# APPENDIX B SAFETY DATA SHEETS

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# SAFETY DATA SHEET

## 1. Identification

| | |
|---|---|
| **Product identifier** | **91 CF REC** |
| **Other means of identification** | None. |
| **Recommended use** | Motor Fuel |
| **Recommended restrictions** | None known. |

**Manufacturer/Importer/Supplier/Distributor information**

**Manufactor**

| | |
|---|---|
| **Company name** | Philadelphia Energy Solutions |
| **Address** | 3144 W. Passyunk Ave<br>Philadelphia, Pennsylvania, 19145 |
| **E-mail** | msds@PES-Companies.com |
| **Emergency phone number** | |
| **24 Hours** | (215) 339-5400 |
| **Information** | |
| **Product Safety Information** | (215) 339-2000 |

## 2. Hazard(s) identification

| | | |
|---|---|---|
| **Physical hazards** | Flammable liquids | Category 2 |
| **Health hazards** | Skin corrosion/irritation | Category 2 |
| | Serious eye damage/eye irritation | Category 2A |
| | Germ cell mutagenicity | Category 1B |
| | Carcinogenicity | Category 1B |
| | Reproductive toxicity | Category 2 |
| | Specific target organ toxicity, single exposure | Category 3 narcotic effects |
| | Aspiration hazard | Category 1 |
| **Environmental hazards** | Hazardous to the aquatic environment, long-term hazard | Category 2 |

**OSHA defined hazards** Not classified.

**Label elements**

**Signal word** Danger

**Hazard statement** Highly flammable liquid and vapor. Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness. May cause genetic defects. May cause cancer. Suspected of damaging fertility or the unborn child. Toxic to aquatic life with long lasting effects.

**Precautionary statement**

**Prevention** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing mist or vapor. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

| | |
|---|---|
| **Response** | If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If exposed or concerned: Get medical advice/attention. Call a poison center/doctor if you feel unwell. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish. Collect spillage. |
| **Storage** | Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store locked up. |
| **Disposal** | Dispose of contents/container in accordance with local/regional/national/international regulations. |
| **Hazard(s) not otherwise classified (HNOC)** | Static Accumulating Liquid. Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. |

## 3. Composition/information on ingredients

**Mixtures**

| Chemical name | CAS number | % |
|---|---|---|
| Light Petroleum Distillate | 8006-61-9 | 100 |

**Constituents**

| Chemical name | CAS number | % |
|---|---|---|
| Toluene | 108-88-3 | 0 - 30 |
| Xylene | 1330-20-7 | 0 - 25 |
| Cyclohexane | 110-82-7 | 0 - 9 |
| n-Hexane | 110-54-3 | 0 - 5 |
| Ethylbenzene | 100-41-4 | 0 - 5 |
| Naphthalene | 91-20-3 | 0 - 5 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0 - 5 |
| Benzene | 71-43-2 | 0.1 - 4.9 |
| Cumene | 98-82-8 | 0 - 1 |

**Composition comments** Occupational Exposure Limits for constituents are listed in Section 8.

## 4. First-aid measures

| | |
|---|---|
| **Inhalation** | 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. |
| **Skin contact** | Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse. |
| **Eye contact** | Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists. |
| **Ingestion** | Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately. |
| **Most important symptoms/effects, acute and delayed** | Convulsions. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. |
| **Indication of immediate medical attention and special treatment needed** | Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed. |
| **General information** | Take off all contaminated clothing immediately. IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse. |

## 5. Fire-fighting measures

| | |
|---|---|
| **Suitable extinguishing media** | Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2). |
| **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 form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed. |
| **Special protective equipment and precautions for firefighters** | Self-contained breathing apparatus and full protective clothing must be worn in case of fire. |
| **Fire fighting equipment/instructions** | In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. |
| **Specific methods** | Use standard firefighting procedures and consider the hazards of other involved materials. |
| **General fire hazards** | Highly flammable liquid and vapor. |

## 6. Accidental release measures

| | |
|---|---|
| **Personal precautions, protective equipment and emergency procedures** | Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS. |
| **Methods and materials for containment and cleaning up** | Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material.<br><br>Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent product from entering drains. Following product recovery, flush area with water.<br><br>Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.<br><br>Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. |
| **Environmental precautions** | Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases. |

## 7. Handling and storage

| | |
|---|---|
| **Precautions for safe handling** | Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices. |
| **Conditions for safe storage, including any incompatibilities** | Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS). |

## 8. Exposure controls/personal protection

**Occupational exposure limits**

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

| Constituents | Type | Value |
|---|---|---|
| Benzene (CAS 71-43-2) | STEL | 5 ppm |
| | TWA | 1 ppm |

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

| Constituents | Type | Value |
|---|---|---|
| Cumene (CAS 98-82-8) | PEL | 245 mg/m3 |
| | | 50 ppm |
| Xylene (CAS 1330-20-7) | PEL | 435 mg/m3 |
| | | 100 ppm |

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

| Constituents | Type | Value |
|---|---|---|
| n-Hexane (CAS 110-54-3) | PEL | 1800 mg/m3 |
| | | 500 ppm |
| Ethylbenzene (CAS 100-41-4) | PEL | 435 mg/m3 |
| | | 100 ppm |
| Naphthalene (CAS 91-20-3) | PEL | 50 mg/m3 |
| | | 10 ppm |
| Cyclohexane (CAS 110-82-7) | PEL | 1050 mg/m3 |
| | | 300 ppm |

**US. OSHA Table Z-2 (29 CFR 1910.1000)**

| Constituents | Type | Value |
|---|---|---|
| Toluene (CAS 108-88-3) | Ceiling | 300 ppm |
| | TWA | 200 ppm |
| Benzene (CAS 71-43-2) | Ceiling | 25 ppm |
| | TWA | 10 ppm |

**US. ACGIH Threshold Limit Values**

| Constituents | Type | Value |
|---|---|---|
| Cumene (CAS 98-82-8) | TWA | 50 ppm |
| Xylene (CAS 1330-20-7) | STEL | 150 ppm |
| | TWA | 100 ppm |
| Toluene (CAS 108-88-3) | TWA | 20 ppm |
| Benzene (CAS 71-43-2) | STEL | 2.5 ppm |
| | TWA | 0.5 ppm |
| 1,2,4-Trimethylbenzene (CAS 95-63-6) | TWA | 25 ppm |
| n-Hexane (CAS 110-54-3) | TWA | 50 ppm |
| Ethylbenzene (CAS 100-41-4) | TWA | 20 ppm |
| Naphthalene (CAS 91-20-3) | TWA | 10 ppm |
| Cyclohexane (CAS 110-82-7) | TWA | 100 ppm |

**US. NIOSH: Pocket Guide to Chemical Hazards**

| Constituents | Type | Value |
|---|---|---|
| Cumene (CAS 98-82-8) | TWA | 245 mg/m3 |
| | | 50 ppm |
| Xylene (CAS 1330-20-7) | STEL | 655 mg/m3 |
| | | 150 ppm |
| | TWA | 435 mg/m3 |
| | | 100 ppm |
| Toluene (CAS 108-88-3) | STEL | 560 mg/m3 |
| | | 150 ppm |
| | TWA | 375 mg/m3 |
| | | 100 ppm |
| Benzene (CAS 71-43-2) | STEL | 1 ppm |
| | TWA | 0.1 ppm |
| 1,2,4-Trimethylbenzene (CAS 95-63-6) | TWA | 125 mg/m3 |
| | | 25 ppm |
| n-Hexane (CAS 110-54-3) | TWA | 180 mg/m3 |
| | | 50 ppm |

**US. NIOSH: Pocket Guide to Chemical Hazards**

| Constituents | Type | Value |
|---|---|---|
| Ethylbenzene (CAS 100-41-4) | STEL | 545 mg/m3 |
| | | 125 ppm |
| | TWA | 435 mg/m3 |
| | | 100 ppm |
| Naphthalene (CAS 91-20-3) | STEL | 75 mg/m3 |
| | | 15 ppm |
| | TWA | 50 mg/m3 |
| | | 10 ppm |
| Cyclohexane (CAS 110-82-7) | TWA | 1050 mg/m3 |
| | | 300 ppm |

**Biological limit values**

**ACGIH Biological Exposure Indices**

| Constituents | Value | Determinant | Specimen | Sampling Time |
|---|---|---|---|---|
| Xylene (CAS 1330-20-7) | 1.5 g/g | Methylhippuric acids | Creatinine in urine | * |
| Toluene (CAS 108-88-3) | 0.3 mg/g | o-Cresol, with hydrolysis | Creatinine in urine | * |
| | 0.03 mg/l | Toluene | Urine | * |
| | 0.02 mg/l | Toluene | Blood | * |
| Benzene (CAS 71-43-2) | 25 µg/g | S-Phenylmercapturic acid | Creatinine in urine | * |
| n-Hexane (CAS 110-54-3) | 0.4 mg/l | 2,5-Hexanedion, without hydrolysis | Urine | * |
| Ethylbenzene (CAS 100-41-4) | 0.15 g/g | Sum of mandelic acid and phenylglyoxylic acid | Creatinine in urine | * |

* - For sampling details, please see the source document.

**Exposure guidelines**

**US - California OELs: Skin designation**

| | |
|---|---|
| Benzene (CAS 71-43-2) | Can be absorbed through the skin. |
| Cumene (CAS 98-82-8) | Can be absorbed through the skin. |
| n-Hexane (CAS 110-54-3) | Can be absorbed through the skin. |
| Toluene (CAS 108-88-3) | Can be absorbed through the skin. |

**US - Minnesota Haz Subs: Skin designation applies**

| | |
|---|---|
| Cumene (CAS 98-82-8) | Skin designation applies. |
| Toluene (CAS 108-88-3) | Skin designation applies. |

**US - Tennessee OELs: Skin designation**

| | |
|---|---|
| Cumene (CAS 98-82-8) | Can be absorbed through the skin. |

**US ACGIH Threshold Limit Values: Skin designation**

| | |
|---|---|
| Benzene (CAS 71-43-2) | Can be absorbed through the skin. |
| Naphthalene (CAS 91-20-3) | Can be absorbed through the skin. |
| n-Hexane (CAS 110-54-3) | Can be absorbed through the skin. |

**US. NIOSH: Pocket Guide to Chemical Hazards**

| | |
|---|---|
| Cumene (CAS 98-82-8) | Can be absorbed through the skin. |

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

| | |
|---|---|
| Cumene (CAS 98-82-8) | Can be absorbed through the skin. |

**Appropriate engineering controls**

Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

**Individual protection measures, such as personal protective equipment**

| | |
|---|---|
| **Eye/face protection** | Wear safety glasses with side shields (or goggles). |
| **Skin protection** | |
| **Hand protection** | Wear appropriate chemical resistant gloves. |
| **Other** | Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended. |
| **Respiratory protection** | Chemical respirator with organic vapor cartridge and full facepiece. |
| **Thermal hazards** | Wear appropriate thermal protective clothing, when necessary. |
| **General hygiene considerations** | When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. |

## 9. Physical and chemical properties

| | |
|---|---|
| **Appearance** | |
| **Physical state** | Liquid. |
| **Form** | Liquid. |
| **Color** | Clear. |
| **Odor** | Gasoline-like. |
| **Odor threshold** | < 1 ppm |
| **pH** | Not available. |
| **Melting point/freezing point** | Not available. |
| **Initial boiling point and boiling range** | 100 - 430 °F (37.78 - 221.11 °C) |
| **Flash point** | -40.0 °F (-40.0 °C) |
| **Evaporation rate** | Not available. |
| **Flammability (solid, gas)** | Not available. |
| **Upper/lower flammability or explosive limits** | |
| **Explosive limit - lower (%)** | 1.5 % |
| **Explosive limit - upper (%)** | 7.6 % |
| **Vapor pressure** | 325 - 525 mm Hg at 20° C |
| **Vapor density** | Not available. |
| **Relative density** | 0.74 |
| **Solubility(ies)** | |
| **Solubility (water)** | Nil to 15% |
| **Partition coefficient (n-octanol/water)** | Not available. |
| **Auto-ignition temperature** | 536 °F (280 °C) |
| **Decomposition temperature** | Not available. |
| **Viscosity** | Not available. |

## 10. Stability and reactivity

| | |
|---|---|
| **Reactivity** | The product is stable and non-reactive under normal conditions of use, storage and transport. |
| **Chemical stability** | Material is stable under normal conditions. |
| **Possibility of hazardous reactions** | No dangerous reaction known under conditions of normal use. |
| **Conditions to avoid** | Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials. |
| **Incompatible materials** | Strong oxidizing agents. Alkaline materials. Halogens. Halogenated compounds. |
| **Hazardous decomposition products** | Carbon oxides. |

## 11. Toxicological information

**Information on likely routes of exposure**

| | |
|---|---|
| **Inhalation** | May cause drowsiness and dizziness. Headache. Nausea, vomiting. |

| | |
|---|---|
| **Skin contact** | Causes skin irritation. |
| **Eye contact** | Causes serious eye irritation. |
| **Ingestion** | Expected to be a low ingestion hazard. |
| **Symptoms related to the physical, chemical and toxicological characteristics** | Convulsions. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. |

**Information on toxicological effects**

**Acute toxicity** Narcotic effects.

**Toxicological data**

| Constituents | Species | Test Results |
|---|---|---|
| Cumene (CAS 98-82-8) | | |
| **Acute** | | |
| *Dermal* | | |
| LD50 | Rabbit | > 3160 mg/kg, 24 Hours |
| *Inhalation* | | |
| LC50 | Rat | 8000 ppm, 4 Hours |
| *Oral* | | |
| LD50 | Rat | 2910 mg/kg |
| Xylene (CAS 1330-20-7) | | |
| **Acute** | | |
| *Dermal* | | |
| LD50 | Rabbit | 12126 mg/kg, 24 Hours |
| *Inhalation* | | |
| LC50 | Rat | 6350 ppm, 4 Hours |
| *Oral* | | |
| LD50 | Rat | 3523 mg/kg |
| Toluene (CAS 108-88-3) | | |
| **Acute** | | |
| *Dermal* | | |
| LD50 | Rabbit | 14.1 ml/kg |
| *Inhalation* | | |
| LC50 | Rat | 49000 mg/m³, 4 Hours |
| *Oral* | | |
| LD50 | Rat | 636 mg/kg |
| Benzene (CAS 71-43-2) | | |
| **Acute** | | |
| *Oral* | | |
| LD50 | Rat | 930 mg/kg |
| 1,2,4-Trimethylbenzene (CAS 95-63-6) | | |
| **Acute** | | |
| *Dermal* | | |
| LD50 | Rabbit | > 3160 mg/kg |
| *Inhalation* | | |
| LC50 | Rat | 18000 mg/m3, 4 hours |
| Ethylbenzene (CAS 100-41-4) | | |
| **Acute** | | |
| *Dermal* | | |
| LD50 | Rabbit | 15400 mg/kg |
| *Inhalation* | | |
| LC50 | Rat | 17.4 mg/m³, 4 Hours |

| Constituents | Species | Test Results |
|---|---|---|
| *Oral* | | |
| LD50 | Rat | 35000 - 47000 mg/kg |
| Naphthalene (CAS 91-20-3) | | |
| **Acute** | | |
| *Dermal* | | |
| LD50 | Rabbit | > 2 g/kg |
| *Oral* | | |
| LD50 | Rat | 490 mg/kg |
| Cyclohexane (CAS 110-82-7) | | |
| **Acute** | | |
| *Oral* | | |
| LD50 | Rat | 12705 mg/kg |

**Skin corrosion/irritation** Causes skin irritation.

**Serious eye damage/eye irritation** Causes serious eye irritation.

**Respiratory or skin sensitization**

**Respiratory sensitization** Not a respiratory sensitizer.

**Skin sensitization** This product is not expected to cause skin sensitization.

**Germ cell mutagenicity** May cause genetic defects.

**Carcinogenicity** May cause cancer.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

| | |
|---|---|
| Benzene (CAS 71-43-2) | 1 Carcinogenic to humans. |
| Cumene (CAS 98-82-8) | 2B Possibly carcinogenic to humans. |
| Ethylbenzene (CAS 100-41-4) | 2B Possibly carcinogenic to humans. |
| Light Petroleum Distillate (CAS 8006-61-9) | 2B Possibly carcinogenic to humans. |
| Naphthalene (CAS 91-20-3) | 2B Possibly carcinogenic to humans. |
| Toluene (CAS 108-88-3) | 3 Not classifiable as to carcinogenicity to humans. |
| Xylene (CAS 1330-20-7) | 3 Not classifiable as to carcinogenicity to humans. |

**NTP Report on Carcinogens**

| | |
|---|---|
| Benzene (CAS 71-43-2) | Known To Be Human Carcinogen. |
| Naphthalene (CAS 91-20-3) | Reasonably Anticipated to be a Human Carcinogen. |

