SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Polyethylene Glycol 400
Product Use Description: Industrial chemical

Manufacturer or supplier's details
Company: Nexeo Solutions LLC
Address: 3 Waterway Square Place Suite 1000
Woodlands, Tx. 77380
United States of America

Emergency telephone number:
Health North America: 1-855-NEXEO4U (1-855-639-3648)
Health International: 1-855-NEXEO4U (1-855-639-3648)
Transport North America: CHEMTREC 800.424.9300

Additional Information:
Responsible Party: Product Safety Group
E-Mail: msds@nexeosolutions.com
SDS Requests: 1-855-429-2661
SDS Requests Fax: 1-281-500-2370
Website: www.nexeosolutions.com

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification
Specific target organ toxicity - single exposure: Category 3 (Respiratory system)

GHS Label element
Hazard pictograms: 

Signal word: Warning
Hazard statements: H335 May cause respiratory irritation.
Precautionary statements: Prevention:
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P271 Use only outdoors or in a well-ventilated area.
Response:
P304 + P340 + P312: If INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if
you feel unwell.

**Storage:**
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

**Disposal:**
P501 Dispose of contents/ container to an approved waste disposal plant.

**Potential Health Effects**

**Carcinogenicity:**
- **IARC**
  No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- **ACGIH**
  No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- **OSHA**
  No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
- **NTP**
  No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**Emergency Overview**

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Viscous, liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>Clear, colourless, white</td>
</tr>
<tr>
<td>Odour</td>
<td>Alcohol-like</td>
</tr>
<tr>
<td>Hazard Summary</td>
<td>No information available.</td>
</tr>
</tbody>
</table>

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

**Substance / Mixture :** Substance

**Hazardous components**

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Chemical Name</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>25322-68-3</td>
<td>Polyethylene glycol</td>
<td>90 - 100</td>
</tr>
</tbody>
</table>

**Molecular formula**

\((\text{C}_2\text{H}_4\text{O})_n\text{H}_2\text{O}\)
SECTION 4. FIRST AID MEASURES

General advice: Move out of dangerous area. Show this safety data sheet to the doctor in attendance. Do not leave the victim unattended.

If inhaled: Consult a physician after significant exposure. If unconscious place in recovery position and seek medical advice.

In case of eye contact: Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.

If swallowed: Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media: In case of fire, use water/water spray/water jet/carbon dioxide/sand/foam/alcohol resistant foam/chemical powder for extinction.

Unsuitable extinguishing media: High volume water jet

Hazardous combustion products: Carbon oxides

Specific extinguishing methods: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Further information: Standard procedure for chemical fires.

Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

NFPA Flammable and Combustible Liquids Classification: Combustible Liquid Class IIIB
SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Ensure adequate ventilation.

Environmental precautions: Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling: Avoid formation of aerosol. Do not breathe vapours/dust. Avoid exposure - obtain special instructions before use. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage: Keep container tightly closed in a dry and well-ventilated place. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

Materials to avoid: Do not store near acids.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Components</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>25322-68-3</td>
<td>Polyethylene glycol</td>
<td>TWA</td>
<td>10 mg/m3</td>
<td>US WEEL</td>
</tr>
</tbody>
</table>

MSDS Number: 100000005157
Safety Data Sheet
Polyethylene Glycol 400

Version 1.0
Revision Date: 10/28/2014

**Personal protective equipment**

Respiratory protection: No personal respiratory protective equipment normally required. In the case of vapour formation use a respirator with an approved filter.

Hand protection

Remarks: The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection: Eye wash bottle with pure water
Tightly fitting safety goggles

Skin and body protection: impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the workplace.

Hygiene measures: When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

---

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance: viscous, liquid

Colour: clear, colourless, white

Odour: alcohol-like

Odour Threshold: No data available

pH: 4.5 - 7 @ 5 %

Freezing Point (Melting point/freezing point): 4 - 20 °C (39 - 68 °F)

Boiling Point (Boiling point/boiling range): Decomposition: Decomposes below the boiling point.

