1. Identification

Product identifier: NINOL COMF-N

Other means of identification

Product code: 6887

Recommended use: Surfactant

Recommended restrictions: For industrial use only.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer:

Company name: Stepan Company
Address: 22 West Frontage Road
Northfield, IL 60093
USA

Telephone: General 1-847-446-7500
Emergency phone number: Medical 1-800-228-5635
Chemtrec 1-800-424-9300
Chemtrec Int'l +1 703-527-3887

2. Hazard(s) identification

Physical hazards: Not classified.

Health hazards:

Skin corrosion/irritation Category 2
Serious eye damage/eye irritation Category 1

Environmental hazards:

Hazardous to the aquatic environment, acute hazard Category 2
Hazardous to the aquatic environment, long-term hazard Category 3

OSHA defined hazards: Combustible dust

Label elements

Signal word: Danger

Hazard statement: Causes skin irritation. Causes serious eye damage. Toxic to aquatic life. Harmful to aquatic life with long lasting effects. May form combustible dust concentrations in air.

Precautionary statement


Response: If on skin: Wash with plenty of water. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Specific treatment (see this label). If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. Call a POISON CENTER/doctor if you feel unwell.

Storage: Store away from incompatible materials.

Disposal: Dispose of contents/container in accordance with local/regional/national/international regulations.

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

Supplemental information: Not applicable.
3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coconut oil monoethanolamide</td>
<td></td>
<td>68140-00-1</td>
<td>80 - 100%</td>
</tr>
<tr>
<td>Glycerin</td>
<td></td>
<td>56-81-5</td>
<td>0 - 20%</td>
</tr>
<tr>
<td>Other components below reportable</td>
<td></td>
<td></td>
<td>0.032</td>
</tr>
</tbody>
</table>

4. First-aid measures

Inhalation
Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin contact
Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

Eye contact
Do not rub eyes. Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

Ingestion
Rinse mouth. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed
Dusts may irritate the respiratory tract, skin and eyes. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain.

Indication of immediate medical attention and special treatment needed
Provide general supportive measures and treat symptomatically. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

General information
In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media

Unsuitable extinguishing media
None known.

Specific hazards arising from the chemical
Explosion hazard: Avoid generating dust; fine dust dispersed in air in sufficient concentrations and in the presence of an ignition source is a potential dust explosion hazard. During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters
Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions
In case of fire and/or explosion do not breathe fumes. In the event of fire, cool tanks with water spray. Move containers from fire area if you can do so without risk.

Specific methods
Cool containers exposed to flames with water until well after the fire is out.

General fire hazards
May form combustible dust concentrations in air.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Use only non-sparking tools. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid inhalation of dust. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up
Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools.

Environmental precautions
Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.
7. Handling and storage

Precautions for safe handling
Eliminate all sources of ignition. Minimize dust generation and accumulation. Combustible dust clouds may be created where operations produce fine material (dust). Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions. Handling and processing operations should be conducted in accordance with ‘best practices’ (e.g. NFPA-654). Do not get this material in contact with eyes. Do not get this material in contact with skin. Avoid breathing dust. Avoid prolonged exposure. Avoid contact with clothing. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Avoid release to the environment. Do not empty into drains.

Conditions for safe storage, including any incompatibilities
Keep away from heat, sparks and open flame. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.

8. Exposure controls/personal protection

Occupational exposure limits

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerin (CAS 56-81-5)</td>
<td>PEL</td>
<td>5 mg/m³</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15 mg/m³</td>
<td>Total dust.</td>
</tr>
<tr>
<td>Monoethanolamine (MEA) (CAS 141-43-5)</td>
<td>PEL</td>
<td>6 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monoethanolamine (MEA) (CAS 141-43-5)</td>
<td>STEL</td>
<td>6 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>3 ppm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monoethanolamine (MEA) (CAS 141-43-5)</td>
<td>STEL</td>
<td>15 mg/m³</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>8 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 ppm</td>
</tr>
</tbody>
</table>

Biological limit values
No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls
Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Use only appropriately classified electrical equipment and powered industrial trucks. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection
Wear safety glasses with side shields (or goggles) and a face shield. Wear a full-face respirator, if needed.

Skin protection
Hand protection
Wear appropriate chemical resistant gloves.

Other
Wear appropriate chemical resistant clothing.

Respiratory protection
In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards
Wear appropriate thermal protective clothing, when necessary.
Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance
- Physical state: Solid.
- Form: Pastilles or Flakes.
- Color: Off-white to light yellow

Odor
- Mild.
- Odor threshold: Not available.

pH
- 8 - 10 (1% in 50:50 IPA/Water)

Melting point/freezing point
- 143.6 - 150.8 °F (62 - 66 °C)

Initial boiling point and boiling range
- 302 °F (150 °C)

Flash point
- > 201.0 °F (> 93.9 °C) Pensky-Martens Closed Cup

Evaporation rate
- Not available.

Flammability (solid, gas)
- Not available.

Upper/lower flammability or explosive limits
- Flammability limit - lower (%): Not available.
- Flammability limit - upper (%): Not available.
- Explosive limit - lower (%): Not available.
- Explosive limit - upper (%): Not available.

Vapor pressure
- Not available.

Vapor density
- Not available.

Relative density
- Not available.

Solubility(ies)
- Solubility (water): Not available.

Auto-ignition temperature
- Not available.

Decomposition temperature
- Not available.

Viscosity
- 50 cP @ 70C

Other information
- Density: 7.82 lb/gal @ 70C

10. Stability and reactivity

Reactivity
- The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability
- Material is stable under normal conditions.

Possibility of hazardous reactions
- No dangerous reaction known under conditions of normal use.