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

| | |
|---|---|
| Benzene (CAS 71-43-2) | Cancer |

**Reproductive toxicity** Suspected of damaging fertility or the unborn child.

**Specific target organ toxicity - single exposure** May cause drowsiness and dizziness.

**Specific target organ toxicity - repeated exposure** Not classified.

**Aspiration hazard** Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

**Chronic effects** Prolonged exposure may cause chronic effects.

## 12. Ecological information

**Ecotoxicity** Toxic to aquatic life with long lasting effects.

| Constituents | | Species | Test Results |
|---|---|---|---|
| Cumene (CAS 98-82-8) | | | |
| **Aquatic** | | | |
| Fish | LC50 | Rainbow trout,donaldson trout (Oncorhynchus mykiss) | 2.7 mg/l, 96 hours |
| Toluene (CAS 108-88-3) | | | |
| **Aquatic** | | | |
| Crustacea | EC50 | Water flea (Daphnia magna) | 5.46 - 9.83 mg/l, 48 hours |
| Fish | LC50 | Pink salmon (Oncorhynchus gorbuscha) | 6.86 - 8.48 mg/l, 96 hours |

| Constituents | | Species | Test Results |
|---|---|---|---|
| 1,2,4-Trimethylbenzene (CAS 95-63-6) | | | |
| **Aquatic** | | | |
| Fish | LC50 | Fathead minnow (Pimephales promelas) | 7.19 - 8.28 mg/l, 96 hours |
| Ethylbenzene (CAS 100-41-4) | | | |
| **Aquatic** | | | |
| Crustacea | EC50 | Daphnia | 1.81 mg/l, 48 hours |
| Fish | LC50 | Bluegill (Lepomis macrochirus) | 32 - 88 mg/l, 96 hours |
| | | Fathead minnow (Pimephales promelas) | 12.1 mg/l, 96 hours |
| Naphthalene (CAS 91-20-3) | | | |
| **Aquatic** | | | |
| Crustacea | EC50 | Water flea (Daphnia magna) | 1.09 - 3.4 mg/l, 48 hours |
| Fish | LC50 | Pink salmon (Oncorhynchus gorbuscha) | 0.95 - 1.62 mg/l, 96 hours |
| Cyclohexane (CAS 110-82-7) | | | |
| **Aquatic** | | | |
| Fish | LC50 | Fathead minnow (Pimephales promelas) | 3.961 - 5.181 mg/l, 96 hours |

**Persistence and degradability** No data is available on the degradability of this product.

**Bioaccumulative potential** No data available.

**Mobility in soil** Expected to be mobile in soil.

**Other adverse effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## 13. Disposal considerations

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Hazardous waste code** D001: Waste Flammable material with a flash point <140 F

**US RCRA Hazardous Waste U List: Reference**

| | |
|---|---|
| Benzene (CAS 71-43-2) | U019 |
| Cumene (CAS 98-82-8) | U055 |
| Cyclohexane (CAS 110-82-7) | U056 |
| Naphthalene (CAS 91-20-3) | U165 |
| Toluene (CAS 108-88-3) | U220 |
| Xylene (CAS 1330-20-7) | U239 |

**Waste from residues / unused products** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging** Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

## 14. Transport information

**DOT**

**UN number** UN1203

**UN proper shipping name** Gasoline

**Transport hazard class(es)**

**Class** 3

**Subsidiary risk** -

**Label(s)** 3

**Packing group** II

**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

**Special provisions** 144, 177, B1, B33, IB2, T4, TP1

**Packaging exceptions** 150

**Packaging non bulk** 202

**Packaging bulk** 242

**IATA**

| | |
|---|---|
| **UN number** | UN1203 |
| **UN proper shipping name** | Petrol |
| **Transport hazard class(es)** | |
| **Class** | 3 |
| **Subsidiary risk** | - |
| **Packing group** | II |
| **Environmental hazards** | Yes |
| **ERG Code** | 3H |
| **Special precautions for user** | Read safety instructions, SDS and emergency procedures before handling. |

**IMDG**

| | |
|---|---|
| **UN number** | UN1203 |
| **UN proper shipping name** | GASOLINE |
| **Transport hazard class(es)** | |
| **Class** | 3 |
| **Subsidiary risk** | - |
| **Packing group** | II |
| **Environmental hazards** | |
| **Marine pollutant** | Yes |
| **EmS** | F-E, S-E |
| **Special precautions for user** | Read safety instructions, SDS and emergency procedures before handling. |

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not established.

## 15. Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

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

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

| | |
|---|---|
| Benzene (CAS 71-43-2) | Cancer<br>Central nervous system<br>Blood<br>Aspiration<br>Skin<br>Eye<br>respiratory tract irritation<br>Flammability |

**CERCLA Hazardous Substance List (40 CFR 302.4)**

| | |
|---|---|
| Benzene (CAS 71-43-2) | LISTED |
| Cumene (CAS 98-82-8) | LISTED |
| Cyclohexane (CAS 110-82-7) | LISTED |
| Ethylbenzene (CAS 100-41-4) | LISTED |
| Light Petroleum Distillate (CAS 8006-61-9) | LISTED |
| Naphthalene (CAS 91-20-3) | LISTED |
| n-Hexane (CAS 110-54-3) | LISTED |
| Toluene (CAS 108-88-3) | LISTED |
| Xylene (CAS 1330-20-7) | LISTED |

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories** Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** Yes

**SARA 313 (TRI reporting)**

| Chemical name | CAS number | % by wt. |
|---|---|---|
| Xylene | 1330-20-7 | 0 - 25 |
| Toluene | 108-88-3 | 0 - 30 |
| Cyclohexane | 110-82-7 | 0 - 9 |
| Ethylbenzene | 100-41-4 | 0 - 5 |
| n-Hexane | 110-54-3 | 0 - 5 |
| Naphthalene | 91-20-3 | 0 - 5 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0 - 5 |
| Benzene | 71-43-2 | 0.1 - 4.9 |
| Cumene | 98-82-8 | 0 - 1 |

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Benzene (CAS 71-43-2)
Cumene (CAS 98-82-8)
Ethylbenzene (CAS 100-41-4)
Naphthalene (CAS 91-20-3)
n-Hexane (CAS 110-54-3)
Toluene (CAS 108-88-3)
Xylene (CAS 1330-20-7)

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

**Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number**

Toluene (CAS 108-88-3) 6594

**Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))**

Toluene (CAS 108-88-3) 35 %WV

**DEA Exempt Chemical Mixtures Code Number**

Toluene (CAS 108-88-3) 594

**US state regulations**

**US. Massachusetts RTK - Substance List**

1,2,4-Trimethylbenzene (CAS 95-63-6)
Benzene (CAS 71-43-2)
Cumene (CAS 98-82-8)
Cyclohexane (CAS 110-82-7)
Ethylbenzene (CAS 100-41-4)
Light Petroleum Distillate (CAS 8006-61-9)
Naphthalene (CAS 91-20-3)
n-Hexane (CAS 110-54-3)
Toluene (CAS 108-88-3)
Xylene (CAS 1330-20-7)

**US. New Jersey Worker and Community Right-to-Know Act**

1,2,4-Trimethylbenzene (CAS 95-63-6)
Benzene (CAS 71-43-2)
Cumene (CAS 98-82-8)
Cyclohexane (CAS 110-82-7)
Ethylbenzene (CAS 100-41-4)
Light Petroleum Distillate (CAS 8006-61-9)
Naphthalene (CAS 91-20-3)
n-Hexane (CAS 110-54-3)
Toluene (CAS 108-88-3)
Xylene (CAS 1330-20-7)

**US. Pennsylvania Worker and Community Right-to-Know Law**

1,2,4-Trimethylbenzene (CAS 95-63-6)
Benzene (CAS 71-43-2)
Cumene (CAS 98-82-8)
Cyclohexane (CAS 110-82-7)

Ethylbenzene (CAS 100-41-4)
Naphthalene (CAS 91-20-3)
n-Hexane (CAS 110-54-3)
Toluene (CAS 108-88-3)
Xylene (CAS 1330-20-7)

**US. Rhode Island RTK**

1,2,4-Trimethylbenzene (CAS 95-63-6)
Benzene (CAS 71-43-2)
Cumene (CAS 98-82-8)
Cyclohexane (CAS 110-82-7)
Ethylbenzene (CAS 100-41-4)
Naphthalene (CAS 91-20-3)
n-Hexane (CAS 110-54-3)
Toluene (CAS 108-88-3)
Xylene (CAS 1330-20-7)

**US. California Proposition 65**

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

**US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**

Benzene (CAS 71-43-2)
Cumene (CAS 98-82-8)
Ethylbenzene (CAS 100-41-4)
Naphthalene (CAS 91-20-3)
Toluene (CAS 108-88-3)

**International Inventories**

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|---|---|---|
| Australia | Australian Inventory of Chemical Substances (AICS) | Yes |
| Canada | Domestic Substances List (DSL) | Yes |
| Canada | Non-Domestic Substances List (NDSL) | No |
| China | Inventory of Existing Chemical Substances in China (IECSC) | Yes |
| Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes |
| Europe | European List of Notified Chemical Substances (ELINCS) | No |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | No |
| Korea | Existing Chemicals List (ECL) | Yes |
| New Zealand | New Zealand Inventory | Yes |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | Yes |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

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

**Issue date** 17-June-2015

**Revision date** -

**Version #** 01

**HMIS® ratings** Health: 2*
Flammability: 3
Physical hazard: 0

**NFPA ratings**

**Disclaimer**

Philadelphia Energy Solutions cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

# *Safety Data Sheet*

## 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

**Product Name:** **ULSD 15MV2 DELUX**

**Distributor Information**:

Sunoco LP
3801 West Chester Pike

Newtown Square, Pennsylvania, 19073
sunocomsds@sunocoinc.com

**Product Use**:

Ultra Low Sulfur Diesel Fuel 2

**Emergency Phone Numbers**:

| | | |
|---|---|---|
| Chemtrec | (800) 424-9300 | 24 Hours |
| Sunoco LP | (800) 964-8861 | 24 Hours |

**Information**:

| | |
|---|---|
| Product Safety Information | (888) 567-3066 |

## 2. HAZARDS IDENTIFICATION

### GHS Hazard

Flammable liquids – Category 3 H226
Skin corrosion/irritation – Category 2 H315
Aspiration hazard – Category 1 H304
Acute toxicity, Inhalation – Category 4 H332
Specific organ toxicity (repeated exposure) – Category 2 H373
Carcinogenicity – Category 2 H351
Hazardous to the aquatic environment, chronic toxicity – Category 1 H410

### Label Elements – Signal Word: Danger

**Hazard Statements**
Flammable liquid and vapor. Causes skin irritation. May be fatal if swallowed and enters airways. Harmful if inhaled. May cause damage to organs through prolonged or repeated exposure. Suspected of causing cancer. Very toxic to aquatic life with long lasting effects.

**Precautionary Statements**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from/heat/sparks/open flames-hot surfaces. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe mist/vapors/spray. Wash skin thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release into the environment. Wear protective gloves/protective clothing and eye/face protection. IF SWALLOWED: immediately call a POISON CENTER or doctor/physician. Do not induce vomiting. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. 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. Take off contaminated clothing and wash before reuse. In case of fire: Use CO2, dry chemical or foam for extinction. Store in a well-ventilated place. Keep cool. Dispose of contents/container to an approved waste disposal facility.

**Hazards Ratings:**

*Key: 0 = least, 1 = slight, 2 = moderate, 3 = high, 4 = extreme*

| | Health | Fire | Reactivity | PPI |
|---|---|---|---|---|
| NFPA | 1 | 2 | 0 | |
| HMIS | 2 | 2 | 0 | X |

- **EMERGENCY OVERVIEW**
  Vapors may cause flash fire or explosion. Static accumulator. May form an ignitable vapor/air mixture.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Component | CAS No. | Amount (Vol%) |
|---|---|---|
| NO. 2 FUEL OIL | 68476-30-2 | 100 - 100 |
| NAPHTHALENE | 91-20-3 | 0 - 2 |
| M-XYLENE | 108-38-3 | 0 - 0.2 |
| O-XYLENE | 95-47-6 | 0 - 0.12 |
| TOLUENE | 108-88-3 | 0 - 0.098 |
| P-XYLENE | 106-42-3 | 0 - 0.064 |
| ETHYLBENZENE | 100-41-4 | 0 - 0.063 |
| CUMENE | 98-82-8 | 0 - 0.015 |
| HEXANE | 110-54-3 | 0 - 0.014 |
| BENZENE | 71-43-2 | 0 - 0.009 |

## 4. FIRST AID MEASURES

- **INHALATION**
  Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and continue to monitor. Get immediate medical attention.
- **SKIN**
  Wash with soap and water for 20 minutes. Get medical attention if irritation develops or persists. Wash clothing before reuse. Destroy contaminated shoes and other leather products. Injection injuries may not appear serious at first but within a few hours, without proper treatment, the area will become swollen, discolored and extremely painful. NOTE TO PHYSICIAN: Following injection, prompt debridement of the wound is necessary to minimize necrosis and tissue loss.
- **EYES**
  Flush eye with water for 20 minutes. Get medical attention.
- **INGESTION**
  Do not induce vomiting! Do not give liquids! Get medical attention immediately.

## 5. FIRE FIGHTING MEASURES

- **EXTINGUISHING MEDIA**
  The following media may be used to extinguish a fire involving this material: Regular foam; Dry chemical; Carbon dioxide; Water may be ineffective. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces.

- **FIRE FIGHTING INSTRUCTIONS**

  Use water spray. Use water spray to cool fire exposed tanks and containers. Wear structural fire-fighting gear. The use of fresh air equipment such as Self Contained Breathing Apparatus (SCBA) or Supplied Air Respirators should be worn for fire-fighting if exposure or potential exposure to products of combustion is expected.

  **FLAMMABLE PROPERTIES**

  Flammable. This material can be ignited by heat, sparks or open flames or other sources of ignition (e.g., static electricity, pilot lights, mechanical/electrical equipment, electronic devices such as cell phones, computers, calculators). Vapors may travel considerable distances to a source of ignition where they can ignite, flash back or explode. May create vapor/air explosions hazard indoors, confined spaces, outdoors or in sewers. This product will float and can be reignited on surface water. Vapors are heavier than air and can accumulate in low areas. If container is not properly cooled, it can ruptured in the heat of fire.

  **HAZARDOUS COMBUSTION PRODUCTS**: Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion. Oxides of nitrogen and sulfur may also be formed.

## 6. ACCIDENTAL RELEASE MEASURES

Prevent ignition, stop leak and ventilate the area. Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Use appropriate personal protective equipment as stated in Section 8 of this MSDS. Advise the Environmental Protection Agency (EPA) and appropriate state agencies, if required. Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Vacuum or sweep up material and place in a disposal container.

## 7. HANDLING AND STORAGE

- **HANDLING**

  Use only in a well-ventilated area. STATIC ACCUMULATOR. This liquid may form an ignitable vapor-air mixture in closed tanks or containers. This liquid may accumulate static electricity even when transferred into properly grounded containers. Bonding and grounding may be insufficient to remove static electricity. Static electricity accumulation may be significantly increased by the presence of small quantities of water. Always bond receiving container to the fill pipe before and during loading, following NFPA-77 and/or API RP 2003 requirements. Automatic gauging devices and other floats in vessels or tanks which contain static accumulating liquids should be electrically bonded to the shell. Bonding and grounding alone may be inadequate to eliminate fire and explosion hazards associated with electrostatic charges. In addition to bonding and grounding, efforts to mitigate the hazards of an electrostatic discharge may include, but are not limited to, ventilation, inerting and/or reduction of transfer velocities. Always keep the nozzle in contact with the container throughout the loading process. Do not fill any portable containers in or on a vehicle. Special precautions, such as reduced loading rates and increased monitoring, must be observed during "switch loading" operations (i.e. loading this material in tanks or shipping compartments that previously contained middle distillates or similar products). Non-equilibrium conditions may increase the risks associated with static electricity such as tank and container filling, tank cleaning, sampling, gauging, loading, filtering, mixing, agitation, etc. Dissipation of electrostatic charges may be improved with the use of conductivity additives when used with other mitigating efforts, including bonding and grounding. Avoid breathing (dust, vapor, mist, gas). Avoid prolonged or repeated contact with skin. Avoid contact with eyes. Wash thoroughly after handling. "Empty" containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Empty drums should be completely drained, properly bunged, and promptly returned to a drum reconditioned, or properly disposed of. For use as a motor fuel only. Do not use as a solvent due to its flammable and potentially toxic properties.

- **STORAGE**

  Keep away from heat, sparks, and flame. Keep container closed when not in use. Store in a cool place in original container and protect from sunlight. Outside or detached storage is preferred. NFPA class II storage. Flash point is greater than 100 degrees F and less than 140 degrees F. Consult NFPA and / or OSHA codes for additional information.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Consult With a Health and Safety Professional for Specific Selections

- **ENGINEERING CONTROLS**
  Use with adequate ventilation. Ventilation is normally required when handling or using this product to keep exposure to airborne contaminants below the exposure limit. Good general ventilation should be sufficient to control airborne levels.
- **PERSONAL PROTECTION**

  - **EYE PROTECTION**
    Use chemical splash goggles and face shield (ANSI Z87.1 or approved equivalent).
  - **GLOVES or HAND PROTECTION**
    The glove(s) listed below may provide protection against permeation. Gloves of other chemically resistant materials may not provide adequate protection. Protective gloves are recommended to protect against contact with product. Polyethylene; Nitrile; Viton; Polyvinyl chloride (PVC); Neoprene; Polyvinyl alcohol;
  - **RESPIRATORY PROTECTION**
    Concentration in air determines the level of respiratory protection needed. Use only NIOSH certified respiratory equipment. Half-mask air purifying respirator with organic vapor cartridges is acceptable for exposures to ten (10) times the exposure limit. Full-face air purifying respirator with organic vapor cartridges is acceptable for exposures to fifty (50) times the exposure limit. Exposure should not exceed the cartridge limit of 1000 ppm. Protection by air purifying respirators is limited. Use a positive pressure-demand full-face supplied air respirator or SCBA for exposures greater than fifty (50) times the exposure limit. If exposure is above the IDLH (Immediately Dangerous to Life and Health) or there is the possibility of an uncontrolled release, or exposure levels are unknown, then use a positive pressure-demand full-face supplied air respirator with escape bottle or SCBA. Wear a NIOSH-approved (or equivalent) full-facepiece airline respirator in the positive pressure mode with emergency escape provisions.
  - **OTHER**
    Where splashing is possible, full chemically resistant protective clothing and boots are required. The following materials are acceptable for use as protective clothing: Polyethylene; Nitrile; Viton; Polyvinyl chloride (PVC); Polyvinyl alcohol (PVA); Neoprene; Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Remove contaminated clothing and wash before reuse. For non-fire emergencies, positive pressure SCBA and structural firefighter's protective clothing will provide only limited protection.

