

SAFETY DATA SHEET

1. Identification

| Identification |
|----------------|
| Product name: |

LUBRIZOL® 9047C

| Additional identification | |
|---------------------------|--|
| Chemical name: | |

Mixture

Recommended use and restriction on use

| Recommended use: | Miscellaneous fuel additive |
|----------------------|-----------------------------|
| Restrictions on use: | None identified. |

Details of the supplier of the safety data sheet

| Supplie | ər |
|---------|----|
|---------|----|

| THE LUBRIZOL CORPORATION |
|--------------------------|
| 29400 LAKELAND BOULEVARD |
| WICKLIFFE, OH 44092-2298 |
| US |
| (440)943-1200 |
| |

Emergency telephone number:

FOR TRANSPORT EMERGENCY CALL CHEMTREC (+1)703 527 3887, OR WITHIN USA 800 424 9300

2. Hazard(s) identification

Hazard Classification

| Physical Hazards Flammable liquids | Category 4 |
|---|------------|
| Health Hazards | |
| Acute toxicity (Oral) | Category 4 |
| Acute toxicity (Inhalation - dust and mist) | Category 4 |
| Carcinogenicity | Category 2 |
| Specific Target Organ Toxicity - Single Exposure | Category 3 |
| Aspiration Hazard | Category 1 |
| Unknown toxicity | |
| Acute toxicity, oral | 0.0 % |
| Acute toxicity, dermal | 0.0 % |
| Acute toxicity, inhalation, vapor | 64.5 % |
| Acute toxicity, inhalation, dust or mist | 19.2 % |

Label Elements:



| Hazard Symbol: | |
|--|---|
| Signal Word: | Danger |
| Hazard Statement: | Combustible liquid. Harmful if swallowed or if inhaled. Suspected of causing cancer. May cause drowsiness or dizziness. May be fatal if swallowed and enters airways. |
| Precautionary Statements: | |
| Prevention: | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. |
| Response: | IF INHALED: Remove person to fresh air and keep comfortable for breathing. Rinse mouth. IF SWALLOWED: Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. Call a POISON CENTER/doctor if you feel unwell. In case of fire: Use CO2, dry chemical or foam to extinguish. Water can be used to cool and protect exposed material. |
| Storage: | Store in a well-ventilated place. Keep cool. Store locked up. Keep container tightly closed. |
| Disposal: | Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. |
| Other hazards which do not result in GHS classification: | None identified. |

3. Composition/information on ingredients

| Chemical name | CAS number | Percent by Weight |
|------------------------|------------|-------------------|
| 2-Ethylhexyl nitrate | 27247-96-7 | 40 - 50% |
| Petroleum naphtha | 64742-94-5 | 20 - 30% |
| 1,2,4-trimethylbenzene | 95-63-6 | 1 - 5% |
| 2-Ethylhexanol | 104-76-7 | 1 - 5% |



| Naphthalene | 91-20-3 | 1 - 5% | |
|--|----------|--------|--|
| 1,3,5-Trimethylbenzene | 108-67-8 | 1 - 5% | |
| ++ 1,2,3-Trimethyl benzene | 526-73-8 | 1 - 5% | |
| Ly The listed components are subcomponents of the bezerdous ingradiants listed above | | | |

++ The listed components are subcomponents of the hazardous ingredients listed above.

