SAFETY DATA SHEET

1. Identification

Product identifier  NINATE 60E
Other means of identification
    Product code  1992
Recommended use  Surfactant
Recommended restrictions  For industrial use only.
Manufacturer/Importer/Supplier/Distributor information
    Manufacturer  Stepan Company
    Address  22 West Frontage Road
             Northfield, IL 60093
    USA
    Telephone  General  1-847-446-7500
    E-mail  Not available.
    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  Flammable liquids  Category 4
Health hazards  Acute toxicity, oral  Category 4
                 Skin corrosion/irritation  Category 2
                 Serious eye damage/eye irritation  Category 2A
Environmental hazards  Hazardous to the aquatic environment, acute hazard  Category 2
                       Hazardous to the aquatic environment, long-term hazard  Category 3
OSHA defined hazards  Not classified.
Label elements

Signal word  Warning
Hazard statement  Combustible liquid. Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. Toxic to aquatic life. Harmful to aquatic life with long lasting effects.
Precautionary statement
Prevention  Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves/eye protection/face protection.
Response  If swallowed: Call a poison center/doctor if you feel unwell. If on skin: Wash with plenty of water. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Specific treatment (see this label). Rinse mouth. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish.
Storage  Store in a well-ventilated place. Keep cool.
Disposal  Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)  None known.
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>Alkyl(C10-16)benzenesulfonic acid, calcium salt</td>
<td></td>
<td>68584-23-6</td>
<td>55 - 65</td>
</tr>
<tr>
<td>Alt CAS 26264-06-2, 84989-14-0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>_2-Ethyl Hexanol</td>
<td></td>
<td>104-76-7</td>
<td>30 - &lt; 40</td>
</tr>
<tr>
<td>_Solvent naphtha, petroleum, heavy arom.</td>
<td></td>
<td>64742-94-5</td>
<td>1 - &lt; 3</td>
</tr>
</tbody>
</table>

Other components below reportable levels 1 - < 3

4. First-aid measures

**Inhalation**
Move to fresh air. Call a physician if symptoms develop or persist.

**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**
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 if irritation develops and persists.

**Ingestion**
Rinse mouth. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

**Most important symptoms/effects, acute and delayed**
Symptoms may include stinging, tearing, redness, swelling, and blurred vision. 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**
Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

**Unsuitable extinguishing media**
Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards arising from the chemical**
The product is combustible, and heating may generate vapors which may form explosive vapor/air mixtures. 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. Move containers from fire area if you can do so without risk.

**Specific methods**
Use standard firefighting procedures and consider the hazards of other involved materials.

**General fire hazards**
Combustible liquid.

6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. 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). Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent product from entering drains. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

**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**

Keep away from open flames, hot surfaces and sources of ignition. Do not taste or swallow. Avoid contact with skin. Avoid contact with eyes. Avoid contact with clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. 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. Store in original tightly closed container. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Keep in an area equipped with sprinklers.

**8. Exposure controls/personal protection**

**Occupational exposure limits**

No exposure limits noted for ingredient(s).

**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. 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).

**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. If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

**Thermal hazards**

Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

When using, do not eat, drink or smoke. 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**

Liquid.

**Form**

Liquid.

**Color**

Amber.

**Odor**

Not available.

**Odor threshold**

Not available.

**pH**

5 - 6 (5% in 50:50 IPA/Water)

**Melting point/freezing point**

Not available.

**Initial boiling point and boiling range**

Not available.

**Flash point**

150.0 °F (65.6 °C) Pensky-Martens Closed Cup
<table>
<thead>
<tr>
<th>Property</th>
<th>Value/Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaporation rate</td>
<td>Less than Ethyl ether</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td></td>
</tr>
<tr>
<td>Flammability limit - lower (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammability limit - upper (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Explosive limit - lower (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Explosive limit - upper (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not determined</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Heavier than air</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not available.</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td></td>
</tr>
<tr>
<td>Solubility (water)</td>
<td>Moderately soluble</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>4850 cP @ 25°C</td>
</tr>
<tr>
<td>Other information</td>
<td></td>
</tr>
<tr>
<td>Density</td>
<td>8.21 lb/gal @ 25°C</td>
</tr>
<tr>
<td>Pour point</td>
<td>2 °F (-16.67 °C)</td>
</tr>
</tbody>
</table>

### 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**

Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.

**Incompatible materials**

Strong oxidizing agents.

**Hazardous decomposition products**

No hazardous decomposition products are known.

