SAFETY DATA SHEET

1. Identification

Product identifier: FRV1106

Other means of identification
Synonyms: Fluoro Acetoxy Sealant

Recommended use and restriction on use
Recommended use: Not available.
Restrictions on use: Not known.

Manufacturer/Importer/Distributor Information
: Momentive Performance Materials LLC
260 Hudson River Road
Waterford NY 12188

Contact person : commercial.services@momentive.com

Telephone : General information
+1-800-295-2392

Emergency telephone number
Supplier : CHEMTREC
1-800-424-9300

2. Hazard(s) identification

Hazard Classification

Health Hazards
- Skin Corrosion/Irritation Category 2
- Serious Eye Damage/Eye Irritation Category 1
- Toxic to reproduction Category 2

Unknown toxicity - Health

<table>
<thead>
<tr>
<th>Acute toxicity, oral</th>
<th>76.14 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity, dermal</td>
<td>76.14 %</td>
</tr>
<tr>
<td>Acute toxicity, inhalation, vapor</td>
<td>76.14 %</td>
</tr>
<tr>
<td>Acute toxicity, inhalation, dust or mist</td>
<td>76.14 %</td>
</tr>
</tbody>
</table>

Label Elements

Hazard Symbol:
Signal Word: Danger

Hazard Statement: Causes skin irritation. Causes serious eye damage. Suspected of damaging fertility or the unborn child.

Target Organs: No data available.

Precautionary Statement

Prevention: Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.

Response: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Immediately call a POISON CENTER/doctor. Specific treatment (see this label). Take off contaminated clothing.

Storage: Store locked up.

Disposal: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Other hazards which do not result in GHS classification: None.

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>CAS number</th>
<th>Content in percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red iron oxide</td>
<td>1309-37-1</td>
<td>7 - 13%</td>
</tr>
<tr>
<td>Methyltriacetoxysilane</td>
<td>4253-34-3</td>
<td>3 - 7%</td>
</tr>
<tr>
<td>di-tert-butoxydiacetoxysilane</td>
<td>13170-23-5</td>
<td>1 - 5%</td>
</tr>
<tr>
<td>Octamethylcyclotetrasiloxane</td>
<td>556-67-2</td>
<td>0.1 - 1%</td>
</tr>
</tbody>
</table>

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.
4. First-aid measures

Ingestion: If swallowed, do NOT induce vomiting. Give a glass of water.

Inhalation: If inhaled, remove to fresh air. If not breathing give artificial respiration using a barrier device. If breathing is difficult give oxygen. Get medical attention.

Skin Contact: To clean from skin, remove completely with a dry cloth or paper towel, before washing with detergent and water. If skin irritation occurs: Get medical advice/attention.

Eye contact: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Most important symptoms/effects, acute and delayed

Symptoms: Treatment is symptomatic and supportive.

Hazards: No data available.

Indication of immediate medical attention and special treatment needed

Treatment: No data available.

5. Fire-fighting measures

General Fire Hazards: No data available.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: All standard extinguishing agents are suitable.

Unsuitable extinguishing media: Do not use water jet.

Specific hazards arising from the chemical: No data available.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: Take precautionary measures against static discharges. Keep away from sources of ignition - No smoking.
Special protective equipment for fire-fighters: Firefighters must wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus with full face mask and full protective clothing.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Avoid contact with skin and eyes. Use only in well-ventilated areas. Remove contact lenses before using sealant. Do not handle lenses until all sealant has been cleaned from the finger and hands. Product releases acetic acid during application and curing. Keep out of reach of children. See Section 8 of the SDS for Personal Protective Equipment.

Methods and material for containment and cleaning up: Wipe, scrape or soak up in an inert material and put in a container for disposal. Wash walking surfaces with detergent and water to reduce slipping hazard. Wear proper protective equipment as specified in the protective equipment section.

7. Handling and storage

Precautions for safe handling: Sensitivity to static discharge is not expected.

Conditions for safe storage, including any incompatibilities: Keep away from heat, sparks and open flame. Keep container tightly closed in a cool, well-ventilated place.

8. Exposure controls/personal protection

Control Parameters

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>type</th>
<th>Exposure Limit Values</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red iron oxide - Respirable fraction.</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>US. ACGIH Threshold Limit Values (03 2015)</td>
</tr>
<tr>
<td>Red iron oxide - Dust and fume. - as Fe</td>
<td>REL</td>
<td>5 mg/m³</td>
<td>US. NIOSH: Pocket Guide to Chemical Hazards (2010)</td>
</tr>
<tr>
<td>Red iron oxide - Fume.</td>
<td>PEL</td>
<td>10 mg/m³</td>
<td>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>10 mg/m³</td>
<td>US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)</td>
</tr>
</tbody>
</table>

Appropriate Engineering Controls: Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

General information: No data available.

