1 Identification

- Product identifier
  - Trade name: NovaFlex MRR Series
  - Application of the substance / the mixture: Metal roof repair and patch mastic

- Details of the supplier of the safety data sheet
  - Manufacturer/Supplier: Novagard Solutions Inc
  - 5109 Hamilton Avenue
  - CLEVELAND, OH 44114
  - USA

- Information department: R&D Department
- Emergency telephone number:
  CHEMTREC 1-800-424-9300 (USA)
  +1 703-741-5970 (International)

2 Hazard(s) identification

- Classification of the substance or mixture
  - GHS08 Health hazard
  - Repr. 2 H361 Suspected of damaging fertility or the unborn child.
  - Eye Irrit. 2B H320 Causes eye irritation.

- Label elements
  - GHS label elements
    - The product is classified and labeled according to the Globally Harmonized System (GHS).
  - Hazard pictograms
    - GHS08

- Signal word: Warning
- Hazard statements
  - Causes eye irritation.
  - Suspected of damaging fertility or the unborn child.

- Precautionary statements
  - Wash thoroughly after handling.
  - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - IF exposed or concerned: Get medical advice/attention.
  - If eye irritation persists: Get medical advice/attention.
  - Store locked up.
  - Dispose of contents/container in accordance with local/regional/national/international regulations.

- Classification system:
- NFPA ratings (scale 0 - 4)
  - Health = 1
  - Fire = 0
  - Reactivity = 0

(Contd. on page 2)
Trade name: NovaFlex MRR Series

· HMIS-ratings (scale 0 - 4)

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>FIRE</th>
<th>REACTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health = 1</td>
<td>Fire = 0</td>
<td>Reactivity = 0</td>
</tr>
</tbody>
</table>

· Other hazards
· Results of PBT and vPvB assessment
· PBT: Not applicable.
· vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterization: Mixture
· Description: Mixture of the substances listed below with nonhazardous additions.

<table>
<thead>
<tr>
<th>Dangerous components:</th>
</tr>
</thead>
<tbody>
<tr>
<td>22984-54-9 butan-2-one O,O',O''-(methylsilylidyne)trioxide</td>
</tr>
<tr>
<td>556-67-2 octamethylcyclotetrasiloxane</td>
</tr>
</tbody>
</table>

4 First-aid measures

· Description of first aid measures
· After inhalation: Supply fresh air; consult doctor in case of complaints.
· After skin contact: Generally the product does not irritate the skin.
· After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· After swallowing: If symptoms persist consult doctor.
· Information for doctor:
· Most important symptoms and effects, both acute and delayed
  No further relevant information available.
· Indication of any immediate medical attention and special treatment needed
  No further relevant information available.

5 Fire-fighting measures

· Extinguishing media
· Suitable extinguishing agents: Use fire fighting measures that suit the environment.
· Special hazards arising from the substance or mixture: No further relevant information available.
· Advice for firefighters
· Protective equipment: No special measures required.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures: Not required.
· Environmental precautions: Do not allow to enter sewers/ surface or ground water.
· Methods and material for containment and cleaning up:
  Dispose contaminated material as waste according to item 13.
· Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
Trade name: NovaFlex MRR Series

See Section 13 for disposal information.

- **Protective Action Criteria for Chemicals**

<table>
<thead>
<tr>
<th>PAC-1:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>919-30-2 3-aminopropyltriethoxysilane</td>
<td>1.9 mg/m³</td>
</tr>
<tr>
<td>13822-56-5 3-(trimethoxysilyl)propylamine</td>
<td>30 mg/m³</td>
</tr>
<tr>
<td>556-67-2 octamethylcyclotetrasiloxane</td>
<td>30 ppm</td>
</tr>
<tr>
<td>77-58-7 dibutyltin dilaurate</td>
<td>1.1 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PAC-2:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>919-30-2 3-aminopropyltriethoxysilane</td>
<td>21 mg/m³</td>
</tr>
<tr>
<td>13822-56-5 3-(trimethoxysilyl)propylamine</td>
<td>330 mg/m³</td>
</tr>
<tr>
<td>556-67-2 octamethylcyclotetrasiloxane</td>
<td>68 ppm</td>
</tr>
<tr>
<td>77-58-7 dibutyltin dilaurate</td>
<td>8 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PAC-3:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>919-30-2 3-aminopropyltriethoxysilane</td>
<td>350 mg/m³</td>
</tr>
<tr>
<td>13822-56-5 3-(trimethoxysilyl)propylamine</td>
<td>2,000 mg/m³</td>
</tr>
<tr>
<td>556-67-2 octamethylcyclotetrasiloxane</td>
<td>130 ppm</td>
</tr>
<tr>
<td>77-58-7 dibutyltin dilaurate</td>
<td>48 mg/m³</td>
</tr>
</tbody>
</table>