| 4. First-aid measures | | | |
|--|---|--|--|
| General information: | IF exposed or concerned: Get medical advice/attention. | | |
| Ingestion: | Do NOT induce vomiting. Aspiration of material due to vomiting can cause chemical pneumonitis which can be fatal. If vomiting occurs naturally, the casualty should lean forward to reduce the risk of aspiration. Rinse mouth. Immediately call a POISON CENTER/doctor. | | |
| Inhalation: | Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. | | |
| Skin Contact: | Take off contaminated clothing and wash before re-use. Wash with soap and water. Call a POISON CENTER/doctor if you feel unwell. Launder contaminated clothing before reuse. | | |
| Eye contact: | Flush thoroughly with water. If irritation occurs, get medical assistance. Remove contact lenses, if present and easy to do. Continue rinsing. | | |
| Most important symptoms/effect | cts, acute and delayed | | |
| Symptoms: | Symptoms may be delayed. | | |
| Indication of immediate medical attention and special treatment needed | | | |
| Treatment: | Treat symptomatically. | | |
| 5. Fire-fighting measures | | | |
| General Fire Hazards: | Move containers from fire area if you can do so without risk. | | |
| Suitable (and unsuitable) exting | guishing media | | |
| Suitable extinguishing media: | CO2, Dry chemical or Foam. Water can be used to cool and protect exposed material. | | |
| Unsuitable extinguishing media: | Do not use water jet as an extinguisher, as this will spread the fire. | | |
| Specific hazards arising from the chemical: | Vapors may cause a flash fire or ignite explosively. Prevent buildup of vapors or gases to explosive concentrations. Vapors may travel considerable distance to a source of ignition and flash back. Water may cause splattering. Container may rupture on heating. A solid stream of water will spread the burning material. Material creates a special hazard because it floats on water. See section 10 for additional information. | | |

Special protective equipment and precautions for firefighters



| Special fire fighting procedures: | No data available. | |
|--|--|--|
| Special protective equipment for fire-fighters: | Wear full protective firegear including self-containing breathing apparatus operated in the positive pressure mode with full facepiece, coat, pants, gloves and boots. | |
| 6. Accidental release measures | 5 | |
| Personal precautions, protective equipment and emergency procedures: | Ventilate closed spaces before entering them. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep upwind. Keep unauthorized personnel away. See Section 8 of the SDS for Personal Protective Equipment. | |
| Methods and material for containment and cleaning up: | In case of leakage, eliminate all ignition sources. Dike far ahead of larger spill for later recovery and disposal. Pick up free liquid for recycle and/or disposal. Residual liquid can be absorbed on inert material. Stop the flow of material, if this is without risk. Prevent entry into waterways, sewer, basements or confined areas. | |
| Environmental Precautions: | Avoid release to the environment. Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. | |
| 7. Handling and storage | | |
| Precautions for safe handling: | Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid breathing dust/fume/gas/mist/vapors/spray. Observe good industrial hygiene practices. Use only in well-ventilated areas. Use personal protective equipment as required. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Launder contaminated clothing before reuse. Avoid environmental contamination. DO NOT HEAT. | |
| Maximum Handling Temperature: | 55 °C 131 °F | |
| Conditions for safe storage, including any incompatibilities: | Keep at temperature not exceeding 40°C. Keep cool. Store in a well- ventilated place. Store away from incompatible materials. See section 10 for incompatible materials. Do not store near potential sources of ignition. | |
| Maximum Storage Temperature: | 45 °C 113 °F | |



8. Exposure controls/personal protection

Control Parameters:

Occupational Exposure Limits

| Chemical name | Туре | Exposure Limit Values | | Source |
|---|------|-----------------------|-----------|--|
| Petroleum naphtha - Non- aerosol as total hydrocarbon vapor | TWA | | 200 mg/m3 | US. ACGIH Threshold Limit Values (03 2014) |
| Petroleum naphtha | REL | 100 ppm | 400 mg/m3 | US. NIOSH: Pocket Guide to Chemical Hazards (2010) |
| Petroleum naphtha | REL | | 100 mg/m3 | US. NIOSH: Pocket Guide to Chemical Hazards (2010) |
| Petroleum naphtha | PEL | 100 ppm | 400 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Petroleum naphtha | TWA | 100 ppm | 400 mg/m3 | US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989) |
| 1,2,4-trimethylbenzene | TWA | 25 ppm | | US. ACGIH Threshold Limit Values (02 2012) |
| 1,2,4-trimethylbenzene | REL | 25 ppm | 125 mg/m3 | US. NIOSH: Pocket Guide to Chemical Hazards (2010) |
| Naphthalene | TWA | 10 ppm | | US. ACGIH Threshold Limit Values (02 2012) |
| Naphthalene | STEL | 15 ppm | 75 mg/m3 | US. NIOSH: Pocket Guide to Chemical Hazards (2010) |
| Naphthalene | REL | 10 ppm | 50 mg/m3 | US. NIOSH: Pocket Guide to Chemical Hazards (2010) |
| Naphthalene | PEL | 10 ppm | 50 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| 1,3,5-Trimethylbenzene | TWA | 25 ppm | | US. ACGIH Threshold Limit Values (02 2012) |
| 1,3,5-Trimethylbenzene | REL | 25 ppm | 125 mg/m3 | US. NIOSH: Pocket Guide to Chemical Hazards (2010) |

