Safety Data Sheet
Methanol

Version 2.1
Revision Date: 05/06/2016

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Methanol

Recommended use of the chemical and restrictions on use
Recommended use : Solvent.
Fuel
Feedstock

Manufacturer / supplier's details
Company : Nexeo Solutions, LLC.
Address : 3 Waterway Square Place Suite 1000
The 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 (1-800-424-9300)

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
Flammable liquids : Category 2
Acute toxicity (Oral) : Category 3
Acute toxicity (Inhalation) : Category 3
Acute toxicity (Dermal) : Category 3
Specific target organ toxicity - single exposure : Category 1 (Eyes, Central nervous system)

GHS Label element
Hazard pictograms :

Signal word : Danger
Hazard statements : H225 Highly flammable liquid and vapour.
H301 + H311 + H331 Toxic if swallowed, in contact with skin or if inhaled
H370 Causes damage to organs (Eyes, Central nervous sys-
Precautionary statements:

**Prevention:**
P210 Keep away from heat/sparks/open flames/hot surfaces.
No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/eye protection/face protection.

**Response:**
P301 + P310 + P330 IF SWALLOWED: Immediately call a
POISON CENTER or doctor/physician. Rinse mouth.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately
all contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P311 IF INHALED: Remove person to fresh air
and keep comfortable for breathing. Call a POISON CENTER or
doctor/physician.
P307 + P311 IF exposed: Call a POISON CENTER or doctor/
physician.
P362 Take off contaminated clothing and wash before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alco-
hol-resistant foam to extinguish.

**Storage:**
P403 + P233 Store in a well-ventilated place. Keep container
tightly closed.
P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

**Disposal:**
P501 Dispose of contents/container to an approved waste dis-
posal plant.

Other hazards
None known.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Substance / Mixture**: Substance

### Hazardous components

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Chemical Name</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-56-1</td>
<td>Methanol</td>
<td>90 - 100</td>
</tr>
</tbody>
</table>

Any concentration shown as a range is due to batch variation.

**Synonyms**: Methyl alcohol,
SECTION 4. FIRST AID MEASURES

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

If inhaled      :  If unconscious place in recovery position and seek medical
                advice.
                If symptoms persist, call a physician.

In case of skin contact :  If on skin, rinse well with water.
                          If on clothes, remove clothes.

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.
                 Take victim immediately to hospital.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media :  Alcohol-resistant foam
                              Carbon dioxide (CO2)
                              Dry chemical

Unsuitable extinguishing media  :  High volume water jet

Specific hazards during firefighting :  Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products :  Carbon oxides
                                Formaldehyde
                                Toxic fumes

Further information :  Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
                     Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
                     For safety reasons in case of fire, cans should be stored separately in closed containments.
                     Use a water spray to cool fully closed containers.

Special protective equipment for firefighters :  Wear self-contained breathing apparatus for firefighting if necessary.
SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

- Ensure adequate ventilation.
- Remove all sources of ignition.
- Evacuate personnel to safe areas.
- Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions

- Prevent product from entering drains.
- 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

- Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion

- Do not spray on a naked flame or any incandescent material.
- Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.

Advice on safe handling

- Avoid formation of aerosol.
- Do not breathe vapours/dust.
- For personal protection see section 8.
- Smoking, eating and drinking should be prohibited in the application area.
- Take precautionary measures against static discharges.
- Provide sufficient air exchange and/or exhaust in work rooms.
- Container may be opened only under exhaust ventilation hood.
- Open drum carefully as content may be under pressure.
- Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage

- No smoking.
- Keep container tightly closed in a dry and well-ventilated place.
- Containers which are opened must be carefully resealed and kept upright to prevent leakage.
- Observe label precautions.
- Electrical installations / working materials must comply with the technological safety standards.
SECTION 8. EXPOSURE CONTROLS/PERSOAL 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>67-56-1</td>
<td>Methanol</td>
<td>TWA</td>
<td>200 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>250 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>200 ppm</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ST</td>
<td>250 ppm</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>200 ppm</td>
<td>OSHA Z-1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>250 ppm</td>
<td>OSHA P0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>200 ppm</td>
<td>OSHA P0</td>
</tr>
</tbody>
</table>

Personal protective equipment

Respiratory protection: General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

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 work place.

Hygiene measures: Avoid contact with skin, eyes and clothing.