**EXPOSURE GUIDELINES**

| | CAS No. | Governing Body | Exposure Limits | | |
|---|---|---|---|---|---|
| Limit for the product | 68476-30-2 | ACGIH | TWA | 100 | mg/m3 |
| BENZENE | 71-43-2 | ACGIH | STEL | 2.5 | ppm |
| BENZENE | 71-43-2 | OSHA | STEL | 5 | ppm |
| BENZENE | 71-43-2 | ACGIH | TWA | 0.5 | ppm |
| BENZENE | 71-43-2 | OSHA | TWA | 1 | ppm |
| CUMENE | 98-82-8 | ACGIH | TWA | 50 | ppm |
| CUMENE | 98-82-8 | OSHA | TWA | 50 | ppm |
| HEXANE | 110-54-3 | ACGIH | TWA | 50 | ppm |
| HEXANE | 110-54-3 | OSHA | TWA | 500 | ppm |
| M-XYLENE | 108-38-3 | ACGIH | STEL | 150 | ppm |
| M-XYLENE | 108-38-3 | ACGIH | TWA | 100 | ppm |
| M-XYLENE | 108-38-3 | OSHA | TWA | 100 | ppm |
| NAPHTHALENE | 91-20-3 | ACGIH | STEL | 15 | ppm |
| NAPHTHALENE | 91-20-3 | ACGIH | TWA | 10 | ppm |
| NAPHTHALENE | 91-20-3 | OSHA | TWA | 10 | ppm |
| O-XYLENE | 95-47-6 | ACGIH | STEL | 150 | ppm |
| O-XYLENE | 95-47-6 | ACGIH | TWA | 100 | ppm |
| O-XYLENE | 95-47-6 | OSHA | TWA | 100 | ppm |
| P-XYLENE | 106-42-3 | ACGIH | STEL | 150 | ppm |
| P-XYLENE | 106-42-3 | ACGIH | TWA | 100 | ppm |
| P-XYLENE | 106-42-3 | OSHA | TWA | 100 | ppm |
| TOLUENE | 108-88-3 | NIOSH | STEL | 150 | ppm |
| TOLUENE | 108-88-3 | ACGIH | TWA | 20 | ppm |
| TOLUENE | 108-88-3 | OSHA | TWA | 200 | ppm |
| ETHYLBENZENE | 100-41-4 | ACGIH | TWA | 20 | ppm |
| ETHYLBENZENE | 100-41-4 | OSHA | TWA | 100 | ppm |
| NO. 2 FUEL OIL | 68476-30-2 | ACGIH | TWA | 100 | mg/m3 |

| | | | | | |
|---|---|---|---|---|---|
| NO. 2 FUEL OIL | 68476-30-2 | Sunoco | TWA | 15 | ppm |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

| Physical Property | Typical | Units | Text Result | Reference |
|---|---|---|---|---|
| Appearance | | N/A | Reddish liquid | |
| Auto Ignition Temperature | 494 | F | | |
| Boiling Point | | F | 390 TO 600 | |
| Flash Point | 125 | F | Min PMCC | |
| Melting Point | | F | no data | |
| Molecular Weight | | g/mole | no data | |
| Octanol/Water Coefficient | | N/A | no data | |
| Upper Exp. Limit | 10 | % | | |
| Low Explosion Limit | 0.3 | % | no data | |
| Specific Gravity | 0.87 | N/A | | |
| Solubility In Water | | wt % | NIL | |
| Odor | | N/A | Diesel Fuel | |
| Odor Threshold | | ppm | no data | |
| Vapor Pressure | 0.5 | mmHg | | @ 20 C |
| Viscosity (F) | | SUS | no data | |
| Viscosity (C) | 1.9 | CsT | | @ 40 C |
| % Volatile | 100 | wt % | | |

## 10. STABILITY AND REACTIVITY

- **STABILITY**
  Stable
- **CONDITIONS TO AVOID**
  Avoid heat, sparks and open flame.
- **INCOMPATIBILITY**
  Strong oxidizers
- **HAZARDOUS DECOMPOSITION PRODUCTS**
  Combustion may produce carbon monoxide, carbon dioxide and other asphyxiants.
- **HAZARDOUS POLYMERIZATION**
  Will not polymerize.

## 11. TOXICOLOGY INFORMATION

**Single Exposure Health Effects**

**Oral:**

**LD50 (g/kg):** >5 g/kg

**Dermal:**

**LD50 (mg/kg):** >4.1 g/kg

**Inhalation:**

**LC50 (mg/l):** 4.65 mg/l mist

**LC50 (mg/m3):** no data

**LC50 (ppm):** no data

- **POTENTIAL HEALTH EFFECTS**

  - **INHALATION**
    High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis and loss of consciousness and even death).

  - **SKIN**
    Practically non-toxic if absorbed through the skin. Prolonged or repeated skin contact may cause irritation. Contains a material that has caused skin tumors in laboratory animals.

  - **EYES**
    Mildly irritating to the eyes.

  - **INGESTION**
    Harmful or fatal if swallowed. Pulmonary aspiration hazard. While ingesting or vomiting, may enter lungs and produce damage.

  - **PRE-EXISTING MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE**
    The following diseases or disorders may be aggravated by exposure to this product: skin, kidney,

**Skin Sensitization:** Not expected to be a skin sensitizer**.**

**Respiratory Sensitizer:** Not expected to be a respiratory sensitizer.

**Specific Target Organ Toxicity (Single Exposure**): Not expected to cause organ effects from single exposure.

**Specific Target Organ Toxicity (Repeated Exposure):** May cause damage to organs through prolonged and repeated exposure. Repeated dermal application of petroleum gas oils for 90 days resulted in decreased liver, thymus, and spleen weights, and altered bone marrow function. Microscopic alterations included liver hypertrophy and necrosis, decreased hematopoesis and lymphocyte depletion.

**Carcinogenicity**: Dermal exposure to middle distillates have caused skin cancer in laboratory animals when repeatedly applied and left in place between applications. Ethylbenzene, a component of this product, has been designated by the International Agency for Research on Cancer as "possibly carcinogenic to humans", based on increased tumor incidence in laboratory animals. Also, exposure to naphthalene has produced "respiratory tract" tumors in laboratory animals.

**Component Toxicity Information**
Overexposure to naphthalene, a minor component of this product, may cause skin, eye and respiratory tract irritation, anemia, loss of vision, nervous system effects and kidney and thymus damage laboratory animals. Cumene may be harmful or fatal if swallowed. Pulmonary aspiration hazard. After ingestion, may enter lungs and cause damage. May cause respiratory irritation, fluid in the lungs and lung damage. May be irritating to the skin and eyes. May cause nervous system effects, including drowsiness, dizziness, coma and even death. Overexposure has caused kidney, nose, and liver damage in laboratory animals. Following inhalation exposure, an increased tumor incidence has been observed in experimental animals. The significance of this finding to human health is presently unknown. , Overexposure to Ethylbenzene may lead to nervous system effects, including drowsiness, dizziness, nausea, headaches, paralysis, loss of consciousness and even death. Repeated overexposure has caused a hearing loss in laboratory animals.

## 12. ECOLOGICAL INFORMATION

**Toxicity:** Experimental studies of gas oils show that acute aquatic toxicity values are typically in the range of 2-20 mg/l. These values are consistent with the predicted aquatic toxicity of these substances based on their hydrocarbon compositions. They should be regarded as toxic to aquatic organisms, with the potential to cause long term adverse effects in the aquatic environment.

**Persistence and Degradability:** Gas oils are complex combinations of individual hydrocarbon species. Based on the known or expected properties of individual constituents, category members are not predicted to be readily

biodegradable. Some hydrocarbon constituents of gas oils are predicted to meet the criteria for persistence; on the other hand, some component can be easily degraded by microorganisms under aerobic conditions.

**Bioaccumulative Potential:** Gas oil components have measured or calculated Log Kow values in the range of 3.9 to 6 which indicates a high potential to bioaccumulate. Lower molecular weight compounds are readily metabolized and the actual bioaccumation potential of higher molecular weights compounds is limited by the low water solubility and large molecular size.

**Mobility in Soil:** Releases to water will result in a hydrocarbon film floating and spreading on the surface. For the lighter components, volatilization is an important loss process and reduces the hazards to aquatic organisms. In air, the hydrocarbon vapors react readily with hydroxyl radicals with half-lives of less than one day. Photoxidation on the water surface is also a significant loss process particularly for polycyclic aromatic compounds. In water, the majority of components will be absorbed in sediment. Adsorption is the most predominant physical process on release to soil. Adsorbed hydrocarbons will slowly degrade in both water and soil.

## 13. DISPOSAL CONSIDERATIONS

Follow federal, state and local regulations. This material is a RCRA hazardous waste. Do not flush material to drain or storm sewer. Contract to authorized disposal service.

## 14. TRANSPORT INFORMATION

| Governing Body | Mode | Proper Shipping Name |
|---|---|---|
| DOT | Ground | Fuel Oil |
| IATA | Air | Gas Oil |

| Governing Body | Mode | Hazard Class | UN/NA No. | Label |
|---|---|---|---|---|
| DOT | Ground | Combustible Liquid | NA1993 | |
| IATA | Air | Flammable Liquid | 1202 | |

## 15. REGULATORY INFORMATION

This product contains the following EPCRA section 313 chemicals subject to the reporting requirements of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372): Maximum Wt% Naphthalene- CAS Number 91-20-3, 2.6%; %; Ethyl benzene- CAS Number 100-41-4, 0.1%. This information must be included in all MSDSs that are copied and distributed for this material.

| Regulatory List | Component | CAS No. |
|---|---|---|
| ACGIH - Occupational Exposure Limits - Carcinogens | FUEL OIL 2 | 68476-30-2 |
| ACGIH - Occupational Exposure Limits - TWAs | FUEL OIL 2 | 68476-30-2 |
| ACGIH - Skin Absorption Designation | FUEL OIL 2 | 68476-30-2 |
| Inventory - Australia (AICS) | FUEL OIL 2 | 68476-30-2 |
| Inventory - Canada - Domestic Substances List | FUEL OIL 2 | 68476-30-2 |
| Inventory - China | FUEL OIL 2 | 68476-30-2 |
| Inventory - European EINECS Inventory | FUEL OIL 2 | 68476-30-2 |
| Inventory - Korea - Existing and Evaluated | FUEL OIL 2 | 68476-30-2 |
| Inventory - Philippines Inventory (PICCS) | FUEL OIL 2 | 68476-30-2 |
| Inventory - TSCA - Sect. 8(b) Inventory | FUEL OIL 2 | 68476-30-2 |
| ACGIH - Occupational Exposure Limits - Carcinogens | BENZENE | 71-43-2 |
| ACGIH - Occupational Exposure Limits - Carcinogens | ETHYLBENZENE | 100-41-4 |
| ACGIH - Occupational Exposure Limits - Carcinogens | M-XYLENE | 108-38-3 |
| ACGIH - Occupational Exposure Limits - Carcinogens | NAPHTHALENE | 91-20-3 |
| ACGIH - Occupational Exposure Limits - Carcinogens | NO. 2 FUEL OIL | 68476-30-2 |
| ACGIH - Occupational Exposure Limits - Carcinogens | O-XYLENE | 95-47-6 |
| ACGIH - Occupational Exposure Limits - Carcinogens | P-XYLENE | 106-42-3 |
| ACGIH - Occupational Exposure Limits - Carcinogens | TOLUENE | 108-88-3 |
| ACGIH - Occupational Exposure Limits - TWAs | BENZENE | 71-43-2 |
| ACGIH - Occupational Exposure Limits - TWAs | CUMENE | 98-82-8 |
| ACGIH - Occupational Exposure Limits - TWAs | ETHYLBENZENE | 100-41-4 |

| | | |
|---|---|---|
| ACGIH - Occupational Exposure Limits - TWAs | HEXANE | 110-54-3 |
| ACGIH - Occupational Exposure Limits - TWAs | M-XYLENE | 108-38-3 |
| ACGIH - Occupational Exposure Limits - TWAs | NAPHTHALENE | 91-20-3 |
| ACGIH - Occupational Exposure Limits - TWAs | NO. 2 FUEL OIL | 68476-30-2 |
| ACGIH - Occupational Exposure Limits - TWAs | O-XYLENE | 95-47-6 |
| ACGIH - Occupational Exposure Limits - TWAs | P-XYLENE | 106-42-3 |
| ACGIH - Occupational Exposure Limits - TWAs | TOLUENE | 108-88-3 |
| ACGIH - Short Term Exposure Limits | BENZENE | 71-43-2 |
| ACGIH - Short Term Exposure Limits | ETHYLBENZENE | 100-41-4 |
| ACGIH - Short Term Exposure Limits | M-XYLENE | 108-38-3 |
| ACGIH - Short Term Exposure Limits | NAPHTHALENE | 91-20-3 |
| ACGIH - Short Term Exposure Limits | O-XYLENE | 95-47-6 |
| ACGIH - Short Term Exposure Limits | P-XYLENE | 106-42-3 |
| ACGIH - Skin Absorption Designation | BENZENE | 71-43-2 |
| ACGIH - Skin Absorption Designation | HEXANE | 110-54-3 |
| ACGIH - Skin Absorption Designation | NAPHTHALENE | 91-20-3 |
| ACGIH - Skin Absorption Designation | NO. 2 FUEL OIL | 68476-30-2 |
| CAA (Clean Air Act) - HON Rule - Organic HAPs | BENZENE | 71-43-2 |
| CAA (Clean Air Act) - HON Rule - Organic HAPs | CUMENE | 98-82-8 |
| CAA (Clean Air Act) - HON Rule - Organic HAPs | ETHYLBENZENE | 100-41-4 |
| CAA (Clean Air Act) - HON Rule - Organic HAPs | HEXANE | 110-54-3 |
| CAA (Clean Air Act) - HON Rule - Organic HAPs | M-XYLENE | 108-38-3 |
| CAA (Clean Air Act) - HON Rule - Organic HAPs | NAPHTHALENE | 91-20-3 |
| CAA (Clean Air Act) - HON Rule - Organic HAPs | O-XYLENE | 95-47-6 |
| CAA (Clean Air Act) - HON Rule - Organic HAPs | P-XYLENE | 106-42-3 |
| CAA (Clean Air Act) - HON Rule - Organic HAPs | TOLUENE | 108-88-3 |
| CAA (Clean Air Act) - HON Rule - SOCMI Chemicals | BENZENE | 71-43-2 |
| CAA (Clean Air Act) - HON Rule - SOCMI Chemicals | CUMENE | 98-82-8 |
| CAA (Clean Air Act) - HON Rule - SOCMI Chemicals | ETHYLBENZENE | 100-41-4 |
| CAA (Clean Air Act) - HON Rule - SOCMI Chemicals | HEXANE | 110-54-3 |
| CAA (Clean Air Act) - HON Rule - SOCMI Chemicals | M-XYLENE | 108-38-3 |
| CAA (Clean Air Act) - HON Rule - SOCMI Chemicals | NAPHTHALENE | 91-20-3 |
| CAA (Clean Air Act) - HON Rule - SOCMI Chemicals | O-XYLENE | 95-47-6 |
| CAA (Clean Air Act) - HON Rule - SOCMI Chemicals | P-XYLENE | 106-42-3 |
| CAA (Clean Air Act) - HON Rule - SOCMI Chemicals | TOLUENE | 108-88-3 |
| CAA - 1990 Hazardous Air Pollutants | BENZENE | 71-43-2 |
| CAA - 1990 Hazardous Air Pollutants | CUMENE | 98-82-8 |
| CAA - 1990 Hazardous Air Pollutants | ETHYLBENZENE | 100-41-4 |
| CAA - 1990 Hazardous Air Pollutants | HEXANE | 110-54-3 |
| CAA - 1990 Hazardous Air Pollutants | M-XYLENE | 108-38-3 |
| CAA - 1990 Hazardous Air Pollutants | NAPHTHALENE | 91-20-3 |
| CAA - 1990 Hazardous Air Pollutants | O-XYLENE | 95-47-6 |
| CAA - 1990 Hazardous Air Pollutants | P-XYLENE | 106-42-3 |
| CAA - 1990 Hazardous Air Pollutants | TOLUENE | 108-88-3 |
| California - Prop. 65 - Developmental Toxicity | BENZENE | 71-43-2 |
| California - Prop. 65 - Developmental Toxicity | TOLUENE | 108-88-3 |
| California - Prop. 65 - Reproductive - Female | TOLUENE | 108-88-3 |
| California - Prop. 65 - Reproductive - Male | BENZENE | 71-43-2 |
| California - Proposition 65 - Carcinogens List | BENZENE | 71-43-2 |
| California - Proposition 65 - Carcinogens List | ETHYLBENZENE | 100-41-4 |
| California - Proposition 65 - Carcinogens List | NAPHTHALENE | 91-20-3 |
| Canada - WHMIS - Ingredient Disclosure | ETHYLBENZENE | 100-41-4 |
| Canada - WHMIS - Ingredient Disclosure | HEXANE | 110-54-3 |
| Canada - WHMIS - Ingredient Disclosure | M-XYLENE | 108-38-3 |
| Canada - WHMIS - Ingredient Disclosure | O-XYLENE | 95-47-6 |
| Canada - WHMIS - Ingredient Disclosure | P-XYLENE | 106-42-3 |
| Canada - WHMIS - Ingredient Disclosure | TOLUENE | 108-88-3 |
| CERCLA/SARA - Haz Substances and their RQs | BENZENE | 71-43-2 |
| CERCLA/SARA - Haz Substances and their RQs | CUMENE | 98-82-8 |
| CERCLA/SARA - Haz Substances and their RQs | ETHYLBENZENE | 100-41-4 |
| CERCLA/SARA - Haz Substances and their RQs | HEXANE | 110-54-3 |
| CERCLA/SARA - Haz Substances and their RQs | M-XYLENE | 108-38-3 |

