



PRODUCT SAFETY INFORMATION SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

TRADE NAME: Cured Flexible Heater Substrate

PRODUCT NUMBERS COVERED:

USE OF ARTICLE: Flexible Heater Substrate

DATE ISSUED: 11/12/2015

COMPANY/UNDERTAKING IDENTIFICATION: Rogers Corporation
1100 Governor Lead Rd
Bear, DE 19701 USA
Phone: 01-302-834-2100
Fax: 01-302-834-4021
Email: msdsinfo@rogerscorporation.com

2. HAZARDS IDENTIFICATION

CLASSIFICATION OF THE MATERIAL: NE

LABELING REQUIREMENTS: NE

EFFECTS OF OVEREXPOSURE: None are expected with normal handling. However, machining or grinding may cause dusting. Processing material at temperatures exceeding decomposition temperatures may release toxic fumes.

INHALATION: Dust generated during machining or grinding may cause respiratory irritation.

EYE CONTACT: Dust may cause irritation.

SKIN CONTACT: Dust may cause irritation.

INGESTION: None known.

CHRONIC: NE

3. COMPOSITION/INFORMATION ON INGREDIENTS

The materials are produced as an "article" as defined in 20 CFR 1910.1200 and REGULATION (EC) N° 1907/2006 is therefore exempt from the Hazard Communication Standard and REACH. Since this material does not release and will not result in exposure to a hazardous chemical under normal conditions of use, no Safety Data Sheet is required.

| <u>Chemical Name</u> | <u>CAS No.</u> | <u>%</u> | <u>OSHA PEL</u> | <u>ACGIH TLV</u> |
|----------------------|----------------|----------|-----------------|------------------|
| NA | NA | NA | NA | NA |

4. FIRST-AID MEASURES

| | |
|---------------|--|
| INHALATION: | Inhalation is unlikely in the supplied form. In the event move to fresh air. Obtain medical attention if symptoms persist. |
| EYE CONTACT: | Flush eyes with large amounts of water for 15 to 20 minutes. Obtain medical attention if symptoms persist. |
| SKIN CONTACT: | Immediately take off all contaminated clothing and flush area with water for 15 to 20 minutes. Obtain medical attention if symptoms persist. |
| INGESTION: | Get medical attention |

5. FIRE-FIGHTING MEASURES

| | | | | | | |
|-------------------------------------|--|------------------------------------|----------|-----------------|-----|----|
| FLASH POINT: | NE °C (°F) | Flammable Limits: | LEL | NA | UEL | NA |
| AUTOIGNITION TEMPERATURE: | NE °C (°F) | | | | | |
| EXTINGUISHING MEDIA: | <u>X</u> Water Spray <u>X</u> Dry Chemical | <u>X</u> Foam <u> </u> Other | <u>X</u> | CO ₂ | | |
| SPECIAL FIRE FIGHTING PROCEDURES: | Decomposition in a fire may produce toxic fumes. Firefighters should be equipped with self-contained breathing apparatus and turnout gear. | | | | | |
| UNUSUAL FIRE AND EXPLOSION HAZARDS: | Carbon monoxide, formaldehyde, silicon dioxide, metal oxides, and incompletely burned carbon compounds. | | | | | |

6. ACCIDENTAL RELEASE MEASURES

| | |
|----------------------------|---|
| PERSONAL PRECAUTIONS: | Use personal protective equipment recommended in Section 8. |
| ENVIRONMENTAL PRECAUTIONS: | The material is not biodegradable. |
| CLEANING METHODS: | Sweep or shovel into appropriate container for disposal. |

7. HANDLING AND STORAGE

| | |
|-----------|---|
| HANDLING: | Wear suitable protective equipment, refer to Section 8. |
| STORAGE: | Keep in a cool, well-ventilated area. |

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

| | |
|----------------------------|--|
| RESPIRATORY PROTECTION: | None needed under normal conditions. If material is heated and odors are noticeable and/or irritating a respirator meeting NIOSH requirements should be used. A qualified individual should evaluate each situation. |
| <u>VENTILATION</u> | |
| LOCAL: | Recommended for all industrial operations. |
| GENERAL: | Recommended for all industrial operations. |
| <u>PERSONAL PROTECTION</u> | |
| HAND: | Wear suitable disposable gloves. |
| EYE: | Safety glasses with side-shields are recommended in all industrial operations. |
| SKIN: | None required. |
| OTHER: | Safety shower/eyewash in the area. |

