24/S25/S51
(Ref. Sect. 7)	R20/R36/R38

16. OTHER INFORMATION

HMIS FORMAT:

Health: 2 Flammability: 1 Reactivity: 0

We believe that the information contained herein is current as of the date of this Material Safety Data Sheet, and is offered in good faith. Since the use of this information and of these opinions and the conditions of the use of the product are not within the control of NuSil Technology, it is the user's obligation to determine the conditions of safe use of the product.
-NuSil Technology LLC Regulatory Compliance Department

Effective Date: January 1, 2009