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.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No.</th>
<th>%</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

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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: X Water Spray X Foam X CO₂
X Dry Chemical ___ Other

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/PERSOAL 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.

VENTILATION
LOCAL:
GENERAL:
PERSONAL PROTECTION
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 X____ UNSTABLE ____

CONDITIONS TO AVOID: NE
MATERIALS TO AVOID: NE
HAZARDOUS POLYMERIZATION: May Occur X Does Not Occur
HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO₂, 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/NDSL):** 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 (Toxic Substances Control Act):** All materials are listed or exempt from TSCA listing.
- **CERCLA (Comprehensive Emergency Response, Compensation, and Liability Act):** NA
- **SARA TITLE III (Superfund Amendments and Reauthorization Act):** NA
- **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:

<table>
<thead>
<tr>
<th>CAS #</th>
<th>CHEMICAL NAME</th>
<th>PERCENT BY WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-02-0</td>
<td>Nickel</td>
<td>&gt;72 wt.%</td>
</tr>
<tr>
<td>7440-47-3</td>
<td>Chromium</td>
<td>14-17 wt.%</td>
</tr>
<tr>
<td>7439-96-5</td>
<td>Manganese</td>
<td>&lt;1 wt.%</td>
</tr>
</tbody>
</table>

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**

<table>
<thead>
<tr>
<th>NA</th>
<th>NE</th>
<th>NC</th>
<th>FILE: 99397-Cured Flexible Heater Substrate PSIS-11122015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Applicable</td>
<td>Not Established</td>
<td>Not Classified</td>
<td>PREPARED BY: Jianhua Zou</td>
</tr>
</tbody>
</table>

REVIEWED BY: Michal Werbecki

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