| | | |
|---|---|---|
| CERCLA/SARA - Haz Substances and their RQs | NAPHTHALENE | 91-20-3 |
| CERCLA/SARA - Haz Substances and their RQs | O-XYLENE | 95-47-6 |
| CERCLA/SARA - Haz Substances and their RQs | P-XYLENE | 106-42-3 |
| CERCLA/SARA - Haz Substances and their RQs | TOLUENE | 108-88-3 |
| CERCLA/SARA - Section 313 - Emission Reporting | BENZENE | 71-43-2 |
| CERCLA/SARA - Section 313 - Emission Reporting | CUMENE | 98-82-8 |
| CERCLA/SARA - Section 313 - Emission Reporting | ETHYLBENZENE | 100-41-4 |
| CERCLA/SARA - Section 313 - Emission Reporting | HEXANE | 110-54-3 |
| CERCLA/SARA - Section 313 - Emission Reporting | M-XYLENE | 108-38-3 |
| CERCLA/SARA - Section 313 - Emission Reporting | NAPHTHALENE | 91-20-3 |
| CERCLA/SARA - Section 313 - Emission Reporting | O-XYLENE | 95-47-6 |
| CERCLA/SARA - Section 313 - Emission Reporting | P-XYLENE | 106-42-3 |
| CERCLA/SARA - Section 313 - Emission Reporting | TOLUENE | 108-88-3 |
| CWA (Clean Water Act) - Hazardous Substances | BENZENE | 71-43-2 |
| CWA (Clean Water Act) - Hazardous Substances | ETHYLBENZENE | 100-41-4 |
| CWA (Clean Water Act) - Hazardous Substances | M-XYLENE | 108-38-3 |
| CWA (Clean Water Act) - Hazardous Substances | NAPHTHALENE | 91-20-3 |
| CWA (Clean Water Act) - Hazardous Substances | O-XYLENE | 95-47-6 |
| CWA (Clean Water Act) - Hazardous Substances | P-XYLENE | 106-42-3 |
| CWA (Clean Water Act) - Hazardous Substances | TOLUENE | 108-88-3 |
| CWA (Clean Water Act) - Priority Pollutants | BENZENE | 71-43-2 |
| CWA (Clean Water Act) - Priority Pollutants | ETHYLBENZENE | 100-41-4 |
| CWA (Clean Water Act) - Priority Pollutants | NAPHTHALENE | 91-20-3 |
| CWA (Clean Water Act) - Priority Pollutants | TOLUENE | 108-88-3 |
| CWA (Clean Water Act) - Toxic Pollutants | BENZENE | 71-43-2 |
| CWA (Clean Water Act) - Toxic Pollutants | ETHYLBENZENE | 100-41-4 |
| CWA (Clean Water Act) - Toxic Pollutants | NAPHTHALENE | 91-20-3 |
| CWA (Clean Water Act) - Toxic Pollutants | TOLUENE | 108-88-3 |
| IARC - Group 1 (carcinogenic to humans) | BENZENE | 71-43-2 |
| IARC - Group 2B (Possibly carcinogenic to humans) | ETHYLBENZENE | 100-41-4 |
| IARC - Group 2B (Possibly carcinogenic to humans) | NAPHTHALENE | 91-20-3 |
| IARC - Group 3 (not classifiable) | M-XYLENE | 108-38-3 |
| IARC - Group 3 (not classifiable) | P-XYLENE | 106-42-3 |
| IARC - Group 3 (not classifiable) | TOLUENE | 108-88-3 |
| Inventory - Australia (AICS) | BENZENE | 71-43-2 |
| Inventory - Australia (AICS) | CUMENE | 98-82-8 |
| Inventory - Australia (AICS) | ETHYLBENZENE | 100-41-4 |
| Inventory - Australia (AICS) | HEXANE | 110-54-3 |
| Inventory - Australia (AICS) | M-XYLENE | 108-38-3 |
| Inventory - Australia (AICS) | NAPHTHALENE | 91-20-3 |
| Inventory - Australia (AICS) | NO. 2 FUEL OIL | 68476-30-2 |
| Inventory - Australia (AICS) | O-XYLENE | 95-47-6 |
| Inventory - Australia (AICS) | P-XYLENE | 106-42-3 |
| Inventory - Australia (AICS) | TOLUENE | 108-88-3 |
| Inventory - Canada - Domestic Substances List | BENZENE | 71-43-2 |
| Inventory - Canada - Domestic Substances List | CUMENE | 98-82-8 |
| Inventory - Canada - Domestic Substances List | ETHYLBENZENE | 100-41-4 |
| Inventory - Canada - Domestic Substances List | HEXANE | 110-54-3 |
| Inventory - Canada - Domestic Substances List | M-XYLENE | 108-38-3 |
| Inventory - Canada - Domestic Substances List | NAPHTHALENE | 91-20-3 |
| Inventory - Canada - Domestic Substances List | NO. 2 FUEL OIL | 68476-30-2 |
| Inventory - Canada - Domestic Substances List | O-XYLENE | 95-47-6 |
| Inventory - Canada - Domestic Substances List | P-XYLENE | 106-42-3 |
| Inventory - Canada - Domestic Substances List | TOLUENE | 108-88-3 |
| Inventory - China | BENZENE | 71-43-2 |
| Inventory - China | CUMENE | 98-82-8 |
| Inventory - China | ETHYLBENZENE | 100-41-4 |
| Inventory - China | HEXANE | 110-54-3 |
| Inventory - China | M-XYLENE | 108-38-3 |
| Inventory - China | NAPHTHALENE | 91-20-3 |
| Inventory - China | NO. 2 FUEL OIL | 68476-30-2 |
| Inventory - China | O-XYLENE | 95-47-6 |

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|---|---|---|
| Inventory - China | P-XYLENE | 106-42-3 |
| Inventory - China | TOLUENE | 108-88-3 |
| Inventory - European EINECS Inventory | BENZENE | 71-43-2 |
| Inventory - European EINECS Inventory | CUMENE | 98-82-8 |
| Inventory - European EINECS Inventory | ETHYLBENZENE | 100-41-4 |
| Inventory - European EINECS Inventory | HEXANE | 110-54-3 |
| Inventory - European EINECS Inventory | M-XYLENE | 108-38-3 |
| Inventory - European EINECS Inventory | NAPHTHALENE | 91-20-3 |
| Inventory - European EINECS Inventory | NO. 2 FUEL OIL | 68476-30-2 |
| Inventory - European EINECS Inventory | O-XYLENE | 95-47-6 |
| Inventory - European EINECS Inventory | P-XYLENE | 106-42-3 |
| Inventory - European EINECS Inventory | TOLUENE | 108-88-3 |
| Inventory - Japan - (ENCS) | BENZENE | 71-43-2 |
| Inventory - Japan - (ENCS) | CUMENE | 98-82-8 |
| Inventory - Japan - (ENCS) | ETHYLBENZENE | 100-41-4 |
| Inventory - Japan - (ENCS) | HEXANE | 110-54-3 |
| Inventory - Japan - (ENCS) | M-XYLENE | 108-38-3 |
| Inventory - Japan - (ENCS) | NAPHTHALENE | 91-20-3 |
| Inventory - Japan - (ENCS) | O-XYLENE | 95-47-6 |
| Inventory - Japan - (ENCS) | P-XYLENE | 106-42-3 |
| Inventory - Japan - (ENCS) | TOLUENE | 108-88-3 |
| Inventory - Korea - Existing and Evaluated | BENZENE | 71-43-2 |
| Inventory - Korea - Existing and Evaluated | CUMENE | 98-82-8 |
| Inventory - Korea - Existing and Evaluated | ETHYLBENZENE | 100-41-4 |
| Inventory - Korea - Existing and Evaluated | HEXANE | 110-54-3 |
| Inventory - Korea - Existing and Evaluated | M-XYLENE | 108-38-3 |
| Inventory - Korea - Existing and Evaluated | NAPHTHALENE | 91-20-3 |
| Inventory - Korea - Existing and Evaluated | NO. 2 FUEL OIL | 68476-30-2 |
| Inventory - Korea - Existing and Evaluated | O-XYLENE | 95-47-6 |
| Inventory - Korea - Existing and Evaluated | P-XYLENE | 106-42-3 |
| Inventory - Korea - Existing and Evaluated | TOLUENE | 108-88-3 |
| Inventory - Philippines Inventory (PICCS) | BENZENE | 71-43-2 |
| Inventory - Philippines Inventory (PICCS) | CUMENE | 98-82-8 |
| Inventory - Philippines Inventory (PICCS) | ETHYLBENZENE | 100-41-4 |
| Inventory - Philippines Inventory (PICCS) | HEXANE | 110-54-3 |
| Inventory - Philippines Inventory (PICCS) | M-XYLENE | 108-38-3 |
| Inventory - Philippines Inventory (PICCS) | NAPHTHALENE | 91-20-3 |
| Inventory - Philippines Inventory (PICCS) | NO. 2 FUEL OIL | 68476-30-2 |
| Inventory - Philippines Inventory (PICCS) | O-XYLENE | 95-47-6 |
| Inventory - Philippines Inventory (PICCS) | P-XYLENE | 106-42-3 |
| Inventory - Philippines Inventory (PICCS) | TOLUENE | 108-88-3 |
| Inventory - TSCA - Sect. 8(b) Inventory | BENZENE | 71-43-2 |
| Inventory - TSCA - Sect. 8(b) Inventory | CUMENE | 98-82-8 |
| Inventory - TSCA - Sect. 8(b) Inventory | ETHYLBENZENE | 100-41-4 |
| Inventory - TSCA - Sect. 8(b) Inventory | HEXANE | 110-54-3 |
| Inventory - TSCA - Sect. 8(b) Inventory | M-XYLENE | 108-38-3 |
| Inventory - TSCA - Sect. 8(b) Inventory | NAPHTHALENE | 91-20-3 |
| Inventory - TSCA - Sect. 8(b) Inventory | NO. 2 FUEL OIL | 68476-30-2 |
| Inventory - TSCA - Sect. 8(b) Inventory | O-XYLENE | 95-47-6 |
| Inventory - TSCA - Sect. 8(b) Inventory | P-XYLENE | 106-42-3 |
| Inventory - TSCA - Sect. 8(b) Inventory | TOLUENE | 108-88-3 |
| Massachusetts - Right To Know List | BENZENE | 71-43-2 |
| Massachusetts - Right To Know List | CUMENE | 98-82-8 |
| Massachusetts - Right To Know List | ETHYLBENZENE | 100-41-4 |
| Massachusetts - Right To Know List | HEXANE | 110-54-3 |
| Massachusetts - Right To Know List | M-XYLENE | 108-38-3 |
| Massachusetts - Right To Know List | NAPHTHALENE | 91-20-3 |
| Massachusetts - Right To Know List | O-XYLENE | 95-47-6 |
| Massachusetts - Right To Know List | P-XYLENE | 106-42-3 |
| Massachusetts - Right To Know List | TOLUENE | 108-88-3 |
| New Jersey - Department of Health RTK List | BENZENE | 71-43-2 |
| New Jersey - Department of Health RTK List | CUMENE | 98-82-8 |

| | | |
|---|---|---|
| New Jersey - Department of Health RTK List | ETHYLBENZENE | 100-41-4 |
| New Jersey - Department of Health RTK List | HEXANE | 110-54-3 |
| New Jersey - Department of Health RTK List | M-XYLENE | 108-38-3 |
| New Jersey - Department of Health RTK List | NAPHTHALENE | 91-20-3 |
| New Jersey - Department of Health RTK List | O-XYLENE | 95-47-6 |
| New Jersey - Department of Health RTK List | P-XYLENE | 106-42-3 |
| New Jersey - Department of Health RTK List | TOLUENE | 108-88-3 |
| New Jersey - Env Hazardous Substances List | BENZENE | 71-43-2 |
| New Jersey - Env Hazardous Substances List | CUMENE | 98-82-8 |
| New Jersey - Env Hazardous Substances List | ETHYLBENZENE | 100-41-4 |
| New Jersey - Env Hazardous Substances List | HEXANE | 110-54-3 |
| New Jersey - Env Hazardous Substances List | M-XYLENE | 108-38-3 |
| New Jersey - Env Hazardous Substances List | NAPHTHALENE | 91-20-3 |
| New Jersey - Env Hazardous Substances List | O-XYLENE | 95-47-6 |
| New Jersey - Env Hazardous Substances List | P-XYLENE | 106-42-3 |
| New Jersey - Env Hazardous Substances List | TOLUENE | 108-88-3 |
| New Jersey - Special Hazardous Substances | BENZENE | 71-43-2 |
| New Jersey - Special Hazardous Substances | CUMENE | 98-82-8 |
| New Jersey - Special Hazardous Substances | ETHYLBENZENE | 100-41-4 |
| New Jersey - Special Hazardous Substances | HEXANE | 110-54-3 |
| New Jersey - Special Hazardous Substances | M-XYLENE | 108-38-3 |
| New Jersey - Special Hazardous Substances | NAPHTHALENE | 91-20-3 |
| New Jersey - Special Hazardous Substances | O-XYLENE | 95-47-6 |
| New Jersey - Special Hazardous Substances | P-XYLENE | 106-42-3 |
| New Jersey - Special Hazardous Substances | TOLUENE | 108-88-3 |
| NTP - Report on Carcinogens - Known Carcinogens | BENZENE | 71-43-2 |
| NTP - Report on Carcinogens - Suspect Carcinogens | NAPHTHALENE | 91-20-3 |
| OSHA - Final PELs - Ceiling Limits | BENZENE | 71-43-2 |
| OSHA - Final PELs - Ceiling Limits | TOLUENE | 108-88-3 |
| OSHA - Final PELs - Short Term Exposure Limits | BENZENE | 71-43-2 |
| OSHA - Final PELs - Skin Notations | CUMENE | 98-82-8 |
| OSHA - Final PELs - Time Weighted Averages | BENZENE | 71-43-2 |
| OSHA - Final PELs - Time Weighted Averages | CUMENE | 98-82-8 |
| OSHA - Final PELs - Time Weighted Averages | ETHYLBENZENE | 100-41-4 |
| OSHA - Final PELs - Time Weighted Averages | HEXANE | 110-54-3 |
| OSHA - Final PELs - Time Weighted Averages | NAPHTHALENE | 91-20-3 |
| OSHA - Final PELs - Time Weighted Averages | TOLUENE | 108-88-3 |
| Pennsylvania - RTK (Right to Know) List | BENZENE | 71-43-2 |
| Pennsylvania - RTK (Right to Know) List | CUMENE | 98-82-8 |
| Pennsylvania - RTK (Right to Know) List | ETHYLBENZENE | 100-41-4 |
| Pennsylvania - RTK (Right to Know) List | HEXANE | 110-54-3 |
| Pennsylvania - RTK (Right to Know) List | M-XYLENE | 108-38-3 |
| Pennsylvania - RTK (Right to Know) List | NAPHTHALENE | 91-20-3 |
| Pennsylvania - RTK (Right to Know) List | O-XYLENE | 95-47-6 |
| Pennsylvania - RTK (Right to Know) List | P-XYLENE | 106-42-3 |
| Pennsylvania - RTK (Right to Know) List | TOLUENE | 108-88-3 |
| Pennsylvania - RTK - Special Hazardous Substances | BENZENE | 71-43-2 |
| TSCA - Sect. 12(b) - Export Notification | NAPHTHALENE | 91-20-3 |
| TSCA - Sect. 12(b) - Export Notification | P-XYLENE | 106-42-3 |
| TSCA - Section 4 - Chemical Test Rules | NAPHTHALENE | 91-20-3 |
| TSCA - Section 4 - Chemical Test Rules | P-XYLENE | 106-42-3 |

### Title III Classifications Sections 311,312:

- Acute: **YES**
- Chronic: **YES**
- Fire: **YES**
- Reactivity: **NO**
- Sudden Release of Pressure: **NO**

## 16. OTHER INFORMATION

Follow all MSDS/label precautions even after container is emptied because it may retain product residue. Keep out of reach of children. Email Address: For MSDS requests/information please contact sunocomsds@sunocoinc.com. For use as a motor fuel only. Do not use as a solvent due to its flammable and potentially toxic properties.