Other exposure limits

| Chemical name | Туре | Exposure Limit Values | Source |
|----------------------|------|-----------------------|--------|
| 2-Ethylhexyl nitrate | TWA | 1 ppm | |

Appropriate engineering controls: Mechanical ventilation or local exhaust ventilation is required. Material should be handled in enclosed vessels and equipment, in which case general (mechanical) room ventilation should be sufficient. Local exhaust ventilation should be used at points where dust, mist, vapors or gases can escape into the room air. Adequate ventilation should be provided so that exposure limits are not exceeded.

Individual protection measures, such as personal protective equipment

General information: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Supplementary local exhaust ventilation, closed systems, or respiratory and eye protection may be needed in special circumstances, such as poorly ventilated spaces, heating, evaporation of liquids from large surfaces, spraying of mists, mechanical generation of dusts, drying of solids, etc.

Eye/face protection: Safety glasses. If potential for splash or mist exists, wear chemical goggles or faceshield.



| Skin Protection Hand Protection: | Use nitrile or neoprene gloves. Use good industrial hygiene practices. In case of skin contact, wash hands and arms with soap and water. Polyvinyl alcohol. Note: polyvinyl alcohol gloves are water soluble and should not be used when there is potential for water contact. Chemical resistant gloves |
|-------------------------------------|---|
| Other: | Gloves, coveralls, apron, boots as necessary to minimize contact. Wear apron or protective clothing in case of contact. |
| Respiratory Protection: | A respiratory protection program compliant with all applicable regulations must be followed whenever workplace conditions require the use of a respirator. Under normal use conditions, respirator is not usually required. Use appropriate respiratory protection if exposure to dust particles, mist or vapors is likely. Use self-contained breathing apparatus for entry into confined space, for other poorly ventilated areas and for large spill clean-up sites. Use respirator with a combination organic vapor and dust/mist cartridge. |
| Hygiene measures: | Observe good industrial hygiene practices. Do not eat, drink or smoke when using the product. When using do not smoke. Wash hands before breaks and immediately after handling the product. Wash hands after handling. |

9. Physical and chemical properties

Appearance

| •• | | |
|---|--|--|
| Physical state: | liquid | |
| Form: | liquid | |
| Color: | Dark brown | |
| Odor: | Pungent | |
| Odor threshold: | No data available. | |
| pH: | No data available. | |
| Freezing point: | No data available. | |
| Boiling Point: | No data available. | |
| Flash Point: | 144 °F (62 °C) (Pensky-Martens Closed Cup) | |
| Evaporation rate: | No data available. | |
| Flammability (solid, gas): | No data available. | |
| Upper/lower limit on flammability or explosive limits | | |
| Flammability limit - upper (%): | No data available. | |
| Flammability limit - lower (%): | No data available. | |
| Explosive limit - upper (%): | No data available. | |
| Explosive limit - lower (%): | No data available. | |
| Vapor pressure: | No data available. | |
| Vapor density: | No data available. | |
| Relative density: | 0.921 - 0.961 60.1 °F (15.6 °C) | |
| Solubility(ies) | | |
| Solubility in water: | Insoluble in water | |
| Solubility (other): | No data available. | |
| | | |



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| |
| 104 °F (40 °C)) 15 mm2/s (0 °C (32 °F)) |
| |
| 7 °C) |
| |

10. Stability and reactivity

| Reactivity: | No data available. |
|--------------------------------------|--|
| Chemical Stability: | Material is stable under normal conditions. |
| Possibility of hazardous reactions: | Will not occur. |
| Conditions to avoid: | Heat may cause the containers to explode. Heat, sparks, flames. |
| Incompatible Materials: | Strong oxidizing agents. |
| Hazardous Decomposition Products: | Thermal decomposition or combustion may generate smoke, carbon monoxide, carbon dioxide, nitrogen oxides, and other products of incomplete combustion. |

