SAFETY DATA SHEET

1. Identification

Product identifier: SILSOFT A+ FLUID

Other means of identification
  Synonyms: Amino Modified Silicone Polyether Copolymer

Recommended use and restriction on use
  Recommended use: Industrial use Component in personal care products
  Restrictions on use: Not known.

Manufacturer/Importer/Distributor information
  Momentive Performance Materials - Sisterville
  10851 Energy Highway
  FRIENDLY WV 26146

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
    Toxic to reproduction Category 2

Label Elements
  Hazard Symbol:
    
  Signal Word: Warning

  Hazard Statement: H361; Suspected of damaging fertility or the unborn child.

Precautionary
SILSOFT A+ FLUID

Statements

Prevention: 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 exposed or concerned: Get medical advice/attention.

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.

Hazard(s) not otherwise classified (HNOC): None.

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>CAS number</th>
<th>Content in percent (%)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol</td>
<td>56-81-5</td>
<td>20 - &lt;50%</td>
<td># This substance has workplace exposure limit(s).</td>
</tr>
<tr>
<td>Octamethylcyclotetrasiloxane</td>
<td>556-67-2</td>
<td>0.1 - &lt;1%</td>
<td># This substance has workplace exposure limit(s).</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. Seek medical advice. Never give liquid to an unconscious person. If vomiting occurs, keep head low so that stomach content doesn’t get into the lungs.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, trained personnel should give oxygen. Get medical attention immediately. Place unconscious person on the side in the recovery position and ensure breathing can take place.

Skin Contact: Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Wash contaminated clothing before reuse. Destroy contaminated clothing and shoes.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention if symptoms persist.
Most important symptoms/effects, acute and delayed

Symptoms: No data available.
Hazards: No data available.

Indication of immediate medical attention and special treatment needed

Treatment: Treatment is symptomatic and supportive.

5. Fire-fighting measures

General Fire Hazards: Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Use standard firefighting procedures and consider the hazards of other involved materials. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: All standard extinguishing agents are suitable.

Unsuitable extinguishing media: Avoid water in straight hose stream; will scatter and spread fire.

Specific hazards arising from the chemical: In case of fire, carbon monoxide and carbon dioxide may be formed. Acute overexposure to the products of combustion may result in irritation of the respiratory tract. Measurements at temperatures above 150°C in presence of air (oxygen) have shown that small amounts of formaldehyde are formed due to oxidative degradation.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: Keep away from sources of ignition - No smoking. All equipment used when handling the product must be grounded.

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: Caution: Contaminated surfaces may be slippery. Keep unprotected persons away. Avoid contact with skin and eyes. Use personal protective equipment. Keep out of reach of children.

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.
Notation Procedures: Remove sources of ignition. Pay attention to the risk of combustion by fire or other sources of ignition.

Environmental Precautions: Do not allow runoff to sewer, waterway or ground.

7. Handling and storage

Precautions for safe handling: Sensitivity to static discharge is not expected. Do not get in eyes, on skin, on clothing. Do not taste or swallow. See Section 8 of the SDS for Personal Protective Equipment.

Conditions for safe storage, including any incompatibilities: Keep in a cool, ventilated location far from heat source and flame. Keep container closed. Use original container or packaging of similar material of construction.

8. Exposure controls/personal protection

Control Parameters

<table>
<thead>
<tr>
<th>Occupational Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chemical Identity</strong></td>
</tr>
<tr>
<td>Glycerol - Total dust.</td>
</tr>
<tr>
<td>Glycerol - Respirable fraction.</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Glycerol - Total dust.</td>
</tr>
<tr>
<td>Glycerol - Respirable fraction and dust or fumes.</td>
</tr>
<tr>
<td>Glycerol - Total dust and mist.</td>
</tr>
<tr>
<td>Glycerol - Vapor.</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Octamethylcyclotrisiloxane - Vapor.</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Appropriate Engineering Controls: Provide eyewash station and safety shower. Local exhaust is recommended. Observe good industrial hygiene practices.

appropriate 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: Use chemical-resistant, impervious gloves.
   Other: Wear suitable protective clothing and eye/face protection.

Respiratory Protection: If inhalation exposure is expected, 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: Avoid contact with eyes, skin, and clothing. Wash hands after handling. When using do not eat, drink or smoke.

9. Physical and chemical properties

Appearance
   Physical state: liquid
   Form: liquid
   Color: Pale yellow
   Odor: Faint
   Odor threshold: No data available.
   pH: No data available.
   Melting point/freezing point: No data available.
   Initial boiling point and boiling range: No data available.
   Flash Point: > 98.88 °C (ASTM D 93)
   Evaporation rate: No data available.
   Flammability: 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.

Heat of combustion: No data available.
Vapor pressure: 1.33 hPa
Vapor density: > 1
Density: 1.05 g/cm3
Relative density: No data available.

Solubility(ies)
   Solubility in water: Dispersible
   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 dangerous reaction if used as recommended.
Chemical Stability: Material is stable under normal conditions.
Possibility of hazardous reactions: Hazardous polymerization does not occur.
Conditions to avoid: None known.
Incompatible Materials: Strong Acids, Strong Bases
Hazardous Decomposition Products: In case of fire, gives off (emits): Oxides of silicon. Carbon oxides 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

General information: This product is not tested.
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: LD 50 (Rat): > 5,000 mg/kg
**Specified substance(s):**
Octamethylcyclotetrasiloxane

**Dermal**
**Product:**
LD 50 (Rat): > 2,000 mg/kg

**Specified substance(s):**
Octamethylcyclotetrasiloxane

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

**Specified substance(s):**
Octamethylcyclotetrasiloxane

**Repeated dose toxicity**
**Product:**
No data available.

**Skin Corrosion/Irritation**
**Product:**
No data available.

**Specified substance(s):**
Octamethylcyclotetrasiloxane

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

**Specified substance(s):**
Octamethylcyclotetrasiloxane

**Respiratory or Skin Sensitization**
**Product:**
Human patch test: negative. The health hazard evaluation is based on the toxicological properties of a similar material.