# SAFETY DATA SHEET

## 1. Identification

| | |
|---|---|
| **Product identifier** | **87 RFG 10% ETH** |
| **Other means of identification** | None. |
| **Recommended use** | Motor fuel. |
| **Recommended restrictions** | None known. |

**Manufacturer/Importer/Supplier/Distributor information**

**Manufactor**

| | |
|---|---|
| **Company name** | Philadelphia Energy Solutions |
| **Address** | 3144 W. Passyunk Ave<br>Philadelphia, Pennsylvania, 19145 |
| **E-mail** | msds@PES-Companies.com |
| **Emergency phone number** | |
| **24 Hours** | (215) 339-5400 |
| **Information** | |
| **Product Safety Information** | (215) 339-2000 |

## 2. Hazard(s) identification

| | | |
|---|---|---|
| **Physical hazards** | Flammable liquids | Category 2 |
| **Health hazards** | Skin corrosion/irritation | Category 2 |
| | Serious eye damage/eye irritation | Category 2A |
| | Germ cell mutagenicity | Category 1B |
| | Carcinogenicity | Category 1B |
| | Reproductive toxicity | Category 2 |
| | Specific target organ toxicity, single exposure | Category 3 narcotic effects |
| | Aspiration hazard | Category 1 |
| **Environmental hazards** | Hazardous to the aquatic environment, acute hazard | Category 2 |
| | Hazardous to the aquatic environment, long-term hazard | Category 2 |

**OSHA defined hazards** Not classified.

**Label elements**

| | |
|---|---|
| **Signal word** | Danger |
| **Hazard statement** | Highly flammable liquid and vapor. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness. May cause genetic defects. May cause cancer. Suspected of damaging fertility or the unborn child. Toxic to aquatic life with long lasting effects. |
| **Precautionary statement** | |
| **Prevention** | Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing mist or vapor. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. |

| | |
|---|---|
| **Response** | If swallowed: Immediately call a poison center/doctor. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If exposed or concerned: Get medical advice/attention. Call a poison center/doctor if you feel unwell. Specific treatment (see this label). Do NOT induce vomiting. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish. Collect spillage. |
| **Storage** | Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store locked up. |
| **Disposal** | Dispose of contents/container in accordance with local/regional/national/international regulations. |
| **Hazard(s) not otherwise classified (HNOC)** | Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion. |

## 3. Composition/information on ingredients

**Substances**

| Chemical name | Common name and synonyms | CAS number | % |
|---|---|---|---|
| Light Petroleum Distillate | | 8006-61-9 | 99.9 |

**Constituents**

| Chemical name | CAS number | % |
|---|---|---|
| Toluene | 108-88-3 | 0 - 30 |
| Xylene | 1330-20-7 | 0 - 25 |
| Ethanol | 64-17-5 | 10 |
| Cyclohexane | 110-82-7 | 0 - 9 |
| n-Hexane | 110-54-3 | 0 - 5 |
| Ethylbenzene | 100-41-4 | 0 - 5 |
| Naphthalene | 91-20-3 | 0 - 5 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0 - 5 |
| Benzene | 71-43-2 | 0.1 - 1.3 |
| Cumene | 98-82-8 | 0 - 1 |

**Composition comments** Occupational Exposure Limits for constituents are listed in Section 8.

## 4. First-aid measures

| | |
|---|---|
| **Inhalation** | 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. |
| **Skin contact** | Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse. |
| **Eye contact** | Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists. |
| **Ingestion** | Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately. |
| **Most important symptoms/effects, acute and delayed** | Convulsions. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. |
| **Indication of immediate medical attention and special treatment needed** | Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed. |
| **General information** | Take off all contaminated clothing immediately. IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse. |

## 5. Fire-fighting measures

| | |
|---|---|
| **Suitable extinguishing media** | Water fog. Foam. Carbon dioxide (CO2). Dry chemical powder. |

| | |
|---|---|
| **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 form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. To reduce potential for static discharge, use proper bonding and grounding procedures. This liquid may accumulate static electricity when filling properly grounded containers. Static electricity accumulation may be significantly increased by the presence of small quantities of water or other contaminants. Material will float and may ignite on surface of water. During fire, gases hazardous to health may be formed. |
| **Special protective equipment and precautions for firefighters** | Self-contained breathing apparatus and full protective clothing must be worn in case of fire. |
| **Fire fighting equipment/instructions** | In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. |
| **Specific methods** | Use standard firefighting procedures and consider the hazards of other involved materials. |
| **General fire hazards** | Highly flammable liquid and vapor. |

## 6. Accidental release measures

| | |
|---|---|
| **Personal precautions, protective equipment and emergency procedures** | Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Use appropriate containment to avoid environmental contamination. Transfer by mechanical means such as vacuum truck to a salvage tank or other suitable container for recovery or safe disposal. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS. |
| **Methods and materials for containment and cleaning up** | Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water.<br><br>Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent product from entering drains. Following product recovery, flush area with water.<br><br>Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.<br><br>Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. |
| **Environmental precautions** | Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases. Use appropriate containment to avoid environmental contamination. |

## 7. Handling and storage

**Precautions for safe handling**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Explosion-proof general and local exhaust ventilation. Minimize fire risks from flammable and combustible materials (including combustible dust and static accumulating liquids) or dangerous reactions with incompatible materials. Handling operations that can promote accumulation of static charges include but are not limited to: mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

For additional information on equipment bonding and grounding, refer to the Canadian Electrical Code in Canada, (CSA C22.1), or the American Petroleum Institute (API) Recommended Practice 2003, "Protection Against Ignitions Arising out of Static, Lightning, and Stray Currents" or National Fire Protection Association (NFPA) 77, "Recommended Practice on Static Electricity" or National Fire Protection Association (NFPA) 70, "National Electrical Code".

**Conditions for safe storage, including any incompatibilities**

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Eliminate sources of ignition. Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

**Occupational exposure limits**

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

| Constituents | Type | Value |
|---|---|---|
| Benzene (CAS 71-43-2) | STEL | 5 ppm |
| | TWA | 1 ppm |

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

| Constituents | Type | Value |
|---|---|---|
| Cumene (CAS 98-82-8) | PEL | 245 mg/m3 |
| | | 50 ppm |
| Ethanol (CAS 64-17-5) | PEL | 1900 mg/m3 |
| | | 1000 ppm |
| Xylene (CAS 1330-20-7) | PEL | 435 mg/m3 |
| | | 100 ppm |
| n-Hexane (CAS 110-54-3) | PEL | 1800 mg/m3 |
| | | 500 ppm |
| Ethylbenzene (CAS 100-41-4) | PEL | 435 mg/m3 |
| | | 100 ppm |
| Naphthalene (CAS 91-20-3) | PEL | 50 mg/m3 |
| | | 10 ppm |
| Cyclohexane (CAS 110-82-7) | PEL | 1050 mg/m3 |
| | | 300 ppm |

**US. OSHA Table Z-2 (29 CFR 1910.1000)**

| Constituents | Type | Value |
|---|---|---|
| Benzene (CAS 71-43-2) | Ceiling | 25 ppm |
| | TWA | 10 ppm |
| Toluene (CAS 108-88-3) | Ceiling | 300 ppm |
| | TWA | 200 ppm |

**US. ACGIH Threshold Limit Values**

| Constituents | Type | Value |
|---|---|---|
| Cumene (CAS 98-82-8) | TWA | 50 ppm |
| Benzene (CAS 71-43-2) | STEL | 2.5 ppm |
| | TWA | 0.5 ppm |
| Ethanol (CAS 64-17-5) | STEL | 1000 ppm |
| Xylene (CAS 1330-20-7) | STEL | 150 ppm |
| | TWA | 100 ppm |
| Toluene (CAS 108-88-3) | TWA | 20 ppm |
| 1,2,4-Trimethylbenzene (CAS 95-63-6) | TWA | 25 ppm |
| n-Hexane (CAS 110-54-3) | TWA | 50 ppm |
| Ethylbenzene (CAS 100-41-4) | TWA | 20 ppm |
| Naphthalene (CAS 91-20-3) | TWA | 10 ppm |
| Cyclohexane (CAS 110-82-7) | TWA | 100 ppm |

**US. NIOSH: Pocket Guide to Chemical Hazards**

| Constituents | Type | Value |
|---|---|---|
| Cumene (CAS 98-82-8) | TWA | 245 mg/m3 |
| | | 50 ppm |
| Benzene (CAS 71-43-2) | STEL | 1 ppm |
| | TWA | 0.1 ppm |
| Ethanol (CAS 64-17-5) | TWA | 1900 mg/m3 |
| | | 1000 ppm |
| Xylene (CAS 1330-20-7) | STEL | 655 mg/m3 |
| | | 150 ppm |
| | TWA | 435 mg/m3 |
| | | 100 ppm |
| Toluene (CAS 108-88-3) | STEL | 560 mg/m3 |
| | | 150 ppm |
| | TWA | 375 mg/m3 |
| | | 100 ppm |
| 1,2,4-Trimethylbenzene (CAS 95-63-6) | TWA | 125 mg/m3 |
| | | 25 ppm |
| n-Hexane (CAS 110-54-3) | TWA | 180 mg/m3 |
| | | 50 ppm |
| Ethylbenzene (CAS 100-41-4) | STEL | 545 mg/m3 |
| | | 125 ppm |
| | TWA | 435 mg/m3 |
| | | 100 ppm |
| Naphthalene (CAS 91-20-3) | STEL | 75 mg/m3 |
| | | 15 ppm |
| | TWA | 50 mg/m3 |
| | | 10 ppm |
| Cyclohexane (CAS 110-82-7) | TWA | 1050 mg/m3 |
| | | 300 ppm |

**Biological limit values**

**ACGIH Biological Exposure Indices**

| Constituents | Value | Determinant | Specimen | Sampling Time |
|---|---|---|---|---|
| Benzene (CAS 71-43-2) | 25 µg/g | S-Phenylmercapturic acid | Creatinine in urine | * |
| Xylene (CAS 1330-20-7) | 1.5 g/g | Methylhippuric acids | Creatinine in urine | * |
| Toluene (CAS 108-88-3) | 0.3 mg/g | o-Cresol, with hydrolysis | Creatinine in urine | * |

**ACGIH Biological Exposure Indices**

| Constituents | Value | Determinant | Specimen | Sampling Time |
|---|---|---|---|---|
| | 0.03 mg/l | Toluene | Urine | * |
| | 0.02 mg/l | Toluene | Blood | * |
| n-Hexane (CAS 110-54-3) | 0.4 mg/l | 2,5-Hexanedion, without hydrolysis | Urine | * |
| Ethylbenzene (CAS 100-41-4) | 0.15 g/g | Sum of mandelic acid and phenylglyoxylic acid | Creatinine in urine | * |

* - For sampling details, please see the source document.

**Exposure guidelines**

**US - California OELs: Skin designation**

| | |
|---|---|
| Benzene (CAS 71-43-2) | Can be absorbed through the skin. |
| Cumene (CAS 98-82-8) | Can be absorbed through the skin. |
| n-Hexane (CAS 110-54-3) | Can be absorbed through the skin. |
| Toluene (CAS 108-88-3) | Can be absorbed through the skin. |

**US - Minnesota Haz Subs: Skin designation applies**

| | |
|---|---|
| Cumene (CAS 98-82-8) | Skin designation applies. |
| Toluene (CAS 108-88-3) | Skin designation applies. |

**US - Tennessee OELs: Skin designation**

| | |
|---|---|
| Cumene (CAS 98-82-8) | Can be absorbed through the skin. |

**US ACGIH Threshold Limit Values: Skin designation**

| | |
|---|---|
| Benzene (CAS 71-43-2) | Can be absorbed through the skin. |
| Naphthalene (CAS 91-20-3) | Can be absorbed through the skin. |
| n-Hexane (CAS 110-54-3) | Can be absorbed through the skin. |

**US. NIOSH: Pocket Guide to Chemical Hazards**

| | |
|---|---|
| Cumene (CAS 98-82-8) | Can be absorbed through the skin. |

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

| | |
|---|---|
| Cumene (CAS 98-82-8) | Can be absorbed through the skin. |

**Appropriate engineering controls** Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Skin protection**

**Hand protection** Wear appropriate chemical resistant gloves.

**Other** Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

**Respiratory protection** Chemical respirator with organic vapor cartridge and full facepiece.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations** When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

**Appearance**

**Physical state** Liquid.

**Form** Liquid.

**Color** Clear.

**Odor** Gasoline.

**Odor threshold** 15 ppm

**pH** Not available.

| | |
|---|---|
| **Melting point/freezing point** | Not available. |
| **Initial boiling point and boiling range** | 100 - 430 °F (37.78 - 221.11 °C) |
| **Flash point** | -40.0 °F (-40.0 °C) |
| **Evaporation rate** | Not available. |
| **Flammability (solid, gas)** | Not available. |
| **Upper/lower flammability or explosive limits** | |
| **Flammability limit - lower (%)** | 1.5 |
| **Flammability limit - upper (%)** | 7.6 |
| **Explosive limit - lower (%)** | Not available. |
| **Explosive limit - upper (%)** | Not available. |
| **Vapor pressure** | 325 - 525 mm Hg @ 20 °C |
| **Relative density** | 0.74 |
| **Solubility(ies)** | |
| **Solubility (water)** | Nil to 15% |
| **Partition coefficient (n-octanol/water)** | Not available. |
| **Auto-ignition temperature** | > 536 °F (> 280 °C) |
| **Decomposition temperature** | Not available. |
| **Viscosity** | Not available. |
| **Other information** | |
| **Percent volatile** | 100 |

## 10. Stability and reactivity

| | |
|---|---|
| **Reactivity** | The product is stable and non-reactive under normal conditions of use, storage and transport. |
| **Chemical stability** | Material is stable under normal conditions. |
| **Possibility of hazardous reactions** | No dangerous reaction known under conditions of normal use. |
| **Conditions to avoid** | Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials. |
| **Incompatible materials** | Strong oxidizing agents. Alkaline materials. Halogens. Halogenated compounds. |
| **Hazardous decomposition products** | Carbon oxides. |

## 11. Toxicological information

**Information on likely routes of exposure**

| | |
|---|---|
| **Inhalation** | May cause drowsiness and dizziness. Headache. Nausea, vomiting. |
| **Skin contact** | Causes skin irritation. |
| **Eye contact** | Causes serious eye irritation. |
| **Ingestion** | Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia. |
| **Symptoms related to the physical, chemical and toxicological characteristics** | Convulsions. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. |

**Information on toxicological effects**

| | |
|---|---|
| **Acute toxicity** | May be fatal if swallowed and enters airways. Narcotic effects. |

**Toxicological data**

| Constituents | Species | Test Results |
|---|---|---|
| Cumene (CAS 98-82-8) | | |
| **Acute** | | |
| *Dermal* | | |
| LD50 | Rabbit | > 3160 mg/kg, 24 Hours |
| *Inhalation* | | |
| LC50 | Rat | 8000 ppm, 4 Hours |
| *Oral* | | |
| LD50 | Rat | 2910 mg/kg |
| Benzene (CAS 71-43-2) | | |
| **Acute** | | |
| *Oral* | | |
| LD50 | Rat | 930 mg/kg |
| Ethanol (CAS 64-17-5) | | |
| **Acute** | | |
| *Inhalation* | | |
| LC50 | Rat | 30000 mg/m3 |
| Xylene (CAS 1330-20-7) | | |
| **Acute** | | |
| *Dermal* | | |
| LD50 | Rabbit | 12126 mg/kg, 24 Hours |
| *Inhalation* | | |
| LC50 | Rat | 6350 ppm, 4 Hours |
| *Oral* | | |
| LD50 | Rat | 3523 mg/kg |
| Toluene (CAS 108-88-3) | | |
| **Acute** | | |
| *Dermal* | | |
| LD50 | Rabbit | 14.1 ml/kg |
| *Inhalation* | | |
| LC50 | Rat | 49000 mg/m³, 4 Hours |
| *Oral* | | |
| LD50 | Rat | 636 mg/kg |
| 1,2,4-Trimethylbenzene (CAS 95-63-6) | | |
| **Acute** | | |
| *Dermal* | | |
| LD50 | Rabbit | > 3160 mg/kg |
| *Inhalation* | | |
| LC50 | Rat | 18000 mg/m3, 4 hours |
| Ethylbenzene (CAS 100-41-4) | | |
| **Acute** | | |
| *Dermal* | | |
| LD50 | Rabbit | 15400 mg/kg |
| *Inhalation* | | |
| LC50 | Rat | 17.4 mg/m³, 4 Hours |
| *Oral* | | |
| LD50 | Rat | 35000 - 47000 mg/kg |
| Naphthalene (CAS 91-20-3) | | |
| **Acute** | | |
| *Dermal* | | |
| LD50 | Rabbit | > 2 g/kg |

| Constituents | Species | Test Results |
|---|---|---|
| *Oral* | | |
| LD50 | Rat | 490 mg/kg |
| Cyclohexane (CAS 110-82-7) | | |
| **Acute** | | |
| *Oral* | | |
| LD50 | Rat | 12705 mg/kg |

* Estimates for product may be based on additional component data not shown.

