Safety Data Sheet

Cat. # 786-512

Nonidet® P-40 Substitute

Size: 1 Liter
Nonidet P-40 Substitute
Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
Revision date: 5/11/2017 Version: 1.1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form: Substance
Substance name: Nonidet P-40 Substitute
EC-No.: 500-024-6
CAS-No.: 9016-45-9
Product code: 072N, 073N
Type of product: Polymer, Group
Formula: (C2H4O)n.C15H24O
Synonyms:

1/8
1. **Relevant identified uses of the substance or mixture and uses advised against**

1.2. **Relevant identified uses**

Use of the substance/mixture: Detergent according to Regulation (EC) No 648/2004

1.2.2. **Uses advised against**

No additional information available

1.3. **Details of the supplier of the safety data sheet**

Geno Technology, Inc./ G-Biosciences

9800 Page Avenue

63132-1429 Saint Louis - United States

T 800-628-7730 - F 314-991-1504

technical@GBiosciences.com - www.GBiosciences.com

1.4. **Emergency telephone number**

Emergency number: Chemtrec 1-800-424-9300 (USA/Canada), +1-703-527-3887 (Intl)

<table>
<thead>
<tr>
<th>Country</th>
<th>Organisation/Company</th>
<th>Address</th>
<th>Emergency number</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Kingdom</td>
<td>National Poisons Information Service</td>
<td>Groversor Road BT12 6BA</td>
<td>0344 892 0111</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Belfast Centre) City Hospital</td>
<td>Belfast</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>National Poisons Information Service</td>
<td>Dudley Road B18 7QH</td>
<td>0344 892 0111</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Birmingham Centre)</td>
<td>Birmingham</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>National Poisons Information Service</td>
<td>Penarth CF64 2XX</td>
<td>0344 892 0111</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Cardiff Centre)</td>
<td>Cardiff</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1/24/2018 EN (English) 2/8
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Hazardous to the aquatic environment — H413
Chronic Hazard, Category 4
Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects
May cause long lasting harmful effects to aquatic life.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

CLP Signal word : -
Hazard statements (CLP) : H413 - May cause long lasting harmful effects to aquatic life.
Precautionary statements (CLP) : P273 - Avoid release to the environment.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonidet P-40 Substitute</td>
<td>(CAS-No.) 9016-45-9  (EC-No.) 500-024-6</td>
<td>100</td>
<td>Aquatic Chronic 4, H413</td>
</tr>
</tbody>
</table>

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures


First-aid measures after inhalation : Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

First-aid measures after skin contact : Wash immediately with lots of water. Take victim to a doctor if irritation persists.

First-aid measures after eye contact : Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after skin contact: Tingling/irritation of the skin.
Symptoms/effects after eye contact: Irritation of the eye tissue.
Symptoms/effects after ingestion: Irritation of the gastric/intestinal mucosa.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:
- Quick-acting ABC powder extinguisher
- Quick-acting BC powder extinguisher
- Quick-acting class B foam extinguisher
- Quick-acting CO2 extinguisher
- Class B foam (alcohol-resistant)
- Water spray if puddle cannot expand

Unsuitable extinguishing media:
- Water (quick-acting extinguisher, reel): risk of puddle expansion
- Water: risk of puddle expansion

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire:
- Toxic fumes may be released

5.3. Advice for firefighters

Precautionary measures fire:
- Exposure to fire/heat: keep upwind
- Exposure to fire/heat: have neighbourhood close doors and windows

Firefighting instructions:
- Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it

Protection during firefighting:
- Heat/fire exposure: compressed air/oxygen apparatus

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment:
- Gloves
- Face-shield
- Protective clothing

Emergency procedures:
- Mark the danger area
- Wash contaminated clothes

6.1.2. For emergency responders

Protective equipment:
- Do not attempt to take action without suitable protective equipment
- For further information refer to section 8: "Exposure controls/personal protection"

6.2. Environmental precautions

Prevent soil and water pollution. Prevent spreading in sewers

6.3. Methods and material for containment and cleaning up

For containment:
- Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Dam up the liquid spill.

Methods for cleaning up:
- Take up liquid spill into inert absorbent material, e.g.: sand. Scoop absorbed substance into closing containers. Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

Other information:
- Dispose of materials or solid residues at an authorized site

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling:
- Carry operations in the open/under local exhaust/ventilation or with respiratory protection
- Comply with the legal requirements
- Clean contaminated clothing
- Thoroughly clean/dry the installation before use
- Do not discharge the waste into the drain

Hygiene measures:
- Do not eat, drink or smoke when using this product
- Always wash hands after handling the product

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions:
- Store in a well-ventilated place
- Keep cool

Storage temperature:
- 5 - 40 °C

Heat and ignition sources:
- KEEP SUBSTANCE AWAY FROM: heat sources

Information on mixed storage:
- KEEP SUBSTANCE AWAY FROM: water/moisture

Storage area:
- Store in a dry area
- Meet the legal requirements

Special rules on packaging:
- SPECIAL REQUIREMENTS: closing, dry, clean, correctly labelled
- Meet the legal requirements
- Secure fragile packagings in solid containers
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Packaging materials: SUITABLE MATERIAL: stainless steel, synthetic material.

7. Specific End Use(s)
No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
No additional information available

8.2. Exposure controls

Appropriate engineering controls:
Ensure good ventilation of the work station.