Conditions to avoid
- Keep away from heat, sparks and open flame. Avoid temperatures exceeding the flash point. Contact with incompatible materials. Minimize dust generation and accumulation.

Incompatible materials
- Strong oxidizing agents.

Hazardous decomposition products
- No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure
- Inhalation: Prolonged inhalation may be harmful.
- Skin contact: Causes skin irritation.
- Eye contact: Causes serious eye damage.
- Ingestion: Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics

Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>NINOL COMF-N</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Dermal</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC50</td>
<td>Rabbit</td>
<td>&gt; 2 g/kg</td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
<td>&gt; 5 g/kg</td>
</tr>
<tr>
<td><strong>Skin corrosion/irritation</strong></td>
<td>Causes skin irritation.</td>
<td></td>
</tr>
<tr>
<td><strong>Serious eye damage/eye irritation</strong></td>
<td>Causes serious eye damage.</td>
<td></td>
</tr>
</tbody>
</table>

Respiratory or skin sensitization

- **Respiratory sensitization**: Not available.
- **Skin sensitization**: This product is not expected to cause skin sensitization.
- **Germ cell mutagenicity**: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity

- **IARC Monographs. Overall Evaluation of Carcinogenicity**: Not listed.
- **US. National Toxicology Program (NTP) Report on Carcinogens**: Not listed.

Reproductive toxicity

This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure

- Not applicable.

Specific target organ toxicity - repeated exposure

- Not applicable.

Aspiration hazard

Not applicable.

Chronic effects

Prolonged inhalation may be harmful. May be harmful if absorbed through skin.

12. Ecological information

Ecotoxicity

Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>NINOL COMF-N</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Aquatic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Acute</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Algae</td>
<td>EC50</td>
<td>Algae 1.1 mg/l, 72 hours</td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Crustacea 38 mg/l, 48 hours</td>
</tr>
<tr>
<td>Fish</td>
<td>EC50</td>
<td>Fish 38 mg/l, 96 hours</td>
</tr>
<tr>
<td><strong>Components</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glycerin (CAS 56-81-5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Aquatic</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Rainbow trout,donaldson trout (Oncorhynchus mykiss) 51000 - 57000 mg/l, 96 hours</td>
</tr>
<tr>
<td>Monoethanolamine (MEA) (CAS 141-43-5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Aquatic</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Rainbow trout,donaldson trout (Oncorhynchus mykiss) 114 - 196 mg/l, 96 hours</td>
</tr>
</tbody>
</table>
Persistence and degradability  
Readily biodegradable.

Bioaccumulative potential  
No data available.

Partition coefficient n-octanol / water (log Kow)  
- Glycerin: -1.76  
- Monoethanolamine (MEA): -1.31

Mobility in soil  
No data available.

Other adverse effects  
No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions  
Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazardous waste code  
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products  
Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging  
Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT  
Not regulated as dangerous goods.

IATA  
Not regulated as dangerous goods.

IMDG  
Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code  
Not available.

15. Regulatory information

US federal regulations  
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

CERCLA Hazardous Substance List (40 CFR 302.4)  
Not listed.

SARA 304 Emergency release notification  
Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)  
Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories  
Immediate Hazard - Yes  
Delayed Hazard - No  
Fire Hazard - Yes  
Pressure Hazard - No  
Reactivity Hazard - No

SARA 302 Extremely hazardous substance  
Not listed.

SARA 311/312 Hazardous chemical  
Yes

SARA 313 (TRI reporting)  
Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List  
Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)  
Not regulated.
Safe Drinking Water Act (SDWA)

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Glycerin (CAS 56-81-5) Other Flavoring Substances with OSHA PEL’s

US state regulations

US - New Jersey RTK - Substances: Listed substance
Glycerin (CAS 56-81-5)
Monoethanolamine (MEA) (CAS 141-43-5)

US - Pennsylvania RTK - Hazardous Substances: Listed substance
Glycerin (CAS 56-81-5)
Monoethanolamine (MEA) (CAS 141-43-5)

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)
Not listed.

US. Massachusetts RTK - Substance List
Glycerin (CAS 56-81-5)
Monoethanolamine (MEA) (CAS 141-43-5)

US. Pennsylvania Worker and Community Right-to-Know Law
Glycerin (CAS 56-81-5)
Monoethanolamine (MEA) (CAS 141-43-5)

US. Rhode Island RTK
Not regulated.

US. California Proposition 65
WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance
Cocoamide DEA (CAS 68603-42-9) Listed: June 22, 2012
Diethanolamine (CAS 111-42-2) Listed: June 22, 2012

US - California Proposition 65 - CRT: Listed date/Developmental toxin
Methanol (CAS 67-56-1) Listed: March 16, 2012

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory (NZIoC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

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

Issue date 05-23-2014
Revision date 03-10-2017
Version # 06
Further information
Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling.
Terms and Conditions. This SDS is designed only as guidance for the products to which it applies. To the greatest extent permitted by applicable law, nothing contained herein creates any legal obligation including contractual obligations, expressed or implied warranties, including any warranties of merchantability or fitness for particular purpose; or confers any intellectual property rights, including rights to use trademarks or a license to use patents, issued or pending. The information contained herein is based on the manufacturer's own study and the work of others, and is subject to change at any time without further notice. There is no warranty, expressed or implied, as to the accuracy, completeness or adequacy of the information contained herein, and neither the provider nor the manufacturer (nor the agents, directors, officers, contractors or employees of either) are liable to any party for any damages of any nature, including direct, special or consequential damages arising out of or in connection with the accuracy, completeness, adequacy or furnishing of any information in this SDS, or in any other way related (directly or indirectly) to this SDS. The receipt and use of this information constitutes consent to these terms and conditions.

Composition / Information on Ingredients: Disclosure Overrides
GHS: Classification