**Skin corrosion/irritation** Causes skin irritation.

**Serious eye damage/eye irritation** Causes serious eye irritation.

**Respiratory or skin sensitization**

**Respiratory sensitization** Not a respiratory sensitizer.

**Skin sensitization** This product is not expected to cause skin sensitization.

**Germ cell mutagenicity** May cause genetic defects.

**Carcinogenicity** May cause cancer.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

| | |
|---|---|
| Benzene (CAS 71-43-2) | 1 Carcinogenic to humans. |
| Cumene (CAS 98-82-8) | 2B Possibly carcinogenic to humans. |
| Ethylbenzene (CAS 100-41-4) | 2B Possibly carcinogenic to humans. |
| Light Petroleum Distillate (CAS 8006-61-9) | 2B Possibly carcinogenic to humans. |
| Naphthalene (CAS 91-20-3) | 2B Possibly carcinogenic to humans. |
| Toluene (CAS 108-88-3) | 3 Not classifiable as to carcinogenicity to humans. |
| Xylene (CAS 1330-20-7) | 3 Not classifiable as to carcinogenicity to humans. |

**NTP Report on Carcinogens**

| | |
|---|---|
| Benzene (CAS 71-43-2) | Known To Be Human Carcinogen. |
| Naphthalene (CAS 91-20-3) | Reasonably Anticipated to be a Human Carcinogen. |

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

| | |
|---|---|
| Benzene (CAS 71-43-2) | Cancer |

**Reproductive toxicity** Suspected of damaging fertility or the unborn child.

**Specific target organ toxicity - single exposure** May cause drowsiness and dizziness.

**Specific target organ toxicity - repeated exposure** Not classified.

**Aspiration hazard** May be fatal if swallowed and enters airways.

**Chronic effects** Prolonged exposure may cause chronic effects.

## 12. Ecological information

**Ecotoxicity** Toxic to aquatic life with long lasting effects.

| Constituents | | Species | Test Results |
|---|---|---|---|
| Cumene (CAS 98-82-8) | | | |
| **Aquatic** | | | |
| Fish | LC50 | Rainbow trout,donaldson trout (Oncorhynchus mykiss) | 2.7 mg/l, 96 hours |
| Toluene (CAS 108-88-3) | | | |
| **Aquatic** | | | |
| Crustacea | EC50 | Water flea (Daphnia magna) | 5.46 - 9.83 mg/l, 48 hours |
| Fish | LC50 | Pink salmon (Oncorhynchus gorbuscha) | 6.86 - 8.48 mg/l, 96 hours |
| 1,2,4-Trimethylbenzene (CAS 95-63-6) | | | |
| **Aquatic** | | | |
| Fish | LC50 | Fathead minnow (Pimephales promelas) | 7.19 - 8.28 mg/l, 96 hours |

| Constituents | | Species | Test Results |
|---|---|---|---|
| Ethylbenzene (CAS 100-41-4) | | | |
| **Aquatic** | | | |
| Crustacea | EC50 | Daphnia | 1.81 mg/l, 48 hours |
| Fish | LC50 | Bluegill (Lepomis macrochirus) | 32 - 88 mg/l, 96 hours |
| | | Fathead minnow (Pimephales promelas) | 12.1 mg/l, 96 hours |
| Naphthalene (CAS 91-20-3) | | | |
| **Aquatic** | | | |
| Crustacea | EC50 | Water flea (Daphnia magna) | 1.09 - 3.4 mg/l, 48 hours |
| Fish | LC50 | Pink salmon (Oncorhynchus gorbuscha) | 0.95 - 1.62 mg/l, 96 hours |
| Cyclohexane (CAS 110-82-7) | | | |
| **Aquatic** | | | |
| Fish | LC50 | Fathead minnow (Pimephales promelas) | 3.961 - 5.181 mg/l, 96 hours |

**Persistence and degradability** No data is available on the degradability of this product.

**Bioaccumulative potential**

**Mobility in soil** Expected to be slightly to moderately mobile in soil.

**Other adverse effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## 13. Disposal considerations

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**US RCRA Hazardous Waste U List: Reference**

| | |
|---|---|
| Benzene (CAS 71-43-2) | U019 |
| Cumene (CAS 98-82-8) | U055 |
| Cyclohexane (CAS 110-82-7) | U056 |
| Naphthalene (CAS 91-20-3) | U165 |
| Toluene (CAS 108-88-3) | U220 |
| Xylene (CAS 1330-20-7) | U239 |

**Waste from residues / unused products** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging** Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

## 14. Transport information

**DOT**

**UN number** UN3475

**UN proper shipping name** Ethanol and gasoline mixture

**Transport hazard class(es)**

**Class** 3

**Subsidiary risk** -

**Label(s)** 3

**Packing group** II

**Environmental hazards**

**Marine pollutant** Yes

**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

**Special provisions** 144, 177, IB2, T4, TP1

**Packaging exceptions** 150

**Packaging non bulk** 202

**Packaging bulk** 242

**IATA**

| | |
|---|---|
| **UN number** | UN3475 |
| **UN proper shipping name** | Ethanol and petrol mixture |
| **Transport hazard class(es)** | |
| **Class** | 3 |
| **Subsidiary risk** | - |
| **Label(s)** | 3 |
| **Packing group** | II |
| **Environmental hazards** | Yes |
| **ERG Code** | 3L |
| **Special precautions for user** | Read safety instructions, SDS and emergency procedures before handling. |

**IMDG**

| | |
|---|---|
| **UN number** | UN3475 |
| **UN proper shipping name** | ETHANOL AND GASOLINE MIXTURE |
| **Transport hazard class(es)** | |
| **Class** | 3 |
| **Subsidiary risk** | - |
| **Label(s)** | 3 |
| **Packing group** | II |
| **Environmental hazards** | |
| **Marine pollutant** | Yes |
| **EmS** | F-E, S-E |
| **Special precautions for user** | Read safety instructions, SDS and emergency procedures before handling. |

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not available.

## 15. Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

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

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

| | |
|---|---|
| Benzene (CAS 71-43-2) | Cancer<br>Central nervous system<br>Blood<br>Aspiration<br>Skin<br>Eye<br>respiratory tract irritation<br>Flammability |

**CERCLA Hazardous Substance List (40 CFR 302.4)**

| | |
|---|---|
| Benzene (CAS 71-43-2) | LISTED |
| Cumene (CAS 98-82-8) | LISTED |
| Cyclohexane (CAS 110-82-7) | LISTED |
| Ethanol (CAS 64-17-5) | LISTED |
| Ethylbenzene (CAS 100-41-4) | LISTED |
| Light Petroleum Distillate (CAS 8006-61-9) | LISTED |
| Naphthalene (CAS 91-20-3) | LISTED |
| n-Hexane (CAS 110-54-3) | LISTED |
| Toluene (CAS 108-88-3) | LISTED |
| Xylene (CAS 1330-20-7) | LISTED |

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

| | |
|---|---|
| **Hazard categories** | Immediate Hazard - Yes<br>Delayed Hazard - Yes<br>Fire Hazard - Yes<br>Pressure Hazard - No<br>Reactivity Hazard - No |

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** Yes

**SARA 313 (TRI reporting)**

| Chemical name | CAS number | % by wt. |
|---|---|---|
| Toluene | 108-88-3 | 0 - 30 |
| Xylene | 1330-20-7 | 0 - 25 |
| Cyclohexane | 110-82-7 | 0 - 9 |
| Ethylbenzene | 100-41-4 | 0 - 5 |
| n-Hexane | 110-54-3 | 0 - 5 |
| Naphthalene | 91-20-3 | 0 - 5 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0 - 5 |
| Benzene | 71-43-2 | 0.1 - 1.3 |
| Cumene | 98-82-8 | 0 - 1 |

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Benzene (CAS 71-43-2)
Cumene (CAS 98-82-8)
Ethylbenzene (CAS 100-41-4)
Naphthalene (CAS 91-20-3)
n-Hexane (CAS 110-54-3)
Toluene (CAS 108-88-3)
Xylene (CAS 1330-20-7)

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

**Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number**

Toluene (CAS 108-88-3) 6594

**Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))**

Toluene (CAS 108-88-3) 35 %WV

**DEA Exempt Chemical Mixtures Code Number**

Toluene (CAS 108-88-3) 594

**US state regulations**

**US. Massachusetts RTK - Substance List**

1,2,4-Trimethylbenzene (CAS 95-63-6)
Benzene (CAS 71-43-2)
Cumene (CAS 98-82-8)
Cyclohexane (CAS 110-82-7)
Ethanol (CAS 64-17-5)
Ethylbenzene (CAS 100-41-4)
Light Petroleum Distillate (CAS 8006-61-9)
Naphthalene (CAS 91-20-3)
n-Hexane (CAS 110-54-3)
Toluene (CAS 108-88-3)
Xylene (CAS 1330-20-7)

**US. New Jersey Worker and Community Right-to-Know Act**

1,2,4-Trimethylbenzene (CAS 95-63-6)
Benzene (CAS 71-43-2)
Cumene (CAS 98-82-8)
Cyclohexane (CAS 110-82-7)
Ethanol (CAS 64-17-5)
Ethylbenzene (CAS 100-41-4)
Light Petroleum Distillate (CAS 8006-61-9)
Naphthalene (CAS 91-20-3)
n-Hexane (CAS 110-54-3)
Toluene (CAS 108-88-3)
Xylene (CAS 1330-20-7)

**US. Pennsylvania Worker and Community Right-to-Know Law**

1,2,4-Trimethylbenzene (CAS 95-63-6)
Benzene (CAS 71-43-2)
Cumene (CAS 98-82-8)
Cyclohexane (CAS 110-82-7)
Ethanol (CAS 64-17-5)
Ethylbenzene (CAS 100-41-4)
Naphthalene (CAS 91-20-3)
n-Hexane (CAS 110-54-3)
Toluene (CAS 108-88-3)
Xylene (CAS 1330-20-7)

**US. Rhode Island RTK**

1,2,4-Trimethylbenzene (CAS 95-63-6)
Benzene (CAS 71-43-2)
Cumene (CAS 98-82-8)
Cyclohexane (CAS 110-82-7)
Ethylbenzene (CAS 100-41-4)
Naphthalene (CAS 91-20-3)
n-Hexane (CAS 110-54-3)
Toluene (CAS 108-88-3)
Xylene (CAS 1330-20-7)

**US. California Proposition 65**

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

**US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**

Benzene (CAS 71-43-2)
Cumene (CAS 98-82-8)
Ethylbenzene (CAS 100-41-4)
Naphthalene (CAS 91-20-3)
Toluene (CAS 108-88-3)

**International Inventories**

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|---|---|---|
| Australia | Australian Inventory of Chemical Substances (AICS) | Yes |
| Canada | Domestic Substances List (DSL) | Yes |
| Canada | Non-Domestic Substances List (NDSL) | No |
| China | Inventory of Existing Chemical Substances in China (IECSC) | Yes |
| Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes |
| Europe | European List of Notified Chemical Substances (ELINCS) | No |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | No |
| Korea | Existing Chemicals List (ECL) | Yes |
| New Zealand | New Zealand Inventory | Yes |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | Yes |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

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

**Issue date** 17-June-2015

**Revision date** -

**Version #** 01

**HMIS® ratings** Health: 2*
Flammability: 3
Physical hazard: 0

**NFPA ratings**


**Disclaimer**

Philadelphia Energy Solutions cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

# SAFETY DATA SHEET

## 1. Identification

| | |
|---|---|
| **Product identifier** | **ULSD #2 15 MOTOR VEHICLE** |
| **Other means of identification** | None. |
| **Recommended use** | Diesel fuel. |
| **Recommended restrictions** | None known. |

**Manufacturer/Importer/Supplier/Distributor information**

**Manufactor**

| | |
|---|---|
| **Company name** | Philadelphia Energy Solutions |
| **Address** | 3144 W. Passyunk Ave<br>Philadelphia, Pennsylvania, 19145 |
| **E-mail** | msds@PES-Companies.com |
| **Emergency phone number** | |
| **24 Hours** | (215) 339-5400 |
| **Information** | |
| **Product Safety Information** | (215) 339-2000 |

## 2. Hazard(s) identification

| | | |
|---|---|---|
| **Physical hazards** | Flammable liquids | Category 3 |
| **Health hazards** | Acute toxicity, inhalation | Category 4 |
| | Skin corrosion/irritation | Category 2 |
| | Carcinogenicity | Category 2 |
| | Specific target organ toxicity, repeated exposure | Category 2 (blood, liver, thymus) |
| | Aspiration hazard | Category 1 |
| **Environmental hazards** | Hazardous to the aquatic environment, acute hazard | Category 2 |
| | Hazardous to the aquatic environment, long-term hazard | Category 2 |

**OSHA defined hazards** Not classified.

**Label elements**

**Signal word** Danger

**Hazard statement** Flammable liquid and vapor. May be fatal if swallowed and enters airways. Causes skin irritation. Harmful if inhaled. Suspected of causing cancer. May cause damage to organs (blood, liver, thymus) through prolonged or repeated exposure. Toxic to aquatic life with long lasting effects.

**Precautionary statement**

**Prevention** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe mist or vapor. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

| | |
|---|---|
| **Response** | If swallowed: Immediately call a poison center/doctor. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. If inhaled: Remove person to fresh air and keep comfortable for breathing. If exposed or concerned: Get medical advice/attention. Call a poison center/doctor if you feel unwell. Do NOT induce vomiting. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish. Collect spillage. |
| **Storage** | Store in a well-ventilated place. Keep cool. Store locked up. |
| **Disposal** | Dispose of contents/container in accordance with local/regional/national/international regulations. |
| **Hazard(s) not otherwise classified (HNOC)** | Static Accumulating Liquid.<br>Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. |

## 3. Composition/information on ingredients

**Substances**

| Chemical name | Common name and synonyms | CAS number | % |
|---|---|---|---|
| Fuels, diesel, no. 2 | | 68476-34-6 | 100 |

**Constituents**

| Chemical name | CAS number | % |
|---|---|---|
| 1,2,4-Trimethylbenzene | 95-63-6 | 0 - 2 |
| Naphthalene | 91-20-3 | 0 - 2 |
| Cumene | 98-82-8 | 0 - 1 |
| Ethylbenzene | 100-41-4 | 0 - 1 |
| Xylene | 1330-20-7 | 0 - 1 |

**Composition comments** Occupational Exposure Limits for constituents are listed in Section 8.

## 4. First-aid measures

**Inhalation** If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.

**Skin contact** Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical attention if irritation develops and persists.

**Eye contact** Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists.

**Ingestion** Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

**Most important symptoms/effects, acute and delayed** Aspiration may cause pulmonary edema and pneumonitis. Direct contact with eyes may cause temporary irritation. Skin irritation.

**Indication of immediate medical attention and special treatment needed** Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

**General information** Take off all contaminated clothing immediately. IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

## 5. Fire-fighting measures

**Suitable extinguishing media** Water fog. Foam. Carbon dioxide (CO2). Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

**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 form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. To reduce potential for static discharge, use proper bonding and grounding procedures. This liquid may accumulate static electricity when filling properly grounded containers. Static electricity accumulation may be significantly increased by the presence of small quantities of water or other contaminants. Material will float and may ignite on surface of water. During fire, gases hazardous to health may be formed. |
| **Special protective equipment and precautions for firefighters** | Self-contained breathing apparatus and full protective clothing must be worn in case of fire. |
| **Fire fighting equipment/instructions** | In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. |
| **Specific methods** | Use standard firefighting procedures and consider the hazards of other involved materials. |
| **General fire hazards** | Flammable liquid and vapor. |

## 6. Accidental release measures

| | |
|---|---|
| **Personal precautions, protective equipment and emergency procedures** | Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Use appropriate containment to avoid environmental contamination. Transfer by mechanical means such as vacuum truck to a salvage tank or other suitable container for recovery or safe disposal. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS. |
| **Methods and materials for containment and cleaning up** | Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. The product is immiscible with water and will spread on the water surface. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways.<br><br>Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.<br><br>Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.<br><br>Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. |
| **Environmental precautions** | Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination. |

## 7. Handling and storage

| | |
|---|---|
| **Precautions for safe handling** | Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Minimize fire risks from flammable and combustible materials (including combustible dust and static accumulating liquids) or dangerous reactions with incompatible materials. Handling operations that can promote accumulation of static charges include but are not limited to: mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.<br><br>For additional information on equipment bonding and grounding, refer to the Canadian Electrical Code in Canada, (CSA C22.1), or the American Petroleum Institute (API) Recommended Practice 2003, "Protection Against Ignitions Arising out of Static, Lightning, and Stray Currents" or National Fire Protection Association (NFPA) 77, "Recommended Practice on Static Electricity" or National Fire Protection Association (NFPA) 70, "National Electrical Code". |

**Conditions for safe storage, including any incompatibilities**

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Eliminate sources of ignition. Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

**Occupational exposure limits**

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

| Constituents | Type | Value |
|---|---|---|
| Cumene (CAS 98-82-8) | PEL | 245 mg/m3<br>50 ppm |
| Ethylbenzene (CAS 100-41-4) | PEL | 435 mg/m3<br>100 ppm |
| Xylene (CAS 1330-20-7) | PEL | 435 mg/m3<br>100 ppm |
| Naphthalene (CAS 91-20-3) | PEL | 50 mg/m3<br>10 ppm |

**US. ACGIH Threshold Limit Values**

| Components | Type | Value | Form |
|---|---|---|---|
| Fuels, diesel, no. 2 (CAS 68476-34-6) | TWA | 100 mg/m3 | Inhalable fraction and vapor. |

| Constituents | Type | Value |
|---|---|---|
| Cumene (CAS 98-82-8) | TWA | 50 ppm |
| Ethylbenzene (CAS 100-41-4) | TWA | 20 ppm |
| Xylene (CAS 1330-20-7) | STEL | 150 ppm |
| | TWA | 100 ppm |
| 1,2,4-Trimethylbenzene (CAS 95-63-6) | TWA | 25 ppm |
| Naphthalene (CAS 91-20-3) | TWA | 10 ppm |

**US. NIOSH: Pocket Guide to Chemical Hazards**

| Constituents | Type | Value |
|---|---|---|
| Cumene (CAS 98-82-8) | TWA | 245 mg/m3<br>50 ppm |
| Ethylbenzene (CAS 100-41-4) | STEL | 545 mg/m3<br>125 ppm |
| | TWA | 435 mg/m3<br>100 ppm |
| Xylene (CAS 1330-20-7) | STEL | 655 mg/m3<br>150 ppm |
| | TWA | 435 mg/m3<br>100 ppm |
| 1,2,4-Trimethylbenzene (CAS 95-63-6) | TWA | 125 mg/m3<br>25 ppm |
| Naphthalene (CAS 91-20-3) | STEL | 75 mg/m3<br>15 ppm |
| | TWA | 50 mg/m3<br>10 ppm |

**Biological limit values**

**ACGIH Biological Exposure Indices**

| Constituents | Value | Determinant | Specimen | Sampling Time |
|---|---|---|---|---|
| Ethylbenzene (CAS 100-41-4) | 0.15 g/g | Sum of mandelic acid and phenylglyoxylic acid | Creatinine in urine | * |
| Xylene (CAS 1330-20-7) | 1.5 g/g | Methylhippuric acids | Creatinine in urine | * |

* - For sampling details, please see the source document.