Flash point: 198.9 - 270 °C (390.0 - 518 °F)

Evaporation rate: No data available

Flammability (solid, gas): No data available

Burning rate: No data available
Safety Data Sheet
Polyethylene Glycol 400

Version 1.0
Revision Date: 10/28/2014

Upper explosion limit : No data available
Lower explosion limit : No data available
Vapour pressure : < 0.08 mmHg @ 20 °C (68 °F)
Relative vapour density : > 5(Air = 1.0)
Relative density : No data available
Density : 1.127 - 1.2 g/cm³ @ 20 °C (68 °F)
Bulk density : No data available
Solubility(ies)
Water solubility : soluble
Solubility in other solvents : No data available
Partition coefficient: n-octanol/water : No data available
Auto-ignition temperature : 320 - 400 °C
Thermal decomposition : No data available
Viscosity
Viscosity, kinematic : 43 mm²/s @ 40 °C (104 °F)
6.8 - 8.0 mm²/s @ 98.9 °C (210.0 °F)

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No dangerous reaction known under conditions of normal use.
Chemical stability : Stable under normal conditions.
Possibility of hazardous reactions : No decomposition if stored and applied as directed.
Conditions to avoid : Heat, flames and sparks.
Incompatible materials : Strong oxidizing agents
                       Strong acids and strong bases

MSDS Number: 100000005157

6 / 15
Polyethylene Glycol 400
Hazardous decomposition products: Aldehydes, Alcohols, Ethers, Carbon oxides, Carboxylic acids

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Components:
25322-68-3:
Acute oral toxicity: LD50 (rat): > 5,000 mg/kg
Acute inhalation toxicity: LC50 (rat): > 2.5 mg/l
   Exposure time: 6 h
   Test atmosphere: dust/mist
   Assessment: The component/mixture is low toxic after short term inhalation.
Acute dermal toxicity: LD50 (rabbit): > 5,000 mg/kg

Skin corrosion/irritation

Components:
25322-68-3:
Remarks: No data available

Serious eye damage/eye irritation

Components:
25322-68-3:
Species: rabbit
Result: No eye irritation

Respiratory or skin sensitisation

Components:
25322-68-3:
Species: guinea pig
Method: OECD Test Guideline 406
Result: Does not cause skin sensitisation.
Germ cell mutagenicity

**Components:**

**25322-68-3:**

Genotoxicity in vitro: Test Type: Ames test
Test species: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Result: negative

Germ cell mutagenicity - Assessment: Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Carcinogenicity

**Components:**

**25322-68-3:**

Remarks: This information is not available.

Carcinogenicity - Assessment: Animal testing did not show any carcinogenic effects.

Reproductive toxicity

**Components:**

**25322-68-3:**

Effects on fertility: Test Type: Three-generation study
Species: rat, male and female
Application Route: oral
Dose: 0, 15, 59, 270, 1690 mg/kg bw
General Toxicity - Parent: NOAEL: 60 mg/kg bw
Result: No reproductive effects.

Effects on foetal development: Species: rat
Application Route: oral
Dose: 1500-5000 mg/kg bw d
Duration of Single Treatment: 9 d
Teratogenicity: NOAEL: 1,500 mg/kg bw

Reproductive toxicity - Assessment: No toxicity to reproduction
Did not show teratogenic effects in animal experiments.

**STOT - single exposure**

**Product:** No data available

**Components:**

**25322-68-3:**

<table>
<thead>
<tr>
<th>Exposure routes</th>
<th>Target Organs</th>
<th>Assessment</th>
<th>Remarks</th>
</tr>
</thead>
</table>

**MSDS Number:** 100000005157
Inhalation | Respiratory system | May cause respiratory irritation., The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

**STOT - repeated exposure**

**Product:** No data available

**Components:**

25322-68-3: No data available

**Repeated dose toxicity**

**Components:**

25322-68-3:
Species: dog, male and female
NOAEL: 500 mg/kg
Application Route: Oral
Exposure time: 1 yr
Number of exposures: daily
Dose: 0, 500 mg/kg

**Aspiration toxicity**

**Components:**

25322-68-3:
No aspiration toxicity classification

**Further information**

**Product:**
Remarks: No data available

---

**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Components:**

25322-68-3:
Safety Data Sheet
Polyethylene Glycol 400

Version 1.0  Revision Date: 10/28/2014

Toxicity to fish: LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l
Exposure time: 96 h
Test Type: static test