Eye/face protection: Safety glasses with side shields

Skin Protection
Hand Protection: Rubber gloves are recommended.

Other: Wear suitable protective clothing and eye/face protection.

Respiratory Protection: If exposure limits are exceeded or respiratory irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Supplied air respirators may be required for non-routine or emergency situations. Respiratory protection must be provided in accordance with OSHA regulations (see 29CFR 1910.134).

Hygiene measures: No data available.

9. Physical and chemical properties

Appearance
- Physical state: solid
- Form: Paste
- Color: Red
- Odor: Acetic acid.
- Odor threshold: No data available.
- pH: not applicable
- Melting point/freezing point: No data available.
- Initial boiling point and boiling range: > 176 °C (1.013 hPa)
- Flash Point: > 121 °C
- Evaporation rate: No data available.
- Flammability (solid, gas): No data available.

Upper/lower limit on flammability or explosive limits
- Flammability limit - upper (%): No data available.
- Flammability limit - lower (%): No data available.
- Explosive limit - upper (%): No data available.
- Explosive limit - lower (%): No data available.
- Vapor pressure: No data available.

Vapor density: No data available.
Density: ca. 1.46 g/cm³
Relative density: ca. 1.46
Solubility(ies)
- Solubility in water: Insoluble
- Solubility (other): Insoluble

Partition coefficient (n-octanol/water) Log Pow: No data available.
Auto-ignition temperature: No data available.
**Decomposition temperature:** No data available.

**SADT:** No data available.

**Viscosity, dynamic:** No data available.

**Viscosity, kinematic:** No data available.

**VOC:** No data available.

### 10. Stability and reactivity

**Reactivity:** No data available.

**Chemical Stability:** No data available.

**Possibility of hazardous reactions:** Hazardous polymerisation does not occur.

**Conditions to avoid:** None known.

**Incompatible Materials:** None known.

**Hazardous Decomposition Products:** Carbon dioxide. Acetic acid. Silicon dioxide. Measurements at temperatures above 150°C in presence of air (oxygen) have shown that small amounts of formaldehyde are formed due to oxidative degradation.

### 11. Toxicological information

**Information on likely routes of exposure**

**Ingestion:** No data available.

**Inhalation:** No data available.

**Skin Contact:** No data available.

**Eye contact:** No data available.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Ingestion:** No data available.

**Inhalation:** No data available.

**Skin Contact:** No data available.

**Eye contact:** No data available.

**Information on toxicological effects**

**Acute toxicity (list all possible routes of exposure)**

**Oral Product:** ATEmix: 8,646.29 mg/kg
Dermal
Product: Not classified for acute toxicity based on available data.

Inhalation
Product: Not classified for acute toxicity based on available data.

Repeated dose toxicity
Product: No data available.

Skin Corrosion/Irritation
Product: No data available.

Serious Eye Damage/Eye Irritation
Product: No data available.

Respiratory or Skin Sensitization
Product: No data available.

Carcinogenicity
Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogenic components identified

No carcinogenic components identified

Germ Cell Mutagenicity

In vitro
Product: No data available.

In vivo
Product: No data available.

Reproductive toxicity
Product: No data available.

Specific Target Organ Toxicity - Single Exposure
Product: No data available.
Specific Target Organ Toxicity - Repeated Exposure
Product: No data available.

Target Organs
No data available.

Aspiration Hazard
Product: No data available.

Other effects: None.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish
Product: No data available.

Aquatic Invertebrates
Product: No data available.

Chronic hazards to the aquatic environment:

Fish
Product: No data available.

Aquatic Invertebrates
Product: No data available.

Toxicity to Aquatic Plants
Product: No data available.

Persistence and Degradability

Biodegradation
Product: No data available.

BOD/COD Ratio
Product: No data available.
Bioaccumulative Potential

Bioconcentration Factor (BCF)
Product: No data available.

Partition Coefficient n-octanol / water (log Kow)
Product: No data available.

Mobility in Soil: No data available.

Known or predicted distribution to environmental compartments
Fluoropropylmethylsiloxane diol No data available.
Treated Fumed Silica No data available.

Known or predicted distribution to environmental compartments
Red iron oxide No data available.
Methyltriacetoxysilane No data available.
di-tert-butoxydiacetoxysilane No data available.
Octamethylcyclotetrasiloxane No data available.