**Exposure guidelines**

**US - California OELs: Skin designation**

Cumene (CAS 98-82-8) Can be absorbed through the skin.

**US - Minnesota Haz Subs: Skin designation applies**

Cumene (CAS 98-82-8) Skin designation applies.

**US - Tennessee OELs: Skin designation**

Cumene (CAS 98-82-8) Can be absorbed through the skin.

**US ACGIH Threshold Limit Values: Skin designation**

Fuels, diesel, no. 2 (CAS 68476-34-6) Can be absorbed through the skin.
Naphthalene (CAS 91-20-3) Can be absorbed through the skin.

**US. NIOSH: Pocket Guide to Chemical Hazards**

Cumene (CAS 98-82-8) Can be absorbed through the skin.

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Cumene (CAS 98-82-8) Can be absorbed through the skin.

**Appropriate engineering controls** Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Chemical respirator with organic vapor cartridge and full facepiece.

**Skin protection**

**Hand protection** Wear appropriate chemical resistant gloves.

**Other** Wear suitable protective clothing. Use of an impervious apron is recommended.

**Respiratory protection** Chemical respirator with organic vapor cartridge and full facepiece.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations** When using do not smoke. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

**Appearance**

**Physical state** Liquid.

**Form** Liquid.

**Color** Light amber.

**Odor** Kerosene-like.

**Odor threshold** Not available.

**pH** Not available.

**Melting point/freezing point** Not available.

**Initial boiling point and boiling range** Not available.

**Flash point** 125.0 - 150.0 °F (51.7 - 65.6 °C) Pensky-Martens Closed Cup

**Evaporation rate** Not available.

**Flammability (solid, gas)** Not available.

**Upper/lower flammability or explosive limits**

| | |
|---|---|
| **Flammability limit - lower (%)** | Not available. |
| **Flammability limit - upper (%)** | Not available. |
| **Explosive limit - lower (%)** | Not available. |
| **Explosive limit - upper (%)** | Not available. |
| **Vapor pressure** | 1.6 mm Hg |
| **Vapor density** | Not available. |
| **Relative density** | 0.87 |
| **Solubility(ies)** | |
| **Solubility (water)** | Insoluble in water. |
| **Partition coefficient (n-octanol/water)** | Not available. |
| **Auto-ignition temperature** | 500 °F (260 °C) |
| **Decomposition temperature** | Not available. |
| **Viscosity** | 1.9 cSt |

## 10. Stability and reactivity

| | |
|---|---|
| **Reactivity** | The product is stable and non-reactive under normal conditions of use, storage and transport. |
| **Chemical stability** | Material is stable under normal conditions. |
| **Possibility of hazardous reactions** | No dangerous reaction known under conditions of normal use. |
| **Conditions to avoid** | Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials. |
| **Incompatible materials** | Strong oxidizing agents. |
| **Hazardous decomposition products** | No hazardous decomposition products are known. |

## 11. Toxicological information

**Information on likely routes of exposure**

| | |
|---|---|
| **Inhalation** | Harmful if inhaled. May cause damage to organs through prolonged or repeated exposure by inhalation. |
| **Skin contact** | Causes skin irritation. |
| **Eye contact** | Direct contact with eyes may cause temporary irritation. |
| **Ingestion** | Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia. |
| **Symptoms related to the physical, chemical and toxicological characteristics** | Aspiration may cause pulmonary edema and pneumonitis. Direct contact with eyes may cause temporary irritation. Skin irritation. |

**Information on toxicological effects**

**Acute toxicity** May be fatal if swallowed and enters airways. Harmful if inhaled. Causes skin irritation.

| Components | Species | Test Results |
|---|---|---|
| Fuels, diesel, no. 2 (CAS 68476-34-6) | | |
| **Acute** | | |
| *Inhalation* | | |
| LC50 | Rat | 4.1 mg/l, 4 hours |

| Constituents | Species | Test Results |
|---|---|---|
| Cumene (CAS 98-82-8) | | |
| **Acute** | | |
| *Dermal* | | |
| LD50 | Rabbit | > 3160 mg/kg, 24 Hours |

| Constituents | Species | Test Results |
|---|---|---|
| *Inhalation* | | |
| LC50 | Rat | 8000 ppm, 4 Hours |
| *Oral* | | |
| LD50 | Rat | 2910 mg/kg |
| Ethylbenzene (CAS 100-41-4) | | |
| **Acute** | | |
| *Dermal* | | |
| LD50 | Rabbit | 15400 mg/kg |
| *Inhalation* | | |
| LC50 | Rat | 17.4 mg/m³, 4 Hours |
| *Oral* | | |
| LD50 | Rat | 35000 - 47000 mg/kg |
| Xylene (CAS 1330-20-7) | | |
| **Acute** | | |
| *Dermal* | | |
| LD50 | Rabbit | 12126 mg/kg, 24 Hours |
| *Inhalation* | | |
| LC50 | Rat | 6350 ppm, 4 Hours |
| *Oral* | | |
| LD50 | Rat | 3523 mg/kg |
| 1,2,4-Trimethylbenzene (CAS 95-63-6) | | |
| **Acute** | | |
| *Dermal* | | |
| LD50 | Rabbit | > 3160 mg/kg |
| *Inhalation* | | |
| LC50 | Rat | 18000 mg/m3, 4 hours |
| Naphthalene (CAS 91-20-3) | | |
| **Acute** | | |
| *Dermal* | | |
| LD50 | Rabbit | > 2 g/kg |
| *Oral* | | |
| LD50 | Rat | 490 mg/kg |

**Skin corrosion/irritation** Causes skin irritation.

**Serious eye damage/eye irritation** Direct contact with eyes may cause temporary irritation.

**Respiratory or skin sensitization**

**Respiratory sensitization** Not a respiratory sensitizer.

**Skin sensitization** This product is not expected to cause skin sensitization.

**Germ cell mutagenicity** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity** Suspected of causing cancer.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

| | |
|---|---|
| Cumene (CAS 98-82-8) | 2B Possibly carcinogenic to humans. |
| Ethylbenzene (CAS 100-41-4) | 2B Possibly carcinogenic to humans. |
| Fuels, diesel, no. 2 (CAS 68476-34-6) | 3 Not classifiable as to carcinogenicity to humans. |
| Naphthalene (CAS 91-20-3) | 2B Possibly carcinogenic to humans. |
| Xylene (CAS 1330-20-7) | 3 Not classifiable as to carcinogenicity to humans. |

**NTP Report on Carcinogens**

| | |
|---|---|
| Naphthalene (CAS 91-20-3) | Reasonably Anticipated to be a Human Carcinogen. |

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**Reproductive toxicity** This product is not expected to cause reproductive or developmental effects.

**Specific target organ toxicity - single exposure** Not classified.

**Specific target organ toxicity - repeated exposure** May cause damage to organs (blood, liver, thymus) through prolonged or repeated exposure.

**Aspiration hazard** Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

**Chronic effects** May cause damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful.

## 12. Ecological information

**Ecotoxicity** Toxic to aquatic life with long lasting effects.

| Components | | Species | Test Results |
|---|---|---|---|
| Fuels, diesel, no. 2 (CAS 68476-34-6) | | | |
| **Aquatic** | | | |
| *Acute* | | | |
| Crustacea | EL50 | Daphnia magna | 68 mg/l, 48 hours |
| Fish | LL50 | Oncorhynchus mykiss | 65 mg/l, 96 hours |

| Constituents | | Species | Test Results |
|---|---|---|---|
| Cumene (CAS 98-82-8) | | | |
| **Aquatic** | | | |
| Fish | LC50 | Rainbow trout,donaldson trout (Oncorhynchus mykiss) | 2.7 mg/l, 96 hours |
| Ethylbenzene (CAS 100-41-4) | | | |
| **Aquatic** | | | |
| Crustacea | EC50 | Daphnia | 1.81 mg/l, 48 hours |
| Fish | LC50 | Bluegill (Lepomis macrochirus) | 32 - 88 mg/l, 96 hours |
| | | Fathead minnow (Pimephales promelas) | 12.1 mg/l, 96 hours |
| 1,2,4-Trimethylbenzene (CAS 95-63-6) | | | |
| **Aquatic** | | | |
| Fish | LC50 | Fathead minnow (Pimephales promelas) | 7.19 - 8.28 mg/l, 96 hours |
| Naphthalene (CAS 91-20-3) | | | |
| **Aquatic** | | | |
| Crustacea | EC50 | Water flea (Daphnia magna) | 1.09 - 3.4 mg/l, 48 hours |
| Fish | LC50 | Pink salmon (Oncorhynchus gorbuscha) | 0.95 - 1.62 mg/l, 96 hours |

**Persistence and degradability** No data is available on the degradability of this product.

**Bioaccumulative potential**

**Mobility in soil** Expected to be mobile in soil.

**Other adverse effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## 13. Disposal considerations

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**US RCRA Hazardous Waste U List: Reference**

| | |
|---|---|
| Cumene (CAS 98-82-8) | U055 |
| Naphthalene (CAS 91-20-3) | U165 |
| Xylene (CAS 1330-20-7) | U239 |

**Waste from residues / unused products** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging** Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

## 14. Transport information

**DOT**

| | |
|---|---|
| **UN number** | UN1202 |
| **UN proper shipping name** | Gas oil |
| **Transport hazard class(es)** | |
| **Class** | 3 |
| **Subsidiary risk** | - |
| **Label(s)** | 3 |
| **Packing group** | III |
| **Environmental hazards** | |
| **Marine pollutant** | Yes |
| **Special precautions for user** | Read safety instructions, SDS and emergency procedures before handling. |
| **Special provisions** | 144, B1, IB3, T2, TP1 |
| **Packaging exceptions** | 150 |
| **Packaging non bulk** | 203 |
| **Packaging bulk** | 242 |

**IATA**

| | |
|---|---|
| **UN number** | UN1202 |
| **UN proper shipping name** | Gas oil |
| **Transport hazard class(es)** | |
| **Class** | 3 |
| **Subsidiary risk** | - |
| **Packing group** | III |
| **Environmental hazards** | No. |
| **ERG Code** | 3L |
| **Special precautions for user** | Read safety instructions, SDS and emergency procedures before handling. |

**IMDG**

| | |
|---|---|
| **UN number** | UN1202 |
| **UN proper shipping name** | Gas oil |
| **Transport hazard class(es)** | |
| **Class** | 3 |
| **Subsidiary risk** | - |
| **Label(s)** | 3 |
| **Packing group** | III |
| **Environmental hazards** | |
| **Marine pollutant** | Yes |
| **EmS** | Not available. |
| **Special precautions for user** | Read safety instructions, SDS and emergency procedures before handling. |

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not established.

**General information** DOT Regulated Marine Pollutant. IMDG Regulated Marine Pollutant.

## 15. Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

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

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

| | |
|---|---|
| Cumene (CAS 98-82-8) | LISTED |
| Ethylbenzene (CAS 100-41-4) | LISTED |
| Naphthalene (CAS 91-20-3) | LISTED |
| Xylene (CAS 1330-20-7) | LISTED |

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories** Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** Yes

**SARA 313 (TRI reporting)**

| Chemical name | CAS number | % by wt. |
|---|---|---|
| Xylene | 1330-20-7 | 0 - 1 |
| Ethylbenzene | 100-41-4 | 0 - 1 |
| Cumene | 98-82-8 | 0 - 1 |
| Naphthalene | 91-20-3 | 0 - 2 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0 - 2 |

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Cumene (CAS 98-82-8)
Ethylbenzene (CAS 100-41-4)
Naphthalene (CAS 91-20-3)
Xylene (CAS 1330-20-7)

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

**US state regulations**

**US. Massachusetts RTK - Substance List**

1,2,4-Trimethylbenzene (CAS 95-63-6)
Cumene (CAS 98-82-8)
Ethylbenzene (CAS 100-41-4)
Naphthalene (CAS 91-20-3)
Xylene (CAS 1330-20-7)

**US. New Jersey Worker and Community Right-to-Know Act**

1,2,4-Trimethylbenzene (CAS 95-63-6)
Cumene (CAS 98-82-8)
Ethylbenzene (CAS 100-41-4)
Fuels, diesel, no. 2 (CAS 68476-34-6)
Naphthalene (CAS 91-20-3)
Xylene (CAS 1330-20-7)

**US. Pennsylvania Worker and Community Right-to-Know Law**

1,2,4-Trimethylbenzene (CAS 95-63-6)
Cumene (CAS 98-82-8)
Ethylbenzene (CAS 100-41-4)
Fuels, diesel, no. 2 (CAS 68476-34-6)
Naphthalene (CAS 91-20-3)
Xylene (CAS 1330-20-7)

**US. Rhode Island RTK**

1,2,4-Trimethylbenzene (CAS 95-63-6)
Cumene (CAS 98-82-8)
Ethylbenzene (CAS 100-41-4)
Naphthalene (CAS 91-20-3)
Xylene (CAS 1330-20-7)

**US. California Proposition 65**

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

**US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**

Cumene (CAS 98-82-8)
Ethylbenzene (CAS 100-41-4)

Naphthalene (CAS 91-20-3)

**International Inventories**

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|---|---|---|
| Australia | Australian Inventory of Chemical Substances (AICS) | Yes |
| Canada | Domestic Substances List (DSL) | Yes |
| Canada | Non-Domestic Substances List (NDSL) | No |
| China | Inventory of Existing Chemical Substances in China (IECSC) | Yes |
| Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes |
| Europe | European List of Notified Chemical Substances (ELINCS) | No |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | No |
| Korea | Existing Chemicals List (ECL) | Yes |
| New Zealand | New Zealand Inventory | Yes |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | Yes |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

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

**Issue date** 10-June-2015

**Revision date** -

**Version #** 01

**HMIS® ratings** Health: 2*
Flammability: 2
Physical hazard: 0

**NFPA ratings**


**Disclaimer** Philadelphia Energy Solutions cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

# *MATERIAL SAFETY DATA SHEET*

## 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

**Product Name:** **ULSD #1 15MV-SP***

**Manufacturer Information**:

Philadelphia Energy Solutions
1735 Market Street LL

Philadelphia, Pennsylvania, 19103-7583

**Product Use**:

Diesel fuel

**Emergency Phone Numbers**:

| | | |
|---|---|---|
| Chemtrec | (800) 424-9300 | 24 Hours |

## 2. HAZARDS IDENTIFICATION

- **EMERGENCY OVERVIEW**
  Danger! Combustible liquid and vapor. Vapors may cause flash fire or explosion. Static accumulator. May form an ignitable vapor/air mixture. High vapor concentrations may cause drowsiness. May cause skin irritation. Harmful or fatal if swallowed. Pulmonary aspiration hazard. While ingesting or vomiting, may enter lungs and produce damage. Contains material or materials that may cause cancer based on animal data.

  **Hazards Ratings:**
  *Key: 0 = least, 1 = slight, 2 = moderate, 3 = high, 4 = extreme*

| | Health | Fire | Reactivity | PPI |
|---|---|---|---|---|
| NFPA | 2 | 2 | 0 | |
| HMIS | 2 | 2 | 0 | x |

- **POTENTIAL HEALTH EFFECTS**

  - **INHALATION**
    High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis and loss of consciousness and even death). High vapor concentrations are irritating to the eyes, nose, throat, and lungs. Intentional misuse (sniffing) can cause damage to the brain, liver and kidneys and may cause sudden death.

  - **SKIN**
    Practically non-toxic if absorbed through the skin. Moderately irritating to the skin. Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash). Contains a material that has caused skin tumors in laboratory animals.

  - **EYES**
    Mildly irritating to the eyes. Contact with the eye may cause redness, burning, tearing and/or blurred vision.

  - **INGESTION**
    Harmful or fatal if swallowed. Pulmonary aspiration hazard. While ingesting or vomiting, may enter lungs and produce damage.

