

MATERIAL SAFETY DATA SHEET

E903 – 64

Section 1. Identification

Product Name: **Noelle E903 - 64**
Manufacturer's Name: **NOELLE INDUSTRIES, Inc.**
Address: **83 Alexander Road
Billerica, MA 01821**

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Section 2. Chemical Product

Product: Noelle E903 – 64
Product Classification: One Component Conductive Thermal Grease

Section 3. Chemical Ingredients / Identification

Single or Mixture: **Mixture**
Chemical Identification: Epoxy mixture

<u>Ingredient</u>	<u>CAS#</u>	<u>OSHA/PEL</u>	<u>ACGIH/TLV</u>	<u>% by Weight</u>
Silver	7440-22-4	Not applicable	Not applicable	23 - 27
Polydimethylsiloxane	63148-62-9	Not established	Not established	59 – 63
Silica Amorphous	7631-86-9	Not established	Not established	5 – 9
Dimethyl siloxane, hydroxy-terminated	70131-67-8	Not established	Not established	5 – 9

Section 4. Physical and Chemical Properties

- ----- Boiling Point: ----- Not Determined
- ----- Vapor Pressure: ----- <1 (mm Hg @ 25°C)
- ----- Vapor Density: ----- >1 (Air=1)
- ----- Specific Gravity: ----- Not Determined
- ----- Melting Point: ----- Not applicable
- ----- Evaporation Rate: ----- <1 (Butyl Acetate = 1)
- ----- Volatiles by Weight ----- <1%
- ----- Solubility in Water: ----- Not soluble
- ----- Appearance (color): ----- Silver
- ----- Appearance (form): ----- paste
- ----- Odor: ----- Mild

Section 5. First Aid Measures

Skin Contact:	Remove product from skin with dry cloth or paper towel, and wash exposed area with water and mild detergent.
Eye Contact:	Immediately flush with water for at least 15 minutes. Get medical attention.
Ingestion:	Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Call a physician immediately.
Potential Health Effect:	Skin Contact: May cause slight skin irritation, but no significant effect. Eye Contact: May cause slight eyes irritation Ingestion: No information is available

Section 6. Fire Fighting Measures

Flash Point (method used):	>150°F, based on flash points of components
Flammable Limits:	Lower: Not established Upper: Not established
Extinguishing Media:	Foam, dry chemical, carbon dioxide or fine water spray
Special Fire Fighting Procedure:	Firefighters/rescue personnel should wear positive pressure self-contained breathing apparatus and full protective equipment. Cool exposed containers with water to prevent pressure buildup. If large quantities of material are involved, evacuate area and fight fire from a safe distance,
Unusual Fire and Explosion Hazard:	Decomposition and combustion products may be toxic. Closed containers may violently rupture under fire condition.

Section 7. Accidental Release Measures

Spill response operations must be conducted in accordance with the provisions of OSHA 29 CFR 1910.120. Review the entire MSDS before proceeding with spill response.

Small Spills: Activate available exhaust ventilation equipment in the immediate spill area. Wipe up or absorb spilled material with paper towels or other absorbent material. Wash area with soapy water to remove residue. Collect absorbed material and water rinses in appropriate containers. Dispose of in accordance with current Federal, State, and local regulations.

Large Spills: Limit access to the immediate spill area. Shut off source of the release if this can be done without risk of injury. Activate available exhaust ventilation equipment in the spill area. Dike area to contain the spill and prevent releases to sewers, drains or other waterways. Collect spilled material for salvage/disposal. Apply absorbent material to soak up residue. Wash area with soapy water. Prevent runoff from entering waterways. Transfer absorbed material and water rinses to appropriate waste containers. Dispose of in accordance with current Federal, State, and local regulations.

Section 8. Handling and Storage

Personal Protection

- Wear chemical safety glasses or goggles. Have Eyewash equipment available.
- Wear impervious gloves
- Other protective clothing or equipment to be used as appropriate to prevent prolonged or repeated contact with skin.
- Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using the restroom facilities.
- Promptly remove contaminated clothing and launder thoroughly before reuse.

Ventilation

- Provide effective mechanical exhaust ventilation to draw vapors, mists or fumes generated during processing away from the worker and prevent routine inhalation, especially during elevated temperature processing.
- Ventilation must be sufficient to maintain airborne levels of Section 2 ingredients below their PEL/TLV values.
- Use an appropriate, properly fitted respirator if exposures exceed PEL/TLV values.
- The type of protection selected (SCBA, air purifying) will depend upon the conditions of use. Observe OSHA regulations for respiratory protection (29 CFR 1910.134).