11. Toxicological information

Information on likely routes of exposure

| Inhalation: | Harmful if inhaled. |
|---------------|---|
| Ingestion: | Harmful if swallowed. |
| Skin Contact: | May be harmful in contact with skin. Causes mild skin irritation. |
| Eye contact: | No data available. |

Information on toxicological effects

Acute toxicity

Oral Product:

Ingestion of 2-ethylhexyl nitrate may cause vasodilation resulting in reduced blood pressure and other cardiovascular effects. Symptoms include headache, dizziness, nausea, fatigue, heart palpitations, confusion and possible loss of consciousness. Material can be aspirated into the lungs during the act of swallowing or vomiting. This could result in severe injury to the lungs and death. Ingestion can cause central nervous system effects such as headache, dizziness, drowsiness, and generalized weakness. Swallowing material may cause irritation of the gastrointestinal lining, nausea, vomiting, diarrhea, and abdominal pain. ATEmix 300 - 2,000 mg/kg.

| Dermal | |
|--------------------------|---|
| Product: | Absorption of 2-ethylhexyl nitrate through the skin may cause |
| SDS_US - LUBRIZOL® 9047C | |



| | vasodilation resulting in reduced blood pressure and other cardiovascular effects. Symptoms include headache, dizziness, nausea, fatigue, heart palpitations, confusion and possible loss of consciousness. Prolonged or widespread contact with this material could result in the absorption of potentially harmful amounts. ATEmix > 2,000 mg/kg |
|--|---|
| Inhalation | |
| Product: | Inhalation of 2-ethylhexyl nitrate may cause vasodilation resulting in reduced blood pressure and other cardiovascular effects. Symptoms include headache, dizziness, nausea, fatigue, heart palpitations, confusion and possible loss of consciousness. Repeated overexposure to petroleum naphtha can cause nervous system damage. High concentrations may cause headaches, dizziness, nausea, behavioral changes, weakness, drowsiness and stupor. ATEmix (, 4 h): 2 - 5 mg/l. Dusts, mists and fumes |
| | Inhalation of 2-ethylhexyl nitrate may cause vasodilation resulting in reduced blood pressure and other cardiovascular effects. Symptoms include headache, dizziness, nausea, fatigue, heart palpitations, confusion and possible loss of consciousness. Repeated overexposure to petroleum naphtha can cause nervous system damage. High concentrations may cause headaches, dizziness, weakness, and nausea. High concentrations may cause headaches, dizziness, nausea, behavioral changes, weakness, drowsiness and stupor. |
| Skin Corrosion/Irritation: Product: | Prolonged or repeated skin contact as from clothing wet with material may cause dermatitis. Symptoms may include redness, edema, drying, and cracking of the skin. Alcohol may enhance the toxic effects. Prolonged or repeated contact may cause irritation. Remarks: Causes mild skin irritation. |
| Serious Eye Damage/Eye Irritation | |
| Product: | Remarks: Not classified as a primary eye irritant. |
| Respiratory sensitization: | No data available |
| Skin sensitization: 2-Ethylhexyl nitrate | Classification: Not a skin sensitizer. (Literature) |
| Petroleum naphtha | Classification: Not a skin sensitizer. (Literature) |
| 2-Ethylhexanol | Classification: Not a skin sensitizer. (Literature) |
| Specific Target Organ Toxicity - S Product: | ingle Exposure: If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract. |



| 2-Ethylhexyl nitrate | If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract. |
|---|---|
| Petroleum naphtha | If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract. |
| 1,2,4-trimethylbenzene | Nose, throat and lung irritant. |
| 2-Ethylhexanol | Respiratory tract irritation. |
| 1,3,5-Trimethylbenzene | May cause irritation to the mucous membranes and upper respiratory tract. |
| ++ 1,2,3-Trimethyl benzene | Nose, throat and lung irritant. |
| Aspiration Hazard: Product: | May be fatal if swallowed and enters airways. |
| Other effects: 2-Ethylhexyl nitrate | Alcohol may enhance the toxic effects. |
| Petroleum naphtha | Narcotic effect. |
| Naphthalene | Blood |
| Chronic Effects Carcinogenicity: Product: | Not available. |
| Naphthalene | A two-year National Toxicology Program (NTP) study found an increased incidence of nasal tumors in rats exposed to naphthalene by inhalation. In mice similarly exposed, increased incidences of alveolar/bronchiolar adenomas were observed. |
| IARC Monographs on the Evaluation | on of Carcinogenic Risks to Humans: Overall evaluation: 2B. Possibly carcinogenic to humans. |
| | (NTD) Demart en Carcinegener |
| US. National Toxicology Program (Naphthalene | Reasonably Anticipated to be a Human Carcinogen. |
| US. OSHA Specifically Regulated S No carcinogenic components identifie | Substances (29 CFR 1910.1001-1050): ed |
| Germ Cell Mutagenicity: | |
| 2-Ethylhexyl nitrate | This material has not exhibited mutagenic or genotoxic potential in laboratory tests. |



