Ammonia compressor oil

Revision date 22-Jan-2020
Revision Number 1

1. Identification

Product identifier

Product Name Ammonia compressor oil

Other means of identification

Product Code(s) 604
Synonyms None

Recommended use of the chemical and restrictions on use

Recommended use Lubricant
Restrictions on use No information available

Details of the supplier of the safety data sheet

Initial Supplier Identifier AXEL Royal, LLC
AXEL Royal, LLC
516 S. 25th West Ave
516 S. 25th West Ave
Tulsa, OK 74127
Tulsa, OK 74127
United States
United States
918 584 2671
918 584 2671

Supplier address

Emergency telephone number

ChemTel Emergency telephone 1-800-255-3924
International Emergency telephone +01-813-248-0585

2. Hazard(s) identification

Classification

Not classified.

Label elements

Not classified.

Other information

May be harmful in contact with skin.

Unknown acute toxicity

Not applicable

3. Composition/information on ingredients

Substance
Not applicable.

Mixture

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS No</th>
<th>Weight-%</th>
<th>trade secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), hydrotreated light naphthenic</td>
<td>64742-53-6</td>
<td>10-30</td>
<td>*</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated heavy naphthenic</td>
<td>64742-52-5</td>
<td>10-30</td>
<td>*</td>
</tr>
</tbody>
</table>

*The exact percentage (concentration) of composition has been withheld as a trade secret.

Ingredient comments

The mineral oils in the product contain <3% DMSO-extract (IP 346).

### 4. First-aid measures

**Description of first aid measures**

**Inhalation**
Move to fresh air in case of accidental inhalation of vapors.

**Eye contact**
Rinse thoroughly with plenty of water, also under the eyelids.

**Skin contact**
Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.

**Ingestion**
Clean mouth with water and drink afterwards plenty of water. Do not induce vomiting without medical advice. Get medical attention if symptoms occur.

Most important symptoms and effects, both acute and delayed

**Symptoms**
No information available.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians**
Treat symptomatically.

### 5. Fire-fighting measures

**Suitable extinguishing media**

**Suitable Extinguishing Media**
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. CO2, dry chemical, dry sand, alcohol-resistant foam.

**Unsuitable extinguishing media**
Do not use a solid water stream as it may scatter and spread fire.

**Special exposure hazards in a fire**

**Specific hazards arising from the chemical**
Fire may produce irritating, corrosive and/or toxic gases.

**Hazardous combustion products**
Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. These may be highly dangerous if inhaled in confined spaces or at high concentration.

**Protective equipment and precautions for firefighters**

**Special protective equipment for fire-fighters**
Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

### 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions**
Extremely slippery when spilled. Avoid contact with skin and eyes. Avoid breathing vapors or mists. Use personal protective equipment as required.
For emergency responders

Use personal protection recommended in Section 8.

Methods and material for containment and cleaning up

Methods for containment

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

Use personal protective equipment as required. Take up with sand or other noncombustible absorbent material and place into containers for later disposal.

Prevention of secondary hazards

Clean contaminated objects and areas thoroughly observing environmental regulations.

Reference to other sections

See section 8 for more information. See section 13 for more information.

7. Handling and storage

Precautions for safe handling

Advice on safe handling

Ensure adequate ventilation. Avoid contact with eyes and prolonged or repeated contact with skin.

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep container tightly closed in a dry and well-ventilated place. Keep at a temperature not exceeding 45 °C.

8. Exposure controls/personal protection

Control parameters

Exposure Limits

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering controls

Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Hand protection

Wear protective nitrile rubber gloves. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves.

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin and body protection

No special protective equipment required.
Respiratory protection
None under normal use conditions. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.

General hygiene considerations
Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>No info</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>No info</td>
<td></td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No info</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>No info</td>
<td></td>
</tr>
<tr>
<td>Melting point / freezing point</td>
<td>No info</td>
<td></td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>No info</td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 93.5°C / &gt; 200.3°F</td>
<td>No info available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No info</td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
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<td></td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td>No info</td>
<td></td>
</tr>
<tr>
<td>Upper flammability or explosive limits</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Lower flammability or explosive limits</td>
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<td></td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No info</td>
<td></td>
</tr>
<tr>
<td>Vapor density</td>
<td>No info</td>
<td></td>
</tr>
<tr>
<td>Relative density</td>
<td>No info</td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>Insoluble in water</td>
<td>No info available</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No info</td>
<td></td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>No info</td>
<td></td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No info</td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No info</td>
<td></td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>68.00 mm²/s @ 40 °C</td>
<td>No info available</td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>No info</td>
<td></td>
</tr>
</tbody>
</table>

Other information

Explosive properties
None under normal use conditions

Oxidizing properties
No information available

VOC Content (%)
0

Liquid Density
< 1000 kg/m³ @ 25 °C / 77 °F

10. Stability and reactivity

Reactivity
Stable.

Chemical stability

Stability
Stable under normal conditions.

Possibility of hazardous reactions
None under normal processing.

Hazardous polymerization
Hazardous polymerization does not occur.

Conditions to avoid
Conditions to avoid

Excessive heat.

Incompatible materials

Strong oxidizing agents.

Hazardous decomposition products

None under normal use conditions.

11. Toxicological information

Information on likely routes of exposure

Product Information

Product does not present an acute toxicity hazard based on known or supplied information

Inhalation

Not an expected route of exposure. Specific test data for the substance or mixture is not available.

Eye contact

Not expected to cause eye irritation.