Hand protection:
Gloves

Eye protection:
Face shield

Skin and body protection:
Protective clothing

Respiratory protection:
Respiratory protection not required in normal conditions

Environmental exposure controls:
Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Liquid</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>880 g/mol</td>
</tr>
<tr>
<td>Colour</td>
<td>No data available</td>
</tr>
<tr>
<td>Odour</td>
<td>Almost odourless</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>6 - 7</td>
</tr>
<tr>
<td>Relative evaporation rate (butylacetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>18 °C</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>&gt; 200 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 200 °C</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>&gt; 400 °C</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.1 (40 °C)</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in water.</td>
</tr>
<tr>
<td></td>
<td>Water: soluble, Literature</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>0.3 Pa.s (40 °C)</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
</tbody>
</table>

9.2. Other information

Other properties: Hygroscopic, Slightly volatile.
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SECTION 10: Stability and reactivity

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

10.2. Chemical stability
Hygroscopic.

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

10.4. Conditions to avoid
None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials
No additional information available

10.6. Hazardous decomposition products
Hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>Effect</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity (oral)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Acute toxicity (dermal)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Acute toxicity (inhalation)</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

### Nonidet P-40 Substitute (9016-45-9)

<table>
<thead>
<tr>
<th>Test</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>&gt; 2000 mg/kg (Rat)</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>&gt; 2000 mg/kg (Rabbit)</td>
</tr>
</tbody>
</table>

- Skin corrosion/irritation: Not classified
- pH: 6 - 7
- Serious eye damage/irritation: Not classified
- pH: 6 - 7
- Respiratory or skin sensitisation: Not classified
- Germ cell mutagenicity: Not classified
- Carcinogenicity: Not classified
- Reproductive toxicity: Not classified
- STOT-single exposure: Not classified
- STOT-repeated exposure: Not classified
- Aspiration hazard: Not classified
- Potential adverse human health effects and symptoms: Practically non-toxic if swallowed (LD50 oral, rat > 2000 mg/kg). Practically non-toxic in contact with skin (LD50 skin > 2000 mg/kg). Irritant to the skin. Slightly harmful by inhalation. Irritant to the eyes.

SECTION 12: Ecological information

12.1. Toxicity

<table>
<thead>
<tr>
<th>Test</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecology - general</td>
<td>May cause long lasting harmful effects to aquatic life.</td>
</tr>
<tr>
<td>Ecology - air</td>
<td>Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).</td>
</tr>
<tr>
<td>Ecology - water</td>
<td>Water pollutant (surface water).</td>
</tr>
<tr>
<td>Acute aquatic toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Chronic aquatic toxicity</td>
<td>May cause long lasting harmful effects to aquatic life.</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability
No additional information available

12.3. Bioaccumulative potential
No additional information available

12.4. Mobility in soil
No additional information available

12.5. Results of PBT and vPvB assessment
No additional information available
**12.6. Other adverse effects**

No additional information available

**SECTION 13: Disposal considerations**

<table>
<thead>
<tr>
<th>Waste treatment methods</th>
<th>Waste treatment methods.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product/Packaging disposal recommendations</td>
<td>Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber with energy recovery.</td>
</tr>
<tr>
<td>Additional information</td>
<td>Can be considered as non hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014.</td>
</tr>
</tbody>
</table>
| European List of Waste (LoW) code | 15 01 02 - plastic packaging  
07 06 99 - wastes not otherwise specified |

**SECTION 14: Transport information**

In accordance with ADR / RID / IMDG / IATA / ADN

<table>
<thead>
<tr>
<th>14.1. UN number</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN-No. (ADR)</td>
</tr>
<tr>
<td>UN-No. (IMDG)</td>
</tr>
<tr>
<td>UN-No. (IATA)</td>
</tr>
<tr>
<td>UN-No. (ADN)</td>
</tr>
<tr>
<td>UN-No. (RID)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>14.2. UN proper shipping name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper Shipping Name (ADR)</td>
</tr>
<tr>
<td>Proper Shipping Name (IMDG)</td>
</tr>
<tr>
<td>Proper Shipping Name (IATA)</td>
</tr>
<tr>
<td>Proper Shipping Name (ADN)</td>
</tr>
<tr>
<td>Proper Shipping Name (RID)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>14.3. Transport hazard class(es)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADR</td>
</tr>
<tr>
<td>IMDG</td>
</tr>
<tr>
<td>IATA</td>
</tr>
<tr>
<td>ADN</td>
</tr>
<tr>
<td>RID</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>14.4. Packing group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packing group (ADR)</td>
</tr>
<tr>
<td>Packing group (IMDG)</td>
</tr>
<tr>
<td>Packing group (IATA)</td>
</tr>
<tr>
<td>Packing group (ADN)</td>
</tr>
<tr>
<td>Packing group (RID)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>14.5. Environmental hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dangerous for the environment</td>
</tr>
<tr>
<td>Marine pollutant</td>
</tr>
<tr>
<td>Other information</td>
</tr>
</tbody>
</table>
14.6. Special precautions for user
- Overland transport
  Not applicable
- Transport by sea
  Not applicable
- Air transport
  Not applicable
- Inland waterway transport
  Not applicable
- Rail transport
  Not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
Not applicable

SECTION 15: Regulatory information
15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
15.1.1. EU-Regulations
No REACH Annex XVII restrictions
Nonidet P-40 Substitute is not on the REACH Candidate List
Nonidet P-40 Substitute is not on the REACH Annex XIV List

15.1.2. National regulations
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on the Canadian DSL (Domestic Substances List)

15.2. Chemical safety assessment
No chemical safety assessment has been carried out

SECTION 16: Other information
Full text of H- and EUH-statements:
| Aquatic Chronic 4 | Hazardous to the aquatic environment — Chronic Hazard, Category 4 |
| H413             | May cause long lasting harmful effects to aquatic life. |

Safety Data Sheet applicable for regions : GB - United Kingdom

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.