| 2-Ethylhexanol | This material has not exhibited mutagenic or genotoxic potential in laboratory tests. | | |
|---|--|--|--|
| Naphthalene | Naphthalene has caused mutagenic effects in in vitro studies with metabolic activation, however, in vivo studies do not show evidence of germ cell mutagenicity. | | |
| Reproductive toxicity: | | | |
| 2-Ethylhexanol | No evidence of adverse effects were found in a developmental toxicity study of 2-ethylhexanol in rats. Doses up to 3 ml/kg applied to the skin during the most critical part of the gestation period produced evidence of toxicity to mothers, but no evidence of injury in the developing offspring. In a previous study, birth defects were observed by oral administration, an unlikely route of exposure in the workplace. | | |
| Specific Target Organ Toxicity - Repeated Exposure: | | | |
| 2-Ethylhexyl nitrate | Prolonged exposure to 2-ethylhexyl nitrate may cause vasodilation resulting in reduced blood pressure and other cardiovascular effects. Symptoms include headache, dizziness, nausea, fatigue, heart palpitations, confusion and possible loss of consciousness. | | |
| Petroleum naphtha | Repeated overexposure to petroleum naphtha can cause nervous system damage. | | |
| 2-Ethylhexanol | Repeated overexposure may result in liver and kidney damage. A 14-day dermal toxicity study of 2-ethylhexanol in rats showed blood effects, decreased spleen weight and decreased triglycerides. Unknown: Target Organ(s): Blood, Liver, Spleen., Kidney | | |
| Naphthalene | Repeated overexposure to naphthalene may cause cataracts. Repeated overexposure to naphthalene may cause destruction of red blood cells with anemia, fever, jaundice and kidney and liver damage. | | |

12. Ecological information

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|-------|----|-----|---|
| | | - | |

| Fish 2-Ethylhexyl nitrate | LC 50 (Zebra Fish, 4 d): 2 mg/l NOEC (Zebra Fish, 4 d): 1.52 mg/l | |
|---|---|-------|
| Petroleum naphtha | LC 50 (Rainbow Trout, 4 Days): 2 mg/l | |
| 1,2,4-trimethylbenzene | LC 50 (Fathead Minnow, 4 Days): 7.72 mg/l | |
| 2-Ethylhexanol | LC 50 (Fathead Minnow, 4 d): 28.2 mg/l LC 50 (Golden Orfe, 4 d): 17.1 mg/l NOEC (Golden Orfe, 4 d): 14 mg/l | |
| Aquatic Invertebrates 2-Ethylhexyl nitrate | EC 50 (Water flea (Daphnia magna), 2 d): > 12.6 mg/l | 40/4/ |