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|----------------------------|--|
| APPEARANCE: | Silicone Rubber Sheet (Various Colors) |
| ODOR: | Characteristic Silicone |
| PHYSICAL STATE: | Solid |
| BOILING POINT: | NA °C (°F) |
| MELTING POINT: | NE °C (°F) |
| FREEZING POINT: | NA °C (°F) |
| FLASH POINT: | NE °C (°F) |
| WATER SOLUBILITY: | In-Soluble |
| VAPOR DENSITY: | NA |
| VAPOR PRESSURE: | NA |
| SPECIFIC GRAVITY: | 1.0-2.0 (Rubber Only) |
| PARTITION COEFFICIENT: | NA |
| EVAPORATION RATE: | NA |
| RELATIVE DENSITY: | NA |
| VISCOSITY: | NA |
| AUTO-IGNITION TEMPERATURE: | NA °C (°F) |
| DECOMPOSITION TEMPERATURE: | NA °C (°F) |
| PH: | NA |
| FLAMMABILITY: | NA |

10. STABILITY AND REACTIVITY

STABLE UNSTABLE

| | |
|-----------------------------------|--|
| CONDITIONS TO AVOID: | NE |
| MATERIALS TO AVOID: | NE |
| HAZARDOUS POLYMERIZATION: | <input type="checkbox"/> May Occur <input checked="" type="checkbox"/> Does Not Occur |
| HAZARDOUS DECOMPOSITION PRODUCTS: | CO, CO ₂ , formaldehyde, silicon dioxide, metal oxides, and traces of incompletely burned carbon compounds. |

11. TOXICOLOGICAL INFORMATION

CARCINOGENIC STATUS: NA

12. ECOLOGICAL INFORMATION

ECOTOXICITY: NA

13. DISPOSAL CONSIDERATION

| | |
|--|--|
| PHYSICAL/CHEMICAL PROPERTIES AFFECTING DISPOSAL: | None |
| ENVIRONMENTAL TOXICITY DATA: | NA |
| WASTE DISPOSAL METHOD: | Dispose of in accordance with applicable federal, state, provincial, and local laws and regulations. |

14. TRANSPORT INFORMATION

| | |
|--------------------------|---------------|
| UN NUMBER: | Not Regulated |
| UN PROPER SHIPPING NAME: | Not Regulated |
| HAZARD CLASS (ES): | Not Regulated |
| PACKING GROUP: | Not Regulated |
| ENVIRONMENTAL HAZARDS: | NE |

15. REGULATORY INFORMATION

INTERNATIONAL REGULATIONS:

Canadian (DSL/NDL): Article – exempt.
Australian (ACIS): Article – exempt.
Korea (KECI): Article – exempt.
Japan (ENCS, MITI): Article – exempt.
China (IECSC): Article – exempt.
EU Directive 2011/65/EC (RoHS): Product is in compliance with the European Directive 2011/65/EC on Restriction on Hazardous Substances and the Chinese Administration Measure on the Control of Pollution Caused by Electronic Information.

EU REACH SVHC : Product is considered compliant with Regulation EC 1907/2006 or Registration, Evaluation, Authorization and restriction of Chemicals (REACH) legislation.

TSCA All materials are listed or exempt from TSCA listing.
(Toxic Substances Control Act):

CERCLA NA
(Comprehensive Emergency Response,

Compensation, and Liability Act):

SARA TITLE III NA
(Superfund Amendments and

Reauthorization Act):

311/312 HAZARD CATEGORIES: None

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and 40 CFR 372 ^a:

| <u>CAS #</u> | <u>CHEMICAL NAME</u> | <u>PERCENT BY WEIGHT</u> |
|--------------|----------------------|--------------------------|
| 7440-02-0 | Nickel | >72 wt. % |
| 7440-47-3 | Chromium | 14-17 wt. % |
| 7439-96-5 | Manganese | <1 wt. % |

a: Nickel, chromium, and manganese only exist in products with part number of I51576R, I39C28N, and I40C28N. The weight percentage only measures Inconel foil used in the products

16. OTHER INFORMATION

NA = Not Applicable

FILE: 99397-Cured Flexible Heater Substrate PSIS-11122015

NE = Not Established

NC = Not Classified

PREPARED BY: Jianhua Zou

REVIEWED BY: Michal Werbecki

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULT TO BE OBTAINED FROM THE USE THEREOF. ROGERS CORPORATION ASSUMES NO RESPONSIBILITY FOR PERSONAL INJURY OR PROPERTY DAMAGE TO VENDEES, USERS OR THIRD PARTIES CAUSED BY THE MATERIAL. SUCH VENDEES OR USERS ASSUME ALL RISKS ASSOCIATED WITH THE USE OF THE MATERIAL.