Skin contact

May be harmful in contact with skin.

Ingestion

No known hazard by swallowing. May cause gastrointestinal discomfort if consumed in large amounts.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms

No information available.

Acute toxicity

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document.

ATEmix (oral) 5,001.50 mg/kg
ATEmix (dermal) 2,001.20 mg/kg

Unknown acute toxicity

Not applicable.

Component Information

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), hydrotreated light naphthenic 64742-53-6</td>
<td>&gt; 5000 mg/kg (Rat)</td>
<td>&gt; 2000 mg/kg (Rabbit)</td>
<td>= 2180 mg/m³ (Rat) 4 h</td>
</tr>
</tbody>
</table>

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation

Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation

Based on available data, the classification criteria are not met.

Respiratory or skin sensitization

Based on available data, the classification criteria are not met.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenicity

Based on available data, the classification criteria are not met.
Reproductive toxicity
Based on available data, the classification criteria are not met.

STOT - single exposure
Based on available data, the classification criteria are not met.

STOT - repeated exposure
Based on available data, the classification criteria are not met.

Aspiration hazard
Based on available data, the classification criteria are not met.

12. Ecological information

Ecotoxicity

The environmental impact of this product has not been fully investigated.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Toxicity to microorganisms</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), hydrotreated light naphthenic 64742-53-6</td>
<td>-</td>
<td>5000: 96 h Oncorhynchus mykiss mg/L LC50</td>
<td>-</td>
<td>1000: 48 h Daphnia magna mg/L EC50</td>
</tr>
</tbody>
</table>

Persistence and degradability

Persistence and degradability
Not readily biodegradable.

Bioaccumulative potential

Bioaccumulation
No information available.

Mobility

Mobility in soil
After release, adsorbs onto soil.

Other adverse effects

Other adverse effects
No information available.

13. Disposal considerations

Waste treatment methods

Waste from residues/unused products
Dispose of in accordance with federal, state and local regulations. Should not be released into the environment. Use personal protection recommended in Section 8.

Contaminated packaging
Dispose of in accordance with federal, state and local regulations.

Other information
Waste codes should be assigned by the user based on the application for which the product was used.

14. Transport information

DOT
Not regulated

TDG
Not regulated
15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer
Not applicable

The Stockholm Convention on Persistent Organic Pollutants
Not applicable

The Rotterdam Convention
Not applicable

International Inventories

TSCA Complies
DSL/NDSL Complies
EINECS/ELINCS -
REACH Contact supplier for inventory compliance status
ENCS -
IEECS Complies
KECL Complies
PICCS Complies
AICS Complies
NZIoC -
TSCI -

Legend
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IEECS - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals
TSCI - Taiwan Chemical Substance Inventory

US Federal Regulations

SARA 313 Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986
(SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications. Under the amended regulations at 40 CFR 370, EPCRA 311/312 Tier II reporting for the 2017 calendar year will need to be consistent with updated hazard classifications.

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**US State Regulations**

**California Proposition 65**

WARNING This product can expose you to chemicals including those listed below, which is [are] known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>California Proposition 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylbenzene</td>
<td>Carcinogen</td>
</tr>
<tr>
<td>100-41-4 (&lt;0.1 %)</td>
<td></td>
</tr>
<tr>
<td>Naphthalene</td>
<td>Carcinogen</td>
</tr>
<tr>
<td>91-20-3 (&lt;0.1 %)</td>
<td></td>
</tr>
</tbody>
</table>

**U.S. State Right-to-Know Regulations**

**US State Regulations**

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), hydrotreated light naphthenic</td>
<td>-</td>
<td>X</td>
<td>-</td>
</tr>
<tr>
<td>64742-53-6</td>
<td>-</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**U.S. EPA Label Information**

**EPA Pesticide Registration Number** Not applicable

**16. Other information**

**NFPA**

<table>
<thead>
<tr>
<th>Health hazards</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical and chemical properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>0</td>
<td>-</td>
</tr>
</tbody>
</table>

**HMIS**

<table>
<thead>
<tr>
<th>Health hazards</th>
<th>Flammability</th>
<th>Physical hazards</th>
<th>Personal protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>0</td>
<td>B</td>
</tr>
</tbody>
</table>

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

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA (time-weighted average)  STEL  STEL (Short Term Exposure Limit)

Maximum limit value  Skin designation
Key literature references and sources for data used to compile the SDS

- Agency for Toxic Substances and Disease Registry (ATSDR)
- U.S. Environmental Protection Agency ChemView Database
- European Food Safety Authority (EFSA)
- EPA (Environmental Protection Agency)
- Acute Exposure Guideline Level(s) (AEGL(s))
- U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
- U.S. Environmental Protection Agency High Production Volume Chemicals
- Food Research Journal
- Hazardous Substance Database
- International Uniform Chemical Information Database (IUCLID)
- Japan GHS Classification
- Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
- NIOSH (National Institute for Occupational Safety and Health)
- National Library of Medicine's ChemID Plus (NLM CIP)
- National Library of Medicine's PubMed database (NLM PUBMED)
- National Toxicology Program (NTP)
- New Zealand's Chemical Classification and Information Database (CCID)
- Organization for Economic Co-operation and Development High Production Volume Chemicals Program
- Organization for Economic Co-operation and Development Screening Information Data Set
- RTECS (Registry of Toxic Effects of Chemical Substances)
- World Health Organization

Revision date 22-Jan-2020

Revision Note
No information available.

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet