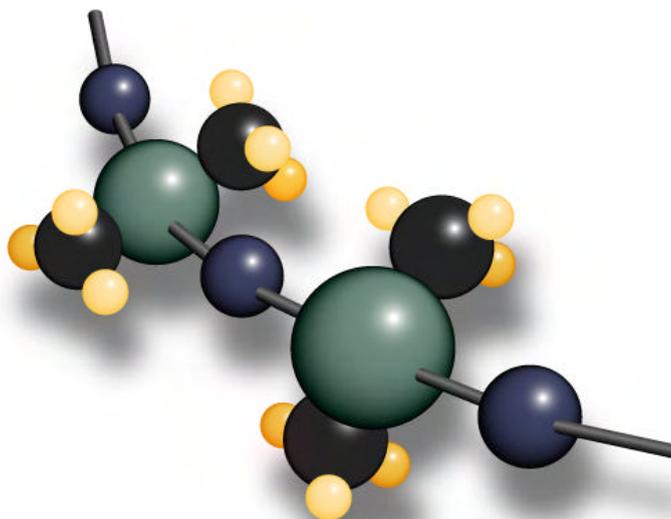


# Polymer Systems Technology Limited

UK & Ireland Distributor



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## MATERIAL SAFETY DATA SHEET

### EPM-2463 PART A

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	<b>EMERGENCY TELEPHONE NUMBERS:</b> (800) 424-9300 <b>CHEMTREC</b> (805) 684-8780  <b>OUTSIDE OF THE USA</b> (703) 527-3887 <b>CHEMTREC</b>
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**PRODUCT NAME: EPM-2463 PART A**

**CHEMICAL NAME:** N/A

**CHEMICAL FAMILY:** Silicone

**FORMULA:** Proprietary

**MOLECULAR WEIGHT:** N/A

**SYNONYMS:** N/A

**CAS # :** Mixture

#### 2. HAZARDOUS INGREDIENTS

<u>%</u>	<u>MATERIAL</u>	<u>CAS #</u>	<u>EXPOSURE VALUE</u>	<u>CLASSIFICATION</u>
60	Nickel, as Ni	07440-02-0	See Section 8	See Section 7
15	Silver, as Ag	07440-22-4	See Section 8	See Section 7
10	Silver-coated glass fiber	Mixture	See Section 8	See Section 7
5	Silica, amorphous	07631-86-9	See Section 8	See Section 7
5	Tetra-n-propyl silicate	00682-01-9	See Section 8	See Section 7

#### 3. HAZARDS IDENTIFICATION

**EFFECTS OF SINGLE OVEREXPOSURE:**

**SWALLOWING:**

No evidence of adverse effects from available information.

**SKIN ABSORPTION:**

No evidence of adverse effects from available information.

**INHALATION:**

No evidence of adverse effects from available information.

**SKIN CONTACT:**

Localized argyria (permanent bluish-gray discoloration) of the skin may occur from the handling of metallic silver or from particles becoming embedded in the skin.

**EYE CONTACT:**

May cause irritation, experienced as stinging, excess blinking and tear production, with excess redness and swelling of the conjunctiva. Contact with metallic silver has caused localized argyria of the conjunctiva.

**EFFECTS OF REPEATED OVEREXPOSURE:**

No injury from silica or dust should occur during reasonable use. If use creates respirable particles, some respiratory system injury may occur. However, since the silica, silver, and nickel in this product is compounded into the polymer matrix, it is not expected to present the same hazards as in their neat forms.

**MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:**

Skin contact can cause an allergic skin rash and/or asthma in previously sensitized individuals.

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

The IARC and the NTP have classified elemental nickel as possibly carcinogenic to humans. However, since the nickel in this product is encapsulated within silver and within the polymer matrix, it is not expected, during reasonable use, to present the same hazards as in the neat form.

The EPA has expressed concern regarding the possible adverse health effects resulting from the inhalation of alkoxysilanes and has recommended that administrative and mechanical means be used to minimize exposures.

**OTHER EFFECTS OF OVEREXPOSURE:**

None currently known.

<b>4. FIRST AID MEASURES</b>
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**EMERGENCY AND FIRST AID MEASURES:**

**SWALLOWING:**

If a large volume (several ounces) is swallowed, and the patient is fully conscious, give two glasses of water.

**SKIN:**

Wash with soap and water.

**INHALATION:**

No emergency care anticipated.

**EYES:**

Immediately flush eyes with water for at least 15 minutes. Obtain medical attention if discomfort persists.

**NOTES TO PHYSICIAN:**

There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.



Silver-coated glass fiber: 0.1 mg/m<sup>3</sup> - 8 hours TWA (ACGIH)  
0.01 mg/m<sup>3</sup> - 8 hours TWA (OSHA, NIOSH)

Silica, amorphous : 10 mg/m<sup>3</sup> - 8 hours TWA (ACGIH,)  
6 mg/m<sup>3</sup> - 8 hours TWA (OSHA, NIOSH)

Tetra-n-propyl silicate: Observe values for n-propanol, formed on exposure to water or humid air:  
200 ppm – 8 hours TWA (ACGIH, OSHA, NIOSH)  
250 ppm – STEL /CEIL© (skin) (ACGIH, OSHA, NIOSH)

**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 Value.

**PROTECTIVE GLOVES:** PVC-coated.

**EYE PROTECTION:** Safety glasses.

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

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

**BOILING POINT:** N/A  
**SPECIFIC GRAVITY (H<sub>2</sub>O=1):** 3.50  
**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:** Tan/Gray  
**ODOR:** Mild Alcohol  
**PHYSICAL STATE :** Paste  
**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

### COMPONENT:

EPM-2463 PART A:

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

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

## 14. TRANSPORT INFORMATION

DOT HAZARD CLASSIFICATION: None  
 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:

<u>MATERIAL</u>	<u>CAS NUMBER</u>	<u>UPPER BOUND CONCENTRATION</u>
n-Propanol (generated upon exposure to moisture)	0071-23-8	5%
Nickel and compounds	07440-02-0	60%

FEDERAL EPA
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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 CONCENTRATION</u>
Nickel and compounds	07440-02-0	60%
Silver and compounds	07440-22-4	25%

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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:

<u>MATERIAL</u>	<u>CAS NUMBER</u>	<u>UPPER BOUND CONCENTRATION</u>
Nickel and compounds	07440-02-0	60%
Silver and compounds	07440-22-4	25%

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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 the following 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.

Nickel and Certain Nickel Compounds.

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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 CONCENTRATION</u>
Nickel and compounds	07440-02-0	60%
Silver and compounds	07440-22-4	25%
n-Propanol (generated upon exposure to moisture)	0071-23-8	5%

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## 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:

<u>MATERIAL</u>	<u>CAS NUMBER</u>	<u>UPPER BOUND CONCENTRATION</u>
Nickel and compounds	07440-02-0	60%
Silver and compounds	07440-22-4	25%
Silica, amorphous	07631-86-9	10%

## 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 < 1 % by weight VOC's.

## OTHER REGULATORY INFORMATION:

EPA Hazard Categories: Immediate Health Hazard  
Delayed Health Hazard

## C.H.I.P. Regulations:

Designation:	<b>EPM-2463 PART A</b>
Symbol:	N/A
Indication of Danger:	N/A
Safety Phrases:	S3/S7/S8
(Ref. Sect. 7)	R45

<b>16. OTHER INFORMATION</b>
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## HMIS FORMAT:

Health: 1\*C

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