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UK & Ireland Distributor



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MATERIAL SAFETY DATA SHEET

MED2-6650 PART A

NuSil Technology 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 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
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PRODUCT NAME: MED2-6650 PART A
CHEMICAL NAME: N/A
CHEMICAL FAMILY: Silicone Dispersion
FORMULA: Proprietary
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>
80	1,1,1-Trichloroethane	00071-55-6	See Section 8	See Section 7
5	Silica, amorphous	07631-86-9	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 nausea, vomiting, diarrhea, dizziness, drowsiness, unconsciousness and death. 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 dizziness, headache, drowsiness, nausea, vomiting, unconsciousness and death from respiratory failure.

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 and swelling of the conjunctiva.

EFFECTS OF REPEATED OVEREXPOSURE:

1,1,1-Trichloroethane may produce toxicity, presented as cardiac arrhythmias and/or myocardial injury leading to cardiac failure.

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 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.

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

Evidence suggesting high frequency hearing loss was obtained from rats repeatedly exposed to high concentrations of 1,1,1-Trichloroethane.

Rats exposed to high concentrations (2100 ppm) of 1,1,1-Trichloroethane before and during pregnancy displayed an increased number of fetal anomalies. Most of the anomalies observed involved a delay in skeletal development or bone formation. These anomalies are not malformations but rather variations of normal development that are not detrimental to offspring and are often reversible. Such anomalies are not considered evidence of teratogenicity but rather of reversible development delay.

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 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).

Repeated overexposure to 1,1,1-Trichloroethane may result in a cardiotoxic interaction with halothane during general anesthetic procedures, possibly resulting in ventricular arrhythmias and/or deterioration of established cardiac failure.

5. FIRE FIGHTING MEASURES

FLASH POINT (test method(s)): None

FLAMMABLE LIMITS IN AIR (by volume):

LOWER: N/A UPPER: N/A

EXTINGUISHING MEDIA:

Use 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:

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:

Cover spill with absorbent material. 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
Avoid contact with skin and Eyes	S24/S25
In case of fire do not breath fumes	S41

Harmful if inhaled or swallowed	R20/R22
Irritates eyes and skin	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:

1,1,1-Trichloroethane: 350 ppm - 8 hours TWA (ACGIH, OSHA)
450 ppm - STEL/CEIL(C) (ACGIH, OSHA)

Silica, amorphous: 10 mg/m³ - 8 hours TWA (ACGIH)
6 mg/m³ - 8 hours TWA (OSHA, NIOSH)

RESPIRATORY PROTECTION:

Use 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 solvent 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: 162-190°F @ 760 mm Hg
SPECIFIC GRAVITY (H₂O=1): 1.16
FREEZING POINT: N/A
VAPOR PRESSURE @ 20°C: 100 mm Hg
VAPOR DENSITY (air=1): 4.6
EVAPORATION RATE (Butyl Acetate=1): N/A
SOLUBILITY IN WATER (By wt): 0.04% @ 25°C
APPEARANCE: Translucent
ODOR: Mild Sweet
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: Avoid open flames and ignition sources.

INCOMPATIBILITY: Avoid strong alkalis, oxidizing materials.

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS:

Burning can produce carbon monoxide, carbon dioxide, 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:

MED2-6650 PART A:

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:

Proper Shipping Name: 1,1,1-Trichloroethane solution
 Hazard Class: 6.1
 Hazard Label: Poison
 UN Number: UN2831
 Packing Group: III

I.A.T.A. HAZARD CLASSIFICATION:

Proper Shipping Name: 1,1,1-Trichloroethane Solution
 Hazard Class: 6.1
 Hazard Label: Toxic
 UN Number: UN2831
 Packing Group: III

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 (Hazards Information and Packaging) Regulations 1993 requires physico-chemical and health hazard determination of all substances and preparations manufactured, transported, stored, modified, or consumed within the EEC. 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>
1,1,1-Trichloroethane	00071-55-6	80%

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 CONCENTRATION</u>
1,1,1-Trichloroethane	00071-55-6	80 %

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:

<u>MATERIAL</u>	<u>CAS NUMBER</u>	<u>UPPER BOUND CONCENTRATION</u>
1,1,1-Trichloroethane	00071-55-6	80%

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:

<u>MATERIAL</u>	<u>CAS NUMBER</u>	<u>UPPER BOUND CONCENTRATION</u>
1,1,1-Trichloroethane	00071-55-6	80%
Silica, amorphous	07631-86-9	5 %

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>
1,1,1-Trichloroethane	00071-55-6	80%
Silica, amorphous	07631-86-9	5%

CALIFORNIA SCAQMD RULE 443.1 VOC'S:

Volatile Organic Components (VOC's) = Substances with vapor pressure of ≥ 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: **MED2-6650 PART A**
Symbol: Xn, Xi

Indication of Danger:	Harmful		Irritant	
Safety Phrases:	S3/S7/S8/S24/S25/S41			
(Ref. Sect. 7)	R20/R22/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 Regulatory Compliance Department

Effective Date: February 10, 2004