Toxicity to daphnia and other aquatic invertebrates: LC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h

Toxicity to algae: EC50 (Skeletonema costatum): > 100 mg/l
End point: Biomass
Exposure time: 72 h
Test Type: Growth inhibition

Persistence and degradability

Components:
25322-68-3:
Biodegradability: Result: Readily biodegradable.
Biodegradation: 90%
Exposure time: 28 d
Method: OECD Test Guideline 301F

Chemical Oxygen Demand (COD): 0.00182 mg/g

Theoretical Oxygen Demand (ThOD): 0.00177 mg/g

Bioaccumulative potential

Components:
25322-68-3:
Partition coefficient: n-octanol/water: Pow: 0.2 (30 °C)

Mobility in soil
No data available

Other adverse effects
No data available

Product:
Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A

MSDS Number: 100000005157  10 / 15  Polyethylene Glycol 400
Safety Data Sheet
Polyethylene Glycol 400

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods
Waste from residues: Dispose of in accordance with all applicable local, state and federal regulations. For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact NEXEO's Environmental Services Group at 800-637-7922.

Contaminated packaging: Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

IATA (International Air Transport Association): Not regulated as a dangerous good

IMDG-Code: Not regulated as a dangerous good

DOT (Department of Transportation): Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

OSHA Hazards: Toxic by inhalation., Moderate respiratory irritant

WHMIS Classification: D2B: Toxic Material Causing Other Toxic Effects

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity
This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.
Safety Data Sheet
Polyethylene Glycol 400

Version 1.0  Revision Date: 10/28/2014

SARA 311/312 Hazards: Acute Health Hazard

SARA 302: SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313: SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act
This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489):
25322-68-3 Polyethylene glycol 100 %

Clean Water Act
This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.
This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.
This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations
Massachusetts Right To Know
No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know
25322-68-3 Polyethylene glycol 90 - 100 %

New Jersey Right To Know
25322-68-3 Polyethylene glycol 90 - 100 %

California Prop 65
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

<table>
<thead>
<tr>
<th>United States TSCA Inventory</th>
<th>y (positive listing)</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States TSCA Inventory</td>
<td>(On TSCA Inventory)</td>
</tr>
</tbody>
</table>

MSDS Number: 100000005157  12 / 15  Polyethylene Glycol 400
<table>
<thead>
<tr>
<th>Substance List</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canadian Domestic Substances List (DSL)</td>
<td>y (positive listing) (All components of this product are on the Canadian DSL.)</td>
</tr>
<tr>
<td>Australia Inventory of Chemical Substances (AICS)</td>
<td>y (positive listing) (On the inventory, or in compliance with the inventory)</td>
</tr>
<tr>
<td>New Zealand. Inventory of Chemical Substances</td>
<td>y (positive listing) (On the inventory, or in compliance with the inventory)</td>
</tr>
<tr>
<td>Japan. ENCS - Existing and New Chemical Substances Inventory</td>
<td>y (positive listing) (On the inventory, or in compliance with the inventory)</td>
</tr>
<tr>
<td>Japan. ISHL - Inventory of Chemical Substances (METI)</td>
<td>y (positive listing) (On the inventory, or in compliance with the inventory)</td>
</tr>
<tr>
<td>Korea. Korean Existing Chemicals Inventory (KECI)</td>
<td>y (positive listing) (On the inventory, or in compliance with the inventory)</td>
</tr>
<tr>
<td>Philippines Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>y (positive listing) (On the inventory, or in compliance with the inventory)</td>
</tr>
<tr>
<td>China. Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>y (positive listing) (On the inventory, or in compliance with the inventory)</td>
</tr>
</tbody>
</table>
SECTION 16. OTHER INFORMATION

Further information

**NFPA:**

- Flammability: 1
- Health: 1
- Instability: 0

**HMIS III:**

- HEALTH: 1
- FLAMMABILITY: 1
- PHYSICAL HAZARD: 0

0 = not significant, 1 = Slight, 2 = Moderate, 3 = High, 4 = Extreme, * = Chronic

The information accumulated is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made become available subsequently to the date hereof, we do not assume any responsibility for the results of its use. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This MSDS has been prepared by NEXEO™ Solutions EHS Product Safety Department (1-855-429-2661) MSDS@nexeosolutions.com.

**Material number:**
16062191, 16058140, 16058139, 16011181, 20433, 604783, 707787, 152624, 71451, 52712, 86433, 87832, 102213, 86943, 102711, 69454, 69952, 153491, 102815, 54182

**Key or legend to abbreviations and acronyms used in the safety data sheet**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>American Conference of Government Industrial Hygienists</td>
</tr>
<tr>
<td>LD50</td>
<td>Lethal Dose 50%</td>
</tr>
<tr>
<td>LOAEL</td>
<td>Lowest Observed Adverse Effect Level</td>
</tr>
<tr>
<td>NFPA</td>
<td>National Fire Protection Agency</td>
</tr>
<tr>
<td>NIOSH</td>
<td>National Institute for Occupational Safety &amp; Health</td>
</tr>
<tr>
<td>NTP</td>
<td>National Toxicology Program</td>
</tr>
<tr>
<td>NZIoC</td>
<td>New Zealand Inventory of Chemicals</td>
</tr>
<tr>
<td>NOAEL</td>
<td>No Observable Adverse Effect Level</td>
</tr>
</tbody>
</table>

**MSDS Number:** 100000005157
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC50</td>
<td>Effective Concentration 50%</td>
</tr>
<tr>
<td>EGEST</td>
<td>EOSCA Generic Exposure Scenario Tool</td>
</tr>
<tr>
<td>EOSCA</td>
<td>European Oilfield Specialty Chemicals Association</td>
</tr>
<tr>
<td>EINECS</td>
<td>European Inventory of Existing Chemical Substances</td>
</tr>
<tr>
<td>MAK</td>
<td>Germany Maximum Concentration Values</td>
</tr>
<tr>
<td>GHS</td>
<td>Globally Harmonized System</td>
</tr>
<tr>
<td>&gt;=</td>
<td>Greater Than or Equal To</td>
</tr>
<tr>
<td>IC50</td>
<td>Inhibition Concentration 50%</td>
</tr>
<tr>
<td>IARC</td>
<td>International Agency for Research on Cancer</td>
</tr>
<tr>
<td>IECSC</td>
<td>Inventory of Existing Chemical Substances in China</td>
</tr>
<tr>
<td>ENCS</td>
<td>Japan, Inventory of Existing and New Chemical Substances</td>
</tr>
<tr>
<td>KECI</td>
<td>Korea, Existing Chemical Inventory</td>
</tr>
<tr>
<td>&lt;=</td>
<td>Less Than or Equal To</td>
</tr>
<tr>
<td>LC50</td>
<td>Lethal Concentration 50%</td>
</tr>
<tr>
<td>NOEC</td>
<td>No Observed Effect Concentration</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Safety &amp; Health Administration</td>
</tr>
<tr>
<td>PEL</td>
<td>Permissible Exposure Limit</td>
</tr>
<tr>
<td>PICCS</td>
<td>Philippines Inventory of Commercial Chemical Substances</td>
</tr>
<tr>
<td>PRNT</td>
<td>Presumed Not Toxic</td>
</tr>
<tr>
<td>RCRA</td>
<td>Resource Conservation Recovery Act</td>
</tr>
<tr>
<td>STEL</td>
<td>Short-term Exposure Limit</td>
</tr>
<tr>
<td>SARA</td>
<td>Superfund Amendments and Reauthorization Act.</td>
</tr>
<tr>
<td>TLV</td>
<td>Threshold Limit Value</td>
</tr>
<tr>
<td>TWA</td>
<td>Time Weighted Average</td>
</tr>
<tr>
<td>TSCA</td>
<td>Toxic Substance Control Act</td>
</tr>
<tr>
<td>UVCB</td>
<td>Unknown or Variable Composition, Complex Reaction Products, and Biological Materials</td>
</tr>
<tr>
<td>WHMIS</td>
<td>Workplace Hazardous Materials Information System</td>
</tr>
</tbody>
</table>