**7 Handling and storage**

- **Handling:**
  - Precautions for safe handling: No special precautions are necessary if used correctly.
  - Information about protection against explosions and fires: No special measures required.

- **Conditions for safe storage, including any incompatibilities**

- **Storage:**
  - Requirements to be met by storerooms and receptacles: No special requirements.
  - Information about storage in one common storage facility: Not required.
  - Further information about storage conditions: Keep receptacle tightly sealed.

- **Specific end use(s):** No further relevant information available.

**8 Exposure controls/personal protection**

- **Additional information about design of technical systems:** No further data; see item 7.

- **Control parameters**

<table>
<thead>
<tr>
<th>556-67-2 octamethylcyclotetrasiloxane</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>WEEL</td>
<td>Long-term value: 10* ppm</td>
</tr>
<tr>
<td>*OARS WEEL **</td>
<td></td>
</tr>
</tbody>
</table>

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**
  - Product evolves methyl ethyl ketone (MEKO) when exposed to water or humid air. Provide ventilation during use.

- **Personal protective equipment:**
  - General protective and hygienic measures:
  - Keep away from foodstuffs, beverages and feed.
  - Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work. Avoid contact with the eyes. Avoid contact with the eyes and skin. 

· **Breathing equipment**: Not required.  
· **Protection of hands**:  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.  
· **Material of gloves**:  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.  
· **Penetration time of glove material**:  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.  
· **Eye protection**:  

![Tightly sealed goggles](image)

### 9 Physical and chemical properties

<table>
<thead>
<tr>
<th>Information on basic physical and chemical properties</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Information</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Appearance</strong></td>
<td></td>
</tr>
<tr>
<td>Form</td>
<td>Pasty</td>
</tr>
<tr>
<td>Color</td>
<td>Different according to coloring</td>
</tr>
<tr>
<td>Odor</td>
<td>Mild</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>pH-value</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Change in condition</strong></td>
<td></td>
</tr>
<tr>
<td>Melting point/Melting range</td>
<td>Undetermined.</td>
</tr>
<tr>
<td>Boiling point/Boiling range</td>
<td>Undetermined.</td>
</tr>
<tr>
<td><strong>Flash point</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Flammability (solid, gaseous)</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Decomposition temperature</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Auto igniting</strong></td>
<td>Product is not selfigniting.</td>
</tr>
<tr>
<td><strong>Danger of explosion</strong></td>
<td>Product does not present an explosion hazard.</td>
</tr>
<tr>
<td><strong>Explosion limits</strong></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Upper</td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Vapor pressure</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Density at 20 °C (68 °F)</strong></td>
<td>1.15–1.35 g/cm³ (9.59675–11.26575 lbs/gal)</td>
</tr>
</tbody>
</table>
### 50.0 Relative density
Not determined.

### 50.0 Vapor density
Not applicable.

### 50.0 Evaporation rate
Not applicable.

#### Solubility in / Miscibility with Water:
Insoluble.

#### Partition coefficient (n-octanol/water):
Not determined.

### 50.0 Viscosity
**Dynamic:**
Not applicable.

**Kinematic:**
Not applicable.

### Other information
No further relevant information available.

### 10 Stability and reactivity

#### Reactivity
No further relevant information available.

#### Chemical stability

- **Thermal decomposition / conditions to be avoided:**
  No decomposition if used according to specifications.

- **Possibility of hazardous reactions**: No dangerous reactions known.

- **Conditions to avoid**: No further relevant information available.

- **Incompatible materials**: No further relevant information available.

- **Hazardous decomposition products**:
  Carbon monoxide, carbon dioxide, silicon dioxide and formaldehyde may be formed during combustion.