- **PRE-EXISTING MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE**
  The following diseases or disorders may be aggravated by exposure to this product: skin, eye, nervous system, respiratory system, lung (asthma-like conditions),

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Component | CAS No. | Amount (Vol%) |
|---|---|---|
| HYDRODESULFURIZED KEROSENE | 64742-81-0 | 99.7 - 100 |
| NAPHTHALENE | 91-20-3 | 0 - 2 |
| XYLENE | 1330-20-7 | 0 - 0.9 |
| TOLUENE | 108-88-3 | 0 - 0.3 |
| ETHYL BENZENE | 100-41-4 | 0 - 0.2 |
| DIETHYLENE GLYCOL MONOETHYL ETHER | 111-90-0 | 0 - 0.12 |
| N-HEXANE | 110-54-3 | 0 - 0.1 |
| CUMENE | 98-82-8 | 0 - 0.07 |

**EXPOSURE GUIDELINES (SEE SECTION 15 FOR ADDITIONAL EXPOSURE LIMITS)**

| | CAS No. | Governing Body | Exposure Limits | | |
|---|---|---|---|---|---|
| Limit for the product | | ACGIH | TWA | 100 | ppm |
| CUMENE | 98-82-8 | ACGIH | TWA | 50 | ppm |
| CUMENE | 98-82-8 | OSHA | TWA | 50 | ppm |
| ETHYL BENZENE | 100-41-4 | ACGIH | TWA | 20 | ppm |
| ETHYL BENZENE | 100-41-4 | OSHA | TWA | 100 | ppm |
| N-HEXANE | 110-54-3 | ACGIH | TWA | 50 | ppm |
| N-HEXANE | 110-54-3 | OSHA | TWA | 500 | ppm |
| NAPHTHALENE | 91-20-3 | ACGIH | STEL | 15 | ppm |
| NAPHTHALENE | 91-20-3 | ACGIH | TWA | 10 | ppm |
| NAPHTHALENE | 91-20-3 | OSHA | TWA | 10 | ppm |
| TOLUENE | 108-88-3 | NIOSH | STEL | 150 | ppm |
| TOLUENE | 108-88-3 | ACGIH | TWA | 20 | ppm |
| TOLUENE | 108-88-3 | OSHA | TWA | 200 | ppm |
| XYLENE | 1330-20-7 | ACGIH | STEL | 150 | ppm |
| XYLENE | 1330-20-7 | ACGIH | TWA | 100 | ppm |
| XYLENE | 1330-20-7 | OSHA | TWA | 100 | ppm |
| HYDRODESULFURIZED KEROSENE | 64742-81-0 | ACGIH | TWA | 200 | mg/m3 |
| HYDRODESULFURIZED KEROSENE | 64742-81-0 | ACGIH | TLV | 30 | ppm |

## 4. FIRST AID MEASURES

- **INHALATION**
  Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and continue to monitor. Get immediate medical attention.
- **SKIN**
  Wash with soap and water for 20 minutes. Get medical attention if irritation develops or persists. Wash clothing before reuse.
- **EYES**
  Flush eye with water for 20 minutes. Get medical attention.
- **INGESTION**
  Do not induce vomiting! Do not give liquids! Get medical attention immediately.

## 5. FIRE FIGHTING MEASURES

- **EXTINGUISHING MEDIA**
  Regular foam; Dry chemical; Carbon dioxide; Water may be ineffective.
- **FIRE FIGHTING INSTRUCTIONS**
  Use water spray to cool fire exposed tanks and containers. Wear structural fire fighting gear. The use of fresh air equipment such as Self Contained Breathing Apparatus (SCBA) or Supplied Air Respirators should be worn for fire fighting if exposure or potential exposure to products of combustion is expected.
- **FLAMMABLE PROPERTIES**
  Combustible liquid and vapor. STATIC ACCUMULATOR. This liquid may form an ignitable vapor-air mixture in closed tanks or containers.

| | Typical | Minimum | Maximum | Text Result | Units | Method |
|---|---|---|---|---|---|---|
| Flash Point | | | | 125 min | F | PMCC |
| Autoignition Temperature | | | | 410 est | F | N/A |
| Lower Explosion Limit | | | | No data | % | N/A |
| Upper Explosion Limit | | | | No data | % | N/A |

## 6. ACCIDENTAL RELEASE MEASURES

Prevent ignition, stop leak and ventilate the area. Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Use appropriate personal protective equipment as stated in Section 8 of this MSDS. Advise the Environmental Protection Agency (EPA) and appropriate state agencies, if required. Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Vacuum or sweep up material and place in a disposal container.

## 7. HANDLING AND STORAGE

- **HANDLING**
  Follow all MSDS/label precautions even after container is emptied because it may retain product residue. Use only in a well-ventilated area. STATIC ACCUMULATOR. This liquid may form an ignitable vapor-air mixture in closed tanks or containers. This liquid may accumulate static electricity even when transferred into properly grounded containers. Bonding and grounding may be insufficient to remove static electricity. Static electricity accumulation may be significantly increased by the presence of small quantities of water.Always bond receiving container to the fill pipe before and during loading, following NFPA-77 and/or API RP 2003 requirements. Automatic gauging devices and other floats in vessels or tanks which contain static accumulating liquids should be electrically bonded to the shell. Bonding and grounding alone may be inadequate to eliminate fire and explosion hazards associated with electrostatic charges. In addition to bonding and grounding, efforts to mitigate the hazards of an electrostatic discharge may include, but are not limited to, ventilation, inerting and/or reduction of transfer velocities. Always keep the nozzle in contact with the container throughout the loading process. Do not fill any portable containers in or on a vehicle. Special precautions, such as reduced loading rates and increased monitoring, must be observed during "switch loading" operations (i.e. loading this material in tanks or shipping compartments that previously contained middle distillates or similar products). Non-equilibrium conditions may increase the risks associated with static electricity such as tank and container filling, tank cleaning, sampling, gauging, loading, filtering, mixing, agitation, etc. Dissipation of electrostatic charges may be improved with the use of conductivity additives when used with other mitigating efforts, including bonding and grounding. Avoid breathing (dust, vapor, mist, gas). Avoid prolonged or repeated contact with skin. Avoid contact with eyes. Wash thoroughly after handling. Never siphon by mouth. "Empty" containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Empty drums should be completely drained, properly bunged, and promptly returned to a drum reconditioned, or properly disposed of.
- **STORAGE**
  Keep away from heat, sparks, and flame. Keep container closed when not in use. Store in a cool place in original container and protect from sunlight. Outside or detached storage is preferred. NFPA class II storage. Flash point is greater than 100 degrees F and less than 140 degrees F.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Consult With a Health and Safety Professional for Specific Selections

- **ENGINEERING CONTROLS**
  Use with adequate ventilation. Mechanical ventilation recommended. Good general ventilation should be sufficient to control airborne levels.
- **PERSONAL PROTECTION**

  - **EYE PROTECTION**
    Splash proof chemical goggles are recommended to protect against the splash of product.
  - **GLOVES or HAND PROTECTION**
    The glove(s) listed below may provide protection against permeation. Gloves of other chemically resistant materials may not provide adequate protection. Protective gloves are recommended to protect against contact with product. Polyvinyl chloride (PVC); Neoprene; Nitrile; Polyvinyl alcohol; Viton; Polyethylene;
  - **RESPIRATORY PROTECTION**
    Concentration in air determines the level of respiratory protection needed. Use only NIOSH certified respiratory equipment. Half-mask air purifying respirator with organic vapor cartridges is acceptable for exposures to ten (10) times the exposure limit. Full-face air purifying respirator with organic vapor cartridges is acceptable for exposures to fifty (50) times the exposure limit. Exposure should not exceed the cartridge limit of 1000 ppm. Protection by air purifying respirators is limited. Use a positive pressure-demand full-face supplied air respirator or SCBA for exposures greater than fifty (50) times the exposure limit. If exposure is above the IDLH (Immediately Dangerous to Life and Health) or there is the possibility of an uncontrolled release, or exposure levels are unknown, then use a positive pressure-demand full-face supplied air respirator with escape bottle or SCBA. Wear a NIOSH-approved (or equivalent) full-facepiece airline respirator in the positive pressure mode with emergency escape provisions.
  - **OTHER**
    Where splashing is possible, full chemically resistant protective clothing and boots are required. The following materials are acceptable for use as protective clothing: Polyvinyl alcohol (PVA); Polyvinyl chloride (PVC); Neoprene; Nitrile; Viton; Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Remove contaminated clothing and wash before reuse. For non-fire emergencies, positive pressure SCBA and structural firefighter's protective clothing will provide only limited protection.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

| Physical Property | Typical | Units | Text Result | Reference |
|---|---|---|---|---|
| Appearance | | other | colorless fluid | |
| Boiling Point | | F | | |
| Bulk Density | | lb/gal | No data | |
| Liquid Conductivity | | ft^2 | | |
| Melting Point | | F | No data | |
| Molecular Weight | | g/mole | No data | |
| Octanol/Water Coefficient | | other | No data | |
| pH | | other | No data | |
| Specific Gravity | 0.81 | other | | |
| Solubility In Water | | wt % | Nil | |
| Odor | | other | Kerosene-like | |
| Odor Threshold | | other | No data | |
| Vapor Pressure | | mmHg | 20 C | |
| Viscosity (F) | | other | No data | |
| Viscosity (C) | 8 | CsT | -20 C | |
| % Volatile | 100 | wt % | | |

## 10. STABILITY AND REACTIVITY

- **STABILITY**
  Stable
- **CONDITIONS TO AVOID**
  Avoid heat, sparks and open flame.
- **INCOMPATIBILITY**
  The following materials are incompatible with this product: Strong oxidizers such as chlorine, peroxides, chromates, nitric acid, perchlorates, concentrated oxygen, sodium hypochlorite, calcium hypochlorite and permanganates. Chlorine; Concentrated oxygen; Sodium hypochlorite; Calcium hypochlorite;
- **HAZARDOUS DECOMPOSITION PRODUCTS**
  Combustion may produce carbon monoxide, carbon dioxide and other asphyxiants.
- **HAZARDOUS POLYMERIZATION**
  Will not polymerize.

## 11. TOXICOLOGY INFORMATION

**Single Exposure Health Effects**

**Oral:**

| | |
|---|---|
| **LD50 (g/kg):** | No data |

**Dermal:**

| | |
|---|---|
| **LD50 (mg/kg):** | No data |

**Inhalation:**

| | |
|---|---|
| **LC50 (mg/l):** | No data |
| **LC50 (mg/m3):** | No data |
| **LC50 (ppm):** | No data |

**Component Toxicity Information**

Cumene may be harmful or fatal if swallowed. Pulmonary aspiration hazard. After ingestion, may enter lungs and cause damage. May cause respiratory irritation, fluid in the lungs and lung damage. May be irritating to the skin and eyes. May cause nervous system effects, including drowsiness, dizziness, coma and even death. Overexposure has caused kidney, nose, and liver damage in laboratory animals. Following inhalation exposure, an increased tumor incidence has been observed in experimental animals. The significance of this finding to human health is presently unknown. Overexposure to naphthalene, a minor component of this product, may cause skin, eye and respiratory tract irritation, anemia, loss of vision, nervous system effects and kidney and thymus damage. Also, exposure to naphthalene has produced "respiratory tract" tumors in laboratory animals.

**Additional Toxicology Information**

Dermal exposure to middle distillates have caused skin irritation and skin cancer in laboratory animals when repeatedly applied and left in place between applications. Studies to further evaluate the carcinogenic potential of middle distillates are currently underway.

## 12. ECOLOGICAL INFORMATION

No data available

## 13. DISPOSAL CONSIDERATIONS

Follow federal, state and local regulations. This material is a RCRA hazardous waste. Do not flush material to drain or storm sewer. Contract to authorized disposal service.

## 14. TRANSPORT INFORMATION

| Governing Body | Mode | Proper Shipping Name |
|---|---|---|
| IATA | Air | Not Determined |
| DOT | Ground | Fuel Oil |

| Governing Body | Mode | Hazard Class | UN/NA No. | Label |
|---|---|---|---|---|
| IATA | Air | Not Determined | | |
| DOT | Ground | Combustible Liquid | NA1993 | |

## 15. REGULATORY INFORMATION

This product contains the following EPCRA section 313 chemicals subject to the reporting requirements of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372): Maximum Wt% Naphthalene- CAS Number 91-20-3, 4.2%; %; Ethyl benzene- CAS Number 100-41-4, 0.2%; Xylene CAS-Number 1330-20-7, 1%. Benzene- CAS Number 71-43-2, 0.1%.The remaining Sara 313 components listed in Section 14 of the MSDS are less than the reported de minimis levels. This information must be included in all MSDSs that are copied and distributed for this material.

| Regulatory List | Component | CAS No. |
|---|---|---|
| ACGIH - Occupational Exposure Limits - Carcinogens | ETHYL BENZENE | 100-41-4 |
| ACGIH - Occupational Exposure Limits - Carcinogens | HYDRODESULFURIZED KEROSENE | 64742-81-0 |
| ACGIH - Occupational Exposure Limits - Carcinogens | NAPHTHALENE | 91-20-3 |
| ACGIH - Occupational Exposure Limits - Carcinogens | TOLUENE | 108-88-3 |
| ACGIH - Occupational Exposure Limits - Carcinogens | XYLENE | 1330-20-7 |
| ACGIH - Occupational Exposure Limits - TWAs | CUMENE | 98-82-8 |
| ACGIH - Occupational Exposure Limits - TWAs | ETHYL BENZENE | 100-41-4 |
| ACGIH - Occupational Exposure Limits - TWAs | HYDRODESULFURIZED KEROSENE | 64742-81-0 |
| ACGIH - Occupational Exposure Limits - TWAs | N-HEXANE | 110-54-3 |
| ACGIH - Occupational Exposure Limits - TWAs | NAPHTHALENE | 91-20-3 |
| ACGIH - Occupational Exposure Limits - TWAs | TOLUENE | 108-88-3 |
| ACGIH - Occupational Exposure Limits - TWAs | XYLENE | 1330-20-7 |
| ACGIH - Short Term Exposure Limits | ETHYL BENZENE | 100-41-4 |
| ACGIH - Short Term Exposure Limits | NAPHTHALENE | 91-20-3 |
| ACGIH - Short Term Exposure Limits | XYLENE | 1330-20-7 |
| ACGIH - Skin Absorption Designation | HYDRODESULFURIZED KEROSENE | 64742-81-0 |
| ACGIH - Skin Absorption Designation | N-HEXANE | 110-54-3 |
| ACGIH - Skin Absorption Designation | NAPHTHALENE | 91-20-3 |
| CAA (Clean Air Act) - HON Rule - Organic HAPs | CUMENE | 98-82-8 |
| CAA (Clean Air Act) - HON Rule - Organic HAPs | ETHYL BENZENE | 100-41-4 |
| CAA (Clean Air Act) - HON Rule - Organic HAPs | N-HEXANE | 110-54-3 |
| CAA (Clean Air Act) - HON Rule - Organic HAPs | NAPHTHALENE | 91-20-3 |
| CAA (Clean Air Act) - HON Rule - Organic HAPs | TOLUENE | 108-88-3 |
| CAA (Clean Air Act) - HON Rule - Organic HAPs | XYLENE | 1330-20-7 |
| CAA (Clean Air Act) - HON Rule - SOCMI Chemicals | CUMENE | 98-82-8 |
| CAA (Clean Air Act) - HON Rule - SOCMI Chemicals | DIETHYLENE GLYCOL MONOETHYL ETHER | 111-90-0 |
| CAA (Clean Air Act) - HON Rule - SOCMI Chemicals | ETHYL BENZENE | 100-41-4 |
| CAA (Clean Air Act) - HON Rule - SOCMI Chemicals | N-HEXANE | 110-54-3 |
| CAA (Clean Air Act) - HON Rule - SOCMI Chemicals | NAPHTHALENE | 91-20-3 |

| | | |
|---|---|---|
| CAA (Clean Air Act) - HON Rule - SOCMI Chemicals | TOLUENE | 108-88-3 |
| CAA (Clean Air Act) - HON Rule - SOCMI Chemicals | XYLENE | 1330-20-7 |
| CAA (Clean Air Act) - VOCs in SOCMI | CUMENE | 98-82-8 |
| CAA (Clean Air Act) - VOCs in SOCMI | DIETHYLENE GLYCOL MONOETHYL ETHER | 111-90-0 |
| CAA (Clean Air Act) - VOCs in SOCMI | ETHYL BENZENE | 100-41-4 |
| CAA (Clean Air Act) - VOCs in SOCMI | TOLUENE | 108-88-3 |
| CAA (Clean Air Act) - VOCs in SOCMI | XYLENE | 1330-20-7 |
| CAA - 1990 Hazardous Air Pollutants | CUMENE | 98-82-8 |
| CAA - 1990 Hazardous Air Pollutants | ETHYL BENZENE | 100-41-4 |
| CAA - 1990 Hazardous Air Pollutants | N-HEXANE | 110-54-3 |
| CAA - 1990 Hazardous Air Pollutants | NAPHTHALENE | 91-20-3 |
| CAA - 1990 Hazardous Air Pollutants | TOLUENE | 108-88-3 |
| CAA - 1990 Hazardous Air Pollutants | XYLENE | 1330-20-7 |
| California - Prop. 65 - Developmental Toxicity | TOLUENE | 108-88-3 |
| California - Prop. 65 - Reproductive - Female | TOLUENE | 108-88-3 |
| California - Proposition 65 - Carcinogens List | ETHYL BENZENE | 100-41-4 |
| California - Proposition 65 - Carcinogens List | NAPHTHALENE | 91-20-3 |
| Canada - WHMIS - Ingredient Disclosure | DIETHYLENE GLYCOL MONOETHYL ETHER | 111-90-0 |
| Canada - WHMIS - Ingredient Disclosure | ETHYL BENZENE | 100-41-4 |
| Canada - WHMIS - Ingredient Disclosure | N-HEXANE | 110-54-3 |
| Canada - WHMIS - Ingredient Disclosure | TOLUENE | 108-88-3 |
| CERCLA/SARA - Haz Substances and their RQs | CUMENE | 98-82-8 |
| CERCLA/SARA - Haz Substances and their RQs | ETHYL BENZENE | 100-41-4 |
| CERCLA/SARA - Haz Substances and their RQs | N-HEXANE | 110-54-3 |
| CERCLA/SARA - Haz Substances and their RQs | NAPHTHALENE | 91