| Petroleum naphtha | EC 50 (Water flea (Daphnia magna), 2 d): 3 mg/l |
|--|--|
| 1,2,4-trimethylbenzene | EC 50 (Water flea (Daphnia magna), 2 d): 3.6 mg/l |
| 2-Ethylhexanol | EC 50 (Water flea (Daphnia magna), 2 d): 39 mg/l |
| 1,3,5-Trimethylbenzene | EC 50 (Water flea (Daphnia magna), 2 d): 6 mg/l |
| Toxicity to Aquatic Plants 2-Ethylhexyl nitrate | EC 50 (Alga, 3 d): 3.22 mg/l |
| Petroleum naphtha | EC 50 (Green algae (Selenastrum capricornutum), 4 d): 1.1 mg/l |
| 2-Ethylhexanol | EC 50 (Green algae (Scenedesmus quadricauda), 3 d): 16.6 mg/l |
| 1,3,5-Trimethylbenzene | EC 50 (Green algae (Scenedesmus quadricauda), 2 Days): 25 mg/l |
| Toxicity to soil dwelling organism | s No data available |
| Sediment Toxicity | No data available |
| Toxicity to Terrestrial Plants | No data available |
| Toxicity to Above-Ground Organis | sms No data available |
| Toxicity to microorganisms 2-Ethylhexyl nitrate | EC 50 (Sludge, 0.3 d): > 1,000 mg/l |
| 2-Ethylhexanol | EC 50 (Pseudomonas putida, 0.1 d): 540 mg/l EC 50 (Sludge, 0.5 d): > 100 mg/l |
| Persistence and Degradability | |
| Biodegradation 2-Ethylhexyl nitrate | Miscellaneous, 0 %, 28 d, Not readily degradable. |
| Petroleum naphtha | OECD TG 301 F, 58 %, 28 d, Not readily degradable. |
| 2-Ethylhexanol | OECD TG 302 B, 95 %, 5 d, Readily biodegradable OECD TG 301 C, 100 %, 14 d, Readily biodegradable |
| Bioaccumulative Potential Bioconcentration Factor (BCF) 2-Ethylhexanol | Bioconcentration Factor (BCF): 25.35 (calculated) |
| Partition Coefficient n-octanol / wa 2-Ethylhexyl nitrate | ater (log Kow) Log Kow: 5.24 (Measured) |
| 1,2,4-trimethylbenzene | Log Kow: 3.63 (calculated) |
| 2-Ethylhexanol | Log Kow: 2.9 (Measured) |
| SDS_US - LUBRIZOL® 9047C | 11/16 |



| Mobility: | |
|-------------------------------|--|
| 2-Ethylhexyl nitrate | soil - 3.75 |
| 2-Ethylhexanol | soil - 1.42 |
| Other Adverse Effects: | No data available. |
| 13. Disposal considerations | |
| Disposal instructions: | Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations. Dispose of packaging or containers in accordance with local, regional, national and international regulations. Empty container contains product residue which may exhibit hazards of product. |
| Contaminated Packaging: | Container packaging may exhibit hazards. |
| 14. Transport information | |
| DOT | |
| UN Number: | NA 1993 |
| UN Proper Shipping Name: | Combustible liquid, n.o.s.(2-Ethylhexyl nitrate, Petroleum naphtha) |
| Transport Hazard Class(es) | |
| Class: | CBL |
| | NONE |
| Label(s): | - |
| Packing Group: | |
| Marine Pollutant: | Yes |
| Special precautions for user: | None established |
| Reportable quantity | Naphthalene 100 lbs |
| IMDG | |
| UN Number: | UN 3082 |
| UN Proper Shipping Name: | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(2-Ethylhexyl nitrate, Naphthalene) |
| Transport Hazard Class(es) | |
| Class: | 9 |
| Label(s): | 9 |
| EmS No.: | F-A, S-F |
| Packing Group: | III |
| Marine Pollutant: | Yes |
| Limited quantity | 5.00L |
| Excepted quantity | E1 |
| Special precautions for user: | None established |



ΙΑΤΑ

| UN Number: Proper Shipping Name: | UN 3082 Environmentally hazardous substance, liquid, n.o.s.(2-Ethylhexyl nitrate, Naphthalene) |
|---|--|
| Transport Hazard Class(es): Class: | 9 |
| Label(s): | 9 9MI |
| Marine Pollutant: | Yes III |
| Packing Group: Limited quantity | 30.00KG |
| Excepted quantity | E1 |
| Environmental Hazards | Marine Pollutant |
| Special precautions for user: Other information | None established |
| Passenger and cargo aircraft: Cargo aircraft only: | Allowed. Allowed. |
| - / | |

Transport in bulk according to Annex II of MARPOL and the IBC Code None known.

The DOT shipping information in this section is based on a bulk container. Please review the accompanying shipping papers for the correct shipping descriptions based the size of the package. Shipping descriptions may vary based on mode of transport, quantities, temperature of the material, package size, and/or origin and destination. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material. During transportation, steps must be taken to prevent load shifting or materials falling, and all relating legal statutes should be obeyed. Review classification requirements before shipping materials at elevated temperatures.