Wash hands before breaks and immediately after handling the product.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: liquid
# Safety Data Sheet

## Methanol

**Version 2.1**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>Clear, Colorless</td>
</tr>
<tr>
<td>Odour</td>
<td>alcohol-like</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>4.2 - 5960 ppm</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing Point (Melting point/freezing point)</td>
<td>-97.8 - -97.6 °C (-144.0 - -143.7 °F)</td>
</tr>
<tr>
<td>Boiling Point (Boiling point/boiling range)</td>
<td>64.7 °C (148.5 °F)</td>
</tr>
<tr>
<td>Flash point</td>
<td>11 °C (52 °F)</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>4.1 (Butyl Acetate = 1)</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>96 mmHg @ 20 °C (68 °F)</td>
</tr>
<tr>
<td>Relative vapour density</td>
<td>1.1 @ 20 °C (68 °F)</td>
</tr>
<tr>
<td>Relative density</td>
<td>0.791 - 0.793 @ 20 °C (68 °F)</td>
</tr>
<tr>
<td>Density</td>
<td>0.791 - 0.793 g/cm3 @ 20 °C (68 °F)</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>completely miscible</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>log Pow: 0.82</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>464 °C</td>
</tr>
<tr>
<td>Thermal decomposition</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td></td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>0.8 mPa.s @ 25 °C (77 °F)</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>Calculated 1.008 - 1.011 mm2/s @ 25 °C (77 °F)</td>
</tr>
</tbody>
</table>
**SECTION 10. STABILITY AND REACTIVITY**

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactivity</td>
<td>No dangerous reaction known under conditions of normal use.</td>
</tr>
<tr>
<td>Chemical stability</td>
<td>Stable under normal conditions.</td>
</tr>
<tr>
<td>Possibility of hazardous reactions</td>
<td>Vapours may form explosive mixture with air.</td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>Keep away from heat, flame, sparks and other ignition sources.</td>
</tr>
<tr>
<td>Incompatible materials</td>
<td>Acids</td>
</tr>
<tr>
<td></td>
<td>Alkali metals</td>
</tr>
<tr>
<td></td>
<td>Alkalis</td>
</tr>
<tr>
<td></td>
<td>Oxidizing agents</td>
</tr>
<tr>
<td></td>
<td>Reducing agents</td>
</tr>
</tbody>
</table>

**SECTION 11. TOXICOLOGICAL INFORMATION**

**Acute toxicity**

**Components:**

<table>
<thead>
<tr>
<th>67-56-1:</th>
<th>LDLo (Humans): 143 mg/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute oral toxicity</td>
<td>Assessment: The component/mixture is toxic after single ingestion.</td>
</tr>
<tr>
<td>Acute inhalation toxicity</td>
<td>Assessment: The component/mixture is toxic after short term inhalation.</td>
</tr>
<tr>
<td></td>
<td>Remarks: Supporting toxicological evidence is limited for this classification. This harmonized classification will replace the indicated classification due to industry leaders and the EU Harmonized Classification (Annex VII).</td>
</tr>
<tr>
<td>Acute dermal toxicity</td>
<td>LDLo (Monkey): 393 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Assessment: The component/mixture is toxic after single contact with skin.</td>
</tr>
</tbody>
</table>

**Carcinogenicity**

<table>
<thead>
<tr>
<th>IARC</th>
<th>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.</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSHA</td>
<td>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.</td>
</tr>
<tr>
<td>NTP</td>
<td>No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen</td>
</tr>
</tbody>
</table>
by NTP.

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.

STOT - single exposure

Components:

67-56-1:
Target Organs: Eyes, Central nervous system
Assessment: The substance or mixture is classified as specific target organ toxicant, single exposure, category 1.

Further information

Product:
Remarks: Solvents may degrease the skin.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity
No data available

Persistence and degradability
No data available

Bioaccumulative potential
No data available

Mobility in soil
No data available

Other adverse effects

Product:
Ozone-Depletion Potential: 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 + B).

Additional ecological information: No data available
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. Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

DOT (Department of Transportation):
UN1230, Methanol, 3, II

IATA (International Air Transport Association):
UN1230, METHANOL, 3 (6.1), II

IMDG (International Maritime Dangerous Goods):
UN1230, METHANOL, 3, (6.1), II, Flash Point:11 °C(52 °F)

SECTION 15. REGULATORY INFORMATION

WHMIS Classification : B2: Flammable liquid

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

CERCLA Reportable Quantity

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Component RQ (lbs)</th>
<th>Calculated product RQ (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>5000</td>
<td>5000</td>
</tr>
</tbody>
</table>

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Fire Hazard
                         Immediate (Acute) Health Hazard

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

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:
Clean Air Act
The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):
   67-56-1  Methanol
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):
   67-56-1  Methanol

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
   67-56-1  Methanol       90 - 100 %

Pennsylvania Right To Know
   67-56-1  Methanol       90 - 100 %

New Jersey Right To Know
   67-56-1  Methanol       90 - 100 %

California Prop 65
   WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.
   67-56-1  Methanol

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

TSCA : On TSCA Inventory

DSL : All components of this product are on the Canadian DSL

AICS : On the inventory, or in compliance with the inventory

NZIoC : On the inventory, or in compliance with the inventory

ENCS : On the inventory, or in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory
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.

Revision Date: 05/06/2016
Legacy SDS: R0001447

Material number: 16108079, 16002900, 16087724, 559683, 16034861, 16032613, 779915, 16024445, 16018469, 736115, 730007, 730006, 717897, 716726, 713298, 710534, 695309, 695256, 694361, 689940, 690224, 682513, 683817, 625491, 602665, 554053, 554376, 554361, 554308, 554052, 554159, 546854, 508417, 117978, 132227, 118306, 116867, 161021, 130207, 130736, 159527, 160328, 115098, 115229, 513432, 509829, 398412, 22244, 20300, 20299, 500031, 16100717, 16100045, 16076584, 16056428, 16056427, 16056426, 16056425, 16055184, 16053934, 16049742, 16048212, 16047323, 16039562, 16031073, 16024444, 16021152, 16016316, 744259, 699273, 627702, 600798, 546132, 504381, 504224, 161018, 160329, 159524, 146769, 145658, 144602, 136311, 131538, 131334, 122681, 117981, 115232, 82470, 82339, 20305, 20304, 20303, 20301, 20298, 20297

<table>
<thead>
<tr>
<th>Key or legend to abbreviations and acronyms used in the safety data sheet</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
</tr>
<tr>
<td>AIICS</td>
</tr>
<tr>
<td>DSL</td>
</tr>
<tr>
<td>NDSL</td>
</tr>
<tr>
<td>CNS</td>
</tr>
</tbody>
</table>

SDS Number: 100000002748 Methanol
<table>
<thead>
<tr>
<th><strong>CAS</strong></th>
<th>Chemical Abstract Service</th>
<th><strong>NZIoC</strong></th>
<th>New Zealand Inventory of Chemicals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EC50</strong></td>
<td>Effective Concentration</td>
<td><strong>NOAEL</strong></td>
<td>No Observable Adverse Effect Level</td>
</tr>
<tr>
<td><strong>EC50</strong></td>
<td>Effective Concentration 50%</td>
<td><strong>NOEC</strong></td>
<td>No Observed Effect Concentration</td>
</tr>
<tr>
<td><strong>EGEST</strong></td>
<td>EOSCA Generic Exposure Scenario Tool</td>
<td><strong>OSHA</strong></td>
<td>Occupational Safety &amp; Health Administration</td>
</tr>
<tr>
<td><strong>EOSCA</strong></td>
<td>European Oilfield Specialty Chemicals Association</td>
<td><strong>PEL</strong></td>
<td>Permissible Exposure Limit</td>
</tr>
<tr>
<td><strong>EINECS</strong></td>
<td>European Inventory of Existing Chemical Substances</td>
<td><strong>PICCS</strong></td>
<td>Philippines Inventory of Commercial Chemical Substances</td>
</tr>
<tr>
<td><strong>MAK</strong></td>
<td>Germany Maximum Concentration Values</td>
<td><strong>PRNT</strong></td>
<td>Presumed Not Toxic</td>
</tr>
<tr>
<td><strong>GHS</strong></td>
<td>Globally Harmonized System</td>
<td><strong>RCRA</strong></td>
<td>Resource Conservation Recovery Act</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>IC50</strong></td>
<td>Inhibition Concentration 50%</td>
<td><strong>SARA</strong></td>
<td>Superfund Amendments and Reauthorization Act</td>
</tr>
<tr>
<td><strong>IARC</strong></td>
<td>International Agency for Research on Cancer</td>
<td><strong>TLV</strong></td>
<td>Threshold Limit Value</td>
</tr>
<tr>
<td><strong>IECSC</strong></td>
<td>Inventory of Existing Chemical Substances in China</td>
<td><strong>TWA</strong></td>
<td>Time Weighted Average</td>
</tr>
<tr>
<td><strong>ENCS</strong></td>
<td>Japan, Inventory of Existing and New Chemical Substances</td>
<td><strong>TSCA</strong></td>
<td>Toxic Substance Control Act</td>
</tr>
<tr>
<td><strong>KECI</strong></td>
<td>Korea, Existing Chemical Inventory</td>
<td><strong>UVCB</strong></td>
<td>Unknown or Variable Composition, Complex Reaction Products, and Biological Materials</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>&lt;=</strong></td>
<td>Less Than or Equal To</td>
<td><strong>WHMIS</strong></td>
<td>Workplace Hazardous Materials Information System</td>
</tr>
<tr>
<td><strong>LC50</strong></td>
<td>Lethal Concentration 50%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>