### 11 Toxicological information

#### Information on toxicological effects

#### Acute toxicity:

<table>
<thead>
<tr>
<th>LD/LC50 values that are relevant for classification:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral LD50</td>
<td>&gt;2,000 mg/kg (rat)</td>
</tr>
</tbody>
</table>

- **Primary irritant effect:**
  - **on the skin**: May cause skin irritation.
  - **on the eye**: Irritating effect.
  - **Sensitization**: No sensitizing effects known.

- **Additional toxicological information**:
  The product shows the following dangers according to internally approved calculation methods for preparations:

  - Irritant

#### Carcinogenic categories

- **IARC (International Agency for Research on Cancer)**: None of the ingredients is listed.

- **NTP (National Toxicology Program)**: None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**: None of the ingredients is listed.
12 Ecological information

- Toxicity
  - Aquatic toxicity: No further relevant information available.
  - Persistence and degradability: No further relevant information available.
- Behavior in environmental systems:
  - Bioaccumulative potential: No further relevant information available.
  - Mobility in soil: No further relevant information available.
- Additional ecological information:
  - General notes:
    - Water hazard class 3 (Self-assessment): extremely hazardous for water
    - Do not allow product to reach ground water, water course or sewage system, even in small quantities.
    - Danger to drinking water if even extremely small quantities leak into the ground.
- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.
- Other adverse effects: No further relevant information available.

13 Disposal considerations

- Waste treatment methods
  - Recommendation:
    - Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- Uncleaned packagings:
  - Recommendation: Disposal must be made according to official regulations.

14 Transport information

- UN-Number
  - DOT, ADN, IMDG, IATA: not regulated

- UN proper shipping name
  - DOT, ADN, IMDG, IATA: not regulated

- Transport hazard class(es)
  - DOT, ADN, IMDG, IATA: not regulated
  - Class: not regulated

- Packing group
  - DOT, IMDG, IATA: not regulated

- Environmental hazards:
  - Not applicable.

- Special precautions for user
  - Not applicable.

- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
  - Not applicable.

- UN "Model Regulation": not regulated
### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - **Sara**
    - **Section 355 (extremely hazardous substances):**
      None of the ingredients is listed.
    - **Section 313 (Specific toxic chemical listings):**
      None of the ingredients is listed.
  - **TSCA (Toxic Substances Control Act):**
    All components have the value ACTIVE.
  - **Hazardous Air Pollutants**
    None of the ingredients is listed.
  - **Proposition 65**
    - **Chemicals known to cause cancer:**
      None of the ingredients is listed.
    - **Chemicals known to cause reproductive toxicity for females:**
      None of the ingredients is listed.
    - **Chemicals known to cause reproductive toxicity for males:**
      None of the ingredients is listed.
    - **Chemicals known to cause developmental toxicity:**
      None of the ingredients is listed.
  - **Carcinogenic categories**
    - **EPA (Environmental Protection Agency)**
      None of the ingredients is listed.
    - **TLV (Threshold Limit Value established by ACGIH)**
      - 77-58-7 dibutyltin dilaurate
    - **NIOSH-Ca (National Institute for Occupational Safety and Health)**
      None of the ingredients is listed.
  - **GHS label elements**
    The product is classified and labeled according to the Globally Harmonized System (GHS).
  - **Hazard pictograms**
    - GHS08

**Signal word** Warning

**Hazard statements**
- Causes eye irritation.
- Suspected of damaging fertility or the unborn child.

**Precautionary statements**
- Wash thoroughly after handling.
- If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- IF exposed or concerned: Get medical advice/attention.
- If eye irritation persists: Get medical advice/attention.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Regulatory Compliance Department
· **Contact:** novagard@novagard.net
· **Date of preparation / last revision** 05/15/2020 / -
· **Abbreviations and acronyms:**
  - IMDG: International Maritime Code for Dangerous Goods
  - DOT: US Department of Transportation
  - IATA: International Air Transport Association
  - ACGIH: American Conference of Governmental Industrial Hygienists
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - ELINCS: European List of Notified Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - NFPA: National Fire Protection Association (USA)
  - HMIS: Hazardous Materials Identification System (USA)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - NIOSH: National Institute for Occupational Safety
  - OSHA: Occupational Safety & Health
  - TLV: Threshold Limit Value
  - PEL: Permissible Exposure Limit
  - REL: Recommended Exposure Limit
  - Eye Irrit. 2B: Serious eye damage/eye irritation – Category 2B
  - Repr. 2: Reproductive toxicity – Category 2
· * Data compared to the previous version altered.