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None present or none present in regulated quantities.

| Chemical Identity | CAS number | Reportable quantity | Calculated ¹ |
|-------------------|------------|----------------------------|----------------------------|
| Naphthalene | 91-20-3 | 100 lbs | 3374 lbs 1531 kgs |
| Xylene | 1330-20-7 | 100 lbs | > 50000 lbs > 22680 kgs |
| Cumene | 98-82-8 | 5000 lbs | > 50000 lbs > 22680 kgs |
| Propylene oxide | 75-56-9 | 100 lbs | > 50000 lbs > 22680 kgs |

CERCLA Hazardous Substance List (40 CFR 302.4)

¹This is the amount product/material required to be released before CERCLA reporting is required.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 311 Classifications

Flammable (gases, aerosols, liquids, or solids) Acute toxicity (any route of exposure) Carcinogenicity Specific target organ toxicity (single or repeated exposure)



Aspiration Hazard

SARA 302 Extremely Hazardous Substance

None present or none present in regulated quantities.

SARA 304 Emergency Release Notification

| Chemical Identity | CAS number | Percent by Weight | Reportable quantity |
|-------------------|------------|----------------------|---------------------|
| Naphthalene | 91-20-3 | 3.0 % | 100 lbs |
| Xylene | 1330-20-7 | 53.0 PPM | 100 lbs |
| Cumene | 98-82-8 | 53.0 PPM | 5000 lbs |
| Propylene oxide | 75-56-9 | 30.0 PPM | 100 lbs |

SARA 313 (TRI Reporting)

| | | Percent by | Reporting threshold for | Reporting threshold for manufacturing |
|------------------------|------------|---------------|----------------------------|---|
| Chemical Identity | CAS number | <u>Weight</u> | other uses | and processing |
| 1,2,4-trimethylbenzene | 95-63-6 | 4.5 % | 10000 lbs | 25000 lbs |
| Naphthalene | 91-20-3 | 3.0 % | 10000 lbs | 25000 lbs |

US State Regulations

US. California Proposition 65

WARNING: This product can expose you to chemicals including: Naphthalene (2.964%) Cumene (53.00PPM) Propylene oxide (30.00PPM) ++ Benzene (296.00PPB) Ethylene oxide (3.00PPB) Methanol (296.00PPT) This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm.

Inventory Status

Australia (AICS)

All components are in compliance with chemical notification requirements in Australia.

Canada (DSL/NDSL)

All substances contained in this product are in compliance with the Canadian Environmental Protection Act and are present on the Domestic Substances List (DSL) or are exempt.

China (IECSC)

This product contains a substance or polymer that has been notified and is restricted to import by the notifier.

European Union (REACh)

To obtain information on the REACH compliance status of this product, please e-mail REACH@SDSInquiries.com.

Japan (ENCS)

This product contains a substance or polymer that has been notified and is restricted to import by specific legal entities.



Korea (ECL)

All components are in compliance in Korea.

New Zealand (NZIoC) All components are in compliance with chemical notification requirements in New Zealand.

Philippines (PICCS)

This product requires notification before sale in the Philippines.

Switzerland (SWISS) May require notification before sale in Switzerland.

Taiwan (TCSCA) All components of this product are listed on the Taiwan inventory.

United States (TSCA)

All substances contained in this product are listed on the TSCA inventory or are exempt.

The information that was used to confirm the compliance status of this product may deviate from the chemical information shown in Section 3.

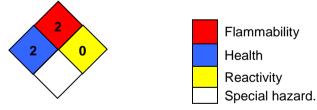
16.Other information, including date of preparation or last revision

HMIS Hazard ID

| Health | * | 2 |
|------------------|---|---|
| Flammability | | 2 |
| Physical Hazards | | 0 |

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible; *Chronic health effect

NFPA Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible

| Issue Date: | 08/27/2018 |
|------------------------|---|
| Version #: | 2.1 |
| Source of information: | Internal company data and other publically available resources. |
| Further Information: | Contact supplier (see Section 1) |



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