Other Adverse Effects: No data available.

13. Disposal considerations

Disposal instructions: Disposal should be made in accordance with federal, state and local regulations.

Contaminated Packaging: Dispose of as unused product.

14. Transport information

DOT
Not regulated.

IMDG
Not regulated.

IATA
Not regulated.
Special precautions for user: This product is not regarded as dangerous goods according to the national and international regulations on the transport of dangerous goods. Protect from moisture. Keep away from food, foodstuff, acids and bases. keep away from odour sensitive materials

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>OSHA hazard(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluoropropylmethylsiloxanediol</td>
<td>No OSHA Hazards</td>
</tr>
<tr>
<td>Red iron oxide</td>
<td>Causes mild skin irritation.; Respiratory hazard.</td>
</tr>
<tr>
<td>Methyltriacetoxysilane</td>
<td>Corrosive to skin and eyes.; Corrosive to eyes</td>
</tr>
<tr>
<td>di-tert-butoxydiacetoxysilane</td>
<td>Causes mild skin irritation.</td>
</tr>
</tbody>
</table>

CERCLA Hazardous Substance List (40 CFR 302.4):

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Reportable quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None present or none present in regulated quantities.</td>
</tr>
</tbody>
</table>

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate (Acute) Health Hazards
Delayed (Chronic) Health Hazard

SARA 302 Extremely Hazardous Substance
None present or none present in regulated quantities.

SARA 304 Emergency Release Notification
None present or none present in regulated quantities.
SARA 311/312 Hazardous Chemical

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Threshold Planning Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red iron oxide</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Methyltriacetoxysilane</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>di-tert-butoxydiacetoxysilane</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Octamethylcyclotetrasiloxane</td>
<td>10000 lbs</td>
</tr>
</tbody>
</table>

SARA 313 (TRI Reporting)
None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)
None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):
None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65
No ingredient regulated by CA Prop 65 present.

US. New Jersey Worker and Community Right-to-Know Act

   Chemical Identity
   Red iron oxide

US. Massachusetts RTK - Substance List
No ingredient regulated by MA Right-to-Know Law present.

US. Pennsylvania RTK - Hazardous Substances

   Chemical Identity
   Red iron oxide

US. Rhode Island RTK
No ingredient regulated by RI Right-to-Know Law present.
Inventory Status:

<table>
<thead>
<tr>
<th>Country/Inventory</th>
<th>Status</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia AICS:</td>
<td>y (positive listing)</td>
<td>None.</td>
</tr>
<tr>
<td>EU EINECS List:</td>
<td>y (positive listing)</td>
<td>None.</td>
</tr>
<tr>
<td>Japan (ENCS) List:</td>
<td>y (positive listing)</td>
<td>None.</td>
</tr>
<tr>
<td>China Inventory of Existing Chemical Substances:</td>
<td>y (positive listing)</td>
<td>None.</td>
</tr>
<tr>
<td>Korea Existing Chemicals Inv. (KECI):</td>
<td>y (positive listing)</td>
<td>None.</td>
</tr>
<tr>
<td>Canada DSL Inventory List:</td>
<td>y (positive listing)</td>
<td>None.</td>
</tr>
<tr>
<td>Canada NDSL Inventory:</td>
<td>n (Negative listing)</td>
<td>None.</td>
</tr>
<tr>
<td>Philippines PICCS:</td>
<td>y (positive listing)</td>
<td>None.</td>
</tr>
<tr>
<td>US TSCA Inventory:</td>
<td>y (positive listing)</td>
<td>Remarks: On TSCA Inventory</td>
</tr>
<tr>
<td>Taiwan. Taiwan inventory (CSNN):</td>
<td>n (Negative listing)</td>
<td>None.</td>
</tr>
</tbody>
</table>

16. Other information, including date of preparation or last revision

HMIS Hazard ID

- **Health**: 3
- **Flammability**: 1
- **Physical Hazards**: 0

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible; *Chronic health effect

**Issue Date:** 07/22/2016

**Revision Date:** No data available.

**Version #:** 1.6

**Further Information:** No data available.
Disclaimer:

Notice to reader

Unless otherwise specified in section 1, Momentive products are intended for use in the manufacture and/or formulation of products and are not intended for direct consumer use. These products are not intended for long-lasting (> 30 days) implantation, injection or direct ingestion into the human body, nor for use in the manufacture of multiple use contraceptives. Keep out of the reach of children.

Further Information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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