**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

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended:
No carcinogenic components identified

Germ Cell Mutagenicity

In vitro
Product: Ames-Test: negative. The health hazard evaluation is based on the toxicological properties of a similar material.

In vivo
Product: No data available.

Specified substance(s):
Octamethylcyclotetrasiloxane
Chromosomal aberration (OECD-Guideline 474 (Genetic Toxicology: Micronucleus Test)) Inhalation (Rat, male and female): negative

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.

Aspiration Hazard
Product: No data available.

Other effects: The health hazard evaluation is based on the toxicological properties of a similar material.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish
Product: EC50 (Pimaphales promelas, 96 h): > 1,000 mg/l

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: EC50 (Desmodesmus subspicatus (green algae), 72 h): > 100 mg/l

**Persistence and Degradability**

**Biodegradation**
- Product: No data available.

**Specified substance(s):**
- Octamethylcyclotetrasiloxane: 3.7 % (29 d, 310 Ready Biodegradability - CO2 in Sealed Vessels (Headspace Test)) Not readily biodegradable.

**BOD/COD Ratio**
- Product: No data available.

**Bioaccumulative potential**

**Bioconcentration Factor (BCF)**
- Product: No data available.

**Specified substance(s):**
- Octamethylcyclotetrasiloxane: Fathead Minnow, Bioconcentration Factor (BCF): 12.40

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

**Mobility in soil:**
- No data available.

**Known or predicted distribution to environmental compartments**
- Glycerol: No data available.
- Octamethylcyclotetrasiloxane: No data available.

**Other adverse effects:**
- No data available.
13. Disposal considerations

General information: The generation of waste should be avoided or minimized wherever possible. See Section 8 for information on appropriate personal protective equipment. Do not discharge into drains, water courses or onto the ground.

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.

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. Toxic Substances Control Act (TSCA) Section 5(a)(2) Final Significant New Use Rules (SNURs) (40 CFR 721, Subpt E)
None present or none present in regulated quantities.

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

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>OSHA hazard(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol</td>
<td>No OSHA Hazards</td>
</tr>
<tr>
<td>Dipropylene Glycol</td>
<td>No OSHA Hazards</td>
</tr>
<tr>
<td>Decamethylcyclopentasil oxane</td>
<td>Causes mild skin irritation.; Respiratory hazard.</td>
</tr>
</tbody>
</table>

CERCLA Hazardous Substance List (40 CFR 302.4):
None present or none present in regulated quantities.
Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Reproductive toxicity

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
Chemical Identity   Threshold Planning Quantity

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required
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 requiring a warning under CA Prop 65.

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

Chemical Identity
- Glycerol
- Aminomodified Silicone-Polyether Copolymer
- Water
- Dipropylene Glycol
- 2-Propanol

US. Massachusetts RTK - Substance List

Chemical Identity
- Glycerol

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity
- Glycerol
- Dipropylene Glycol

US. Rhode Island RTK

Chemical Identity
- Glycerol
### Inventory Status:

<table>
<thead>
<tr>
<th>Country</th>
<th>Status</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia AICS:</td>
<td>y (positive listing)</td>
<td>Remarks: None.</td>
</tr>
<tr>
<td>EU EINECS List:</td>
<td>y (positive listing)</td>
<td>Remarks: None.</td>
</tr>
<tr>
<td>Japan (ENCS) List:</td>
<td>n (negative listing)</td>
<td>Remarks: None.</td>
</tr>
<tr>
<td>China Inventory of Existing Chemical Substances:</td>
<td>y (positive listing)</td>
<td>Remarks: None.</td>
</tr>
<tr>
<td>Korea Existing Chemicals Inv. (KECI):</td>
<td>y (positive listing)</td>
<td>Remarks: None.</td>
</tr>
<tr>
<td>Canada DSL Inventory List:</td>
<td>q (quantity restricted)</td>
<td>Remarks: Please contact your supplier for further information on the inventory status of this material.</td>
</tr>
<tr>
<td>Canada NDSL Inventory:</td>
<td>n (negative listing)</td>
<td>Remarks: None.</td>
</tr>
<tr>
<td>Philippines PICCS:</td>
<td>y (positive listing)</td>
<td>Remarks: None.</td>
</tr>
<tr>
<td>US TSCA Inventory:</td>
<td>y (positive listing)</td>
<td>Remarks: On TSCA Inventory</td>
</tr>
<tr>
<td>New Zealand Inventory of Chemicals:</td>
<td>y (positive listing)</td>
<td>Remarks: None.</td>
</tr>
<tr>
<td>Taiwan, Taiwan inventory (CSNN):</td>
<td>y (positive listing)</td>
<td>Remarks: None.</td>
</tr>
<tr>
<td>REACH:</td>
<td>If purchased from Momentive Performance Materials GmbH in Leverkusen, Germany, all substances in this product have been registered by Momentive Performance Materials GmbH or upstream in our supply chain or are exempt from registration under Regulation (EC) No 1907/2006 (REACH). For polymers, this includes the constituent monomers and other reactants. Remarks: None.</td>
<td></td>
</tr>
</tbody>
</table>

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

**HMIS Hazard ID**

<table>
<thead>
<tr>
<th>Health</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability</td>
<td>1</td>
</tr>
<tr>
<td>Physical Hazards</td>
<td>0</td>
</tr>
</tbody>
</table>

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

**Issue Date:** 11/02/2020

**Revision Date:** No data available.

**Version #:** 3.1
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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