Precaution to be taken in handling and storing:

- Keep container closed when not in use.
- Vent the container properly to eliminate internal pressure.
- Store in a cool place (Qualitatively under 10 degrees C).
- Keep away from heat and flame.
- Do not lay the container on its side.
- Avoid contact with eyes and prolonged or repeated skin contact.
- Avoid contact with acidic, basic or oxidizing materials.
- Contact lens wearers take appropriate precaution.
- Keep out of reach of children.

Information about the emptied container:

- Do not re-use this container.
- Keep away from heat, sparks and flame.
- Do not puncture or cut this container.
- Do not weld on or near this container.

Section 9. Stability and Reactivity

Stability:-----Stable under normal handling and storage conditions (But it will not vigorously polymerize, decompose, condense, or will not become self-reactive under conditions of shocks, pressure or temperature).

Incompatibility (Material to avoid):-----Acidic, basic or oxidizing materials.

Hazardous Decomposition or By-Product: -----Carbon monoxide, carbon dioxide, aldehydes, acids and other organic substances may be formed during combustion. The chemical nature and quantity of decomposition by-products will vary widely depending on the conditions of combustion.

Hazardous Polymerization:-----Uncontrolled mixing with amines, anhydrides, mercaptans, and imidazoles may cause hazardous polymerization.

Conditions to avoid: -----Contact with acidic, basic or oxidizing materials.
 Avoid storage in open containers, exposure to open flame or uncontrolled exposure to heat, uncontrolled mixing with curing agents or exposure to incompatible substances.

Section 10. Toxicological and Health Information

Skin Irritation: Contains materials that cause moderate skin irritation. Prolonged or repeated exposure to the liquid may exert a defatting or drying action on the skin, possibly resulting in dermatitis. This product may cause skin sensitization/allergic skin reactions that may be severe in certain individuals. Symptoms include rash, itching, hives, swelling. Excessive or prolonged contact with silver or silver compounds has been known to cause argyria, a blue-gray discoloration of the skin.

Eye Irritation: Contains materials irritating to the eyes. Symptoms may include blurred vision, burning sensation and tearing.

Inhalation: Heating can generate vapors that may cause respiratory irritation, nausea and headaches. Inhalation hazard at room temperature is unlikely, due to the low volatility of this product.

Ingestion: Harmful if swallowed.

Acute Toxicity (LD50):----- Silver metal.

Acute Toxicity (LC50):----- Not applicable.
Chronic Toxicity----- Not applicable
Carcinogen:----- NTP: Not Listed IARC: not classifiable as carcinogens.
----- OSHA Regulated: Not Listed
Other Information----- None

Section 11. Ecological Information

Biodegradation: ----- Not applicable.
Bioaccumulation: ----- No information is available.
Aquatic Toxicity: ----- Silver metal.
Other Information: ----- None

Section 12. Disposal Consideration

- Can be burned in a chemical incinerator equipped with an afterburner and scrubber.
- Do not dispose of the emptied container unlawfully.
- Observe all federal, state, and local laws.

Section 13. Transportation Information

UN No. ----- None
IMO Classification and Class: ----- None
Packaging Group: ----- None
Proper Shipping Name: ----- None
Technical Shipping Name: ----- None
Marine Pollutant:----- None
Dot Reportable Quantity (RQ):
Hazard Substance (s) Name / (CAS No.), Contents and RQ ----- Silver metal (CAS# 7440-22-4)

Section 14. Regulatory Information

Toxic Substances Control Act (TSCA) Status: Listed on the TSCA inventory

Superfund Amendments and reauthorization to of 1986 (SARA) Title III Section 313 Supplier Notification:

This regulation required submission of annual reports of toxic chemical(s) that appear in section 313 of the emergency planning and community Right-To-Know Act of 1986 and 40 CFR 372. This information must be included in all MSDS's that are copied and distributed for the materials.

The toxic chemical(s) contained in this product are: ****Silver metal****

Section 15. Other Information

For Industrial Use Only

This material safety data sheet is offered solely for your information, consideration and investigation. The data described in this MSDS consist of data on literature, our inquisitional data and analogical inference by data of similar chemical substance or product. Noelle Industries, Inc provides no warranties, either express or implied, and assumes no responsibility for the accuracy or completeness of the data contained herein.