### 11. Toxicological information

**Information on likely routes of exposure**

- **Inhalation**: No adverse effects due to inhalation are expected.
- **Skin contact**: Causes skin irritation.
- **Eye contact**: Causes serious eye irritation.
- **Ingestion**: Harmful if swallowed.

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

Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

**Information on toxicological effects**

- **Acute toxicity**: Harmful if swallowed. Expected to be a low hazard for usual industrial or commercial handling by trained personnel.
- **Skin corrosion/irritation**: Causes skin irritation.
- **Serious eye damage/eye irritation**: Causes serious eye irritation.

**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**

This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
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 exposure may cause chronic effects.

12. Ecological information

Ecotoxicity
Toxic to aquatic life. Harmful to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected.

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>NINATE 60E</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute Fish</td>
<td>LC50</td>
<td>20 mg/l, 96 hours</td>
</tr>
<tr>
<td>Components</td>
<td></td>
<td></td>
</tr>
<tr>
<td>_2-Ethyl Hexanol (CAS 104-76-7)</td>
<td>Aquatic</td>
<td></td>
</tr>
<tr>
<td>Fish LC50</td>
<td>10 - 33 mg/l, 96 hours</td>
<td></td>
</tr>
</tbody>
</table>

Persistence and degradability
Readily biodegradable.

Bioaccumulative potential
No data available.

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

General
The provided transportation classifications are for bulk shipments only and may not be representative of all package/shipment sizes.

DOT
UN number NA1993
UN proper shipping name Combustible Liquids, N.O.S. (2-Ethyl Hexanol)
Transport hazard class(es)
Class答案: Combustible Liquid
Subsidiary risk -
Packing group III
Environmental hazards
Marine pollutant Alkylbenzenesulfonate Salt
Special precautions for user
Read safety instructions, SDS and emergency procedures before handling.
IATA

UN number UN3082
UN proper shipping name Environmentally Hazardous Substance, Liquid, N.O.S. (Alkylbenzenesulfonate Salt)
Transport hazard class(es)
  Class 9
  Subsidiary risk -
  Packing group III
Environmental hazards Yes
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number UN3082
UN proper shipping name Environmentally Hazardous Substance, Liquid, N.O.S. (Alkylbenzenesulfonate Salt), MARINE POLLUTANT
Transport hazard class(es)
  Class 9
  Subsidiary risk -
  Packing group III
Environmental hazards
  Marine pollutant Yes
  EmS Not available.
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

DOT

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)  
Not regulated.

US state regulations  
US - Pennsylvania RTK - Hazardous Substances: Listed substance  
_2-Ethyl Hexanol (CAS 104-76-7)

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

US. Massachusetts RTK - Substance List  
_2-Ethyl Hexanol (CAS 104-76-7)

US. Pennsylvania Worker and Community Right-to-Know Law  
_2-Ethyl Hexanol (CAS 104-76-7)

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.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance  
_Naphthalene (CAS 91-20-3) Listed: April 19, 2002

International Inventories  
Country(s) or region  
Australia  
Canada  
Canada  
China  
Europe  
Europe  
Japan  
Korea  
New Zealand  
Philippines  
Taiwan

Inventory name  
Australian Inventory of Chemical Substances (AICS)  
Domestic Substances List (DSL)  
Non-Domestic Substances List (NDSL)  
Inventory of Existing Chemical Substances in China (IECSC)  
European Inventory of Existing Commercial Chemical Substances (EINECS)  
European List of Notified Chemical Substances (ELINCS)  
Inventory of Existing and New Chemical Substances (ENCS)  
Existing Chemicals List (ECL)  
New Zealand Inventory (NZIoC)  
Philippine Inventory of Chemicals and Chemical Substances (PICCS)  
Taiwan Inventory (TCSI)

On inventory (yes/no)*  
Yes  
Yes  
No  
Yes  
Yes  
No  
Yes  
Yes  
Yes  
Yes
<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<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

<table>
<thead>
<tr>
<th>Issue date</th>
<th>06-27-2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revision date</td>
<td>05-11-2017</td>
</tr>
<tr>
<td>Version #</td>
<td>04</td>
</tr>
</tbody>
</table>

**Disclaimer**

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.

**Revision information**

- Hazard(s) identification: Prevention
- Hazard(s) identification: Response
- Hazard(s) identification: Storage
- Composition / Information on Ingredients: Ingredients
- Regulatory information: California Prop 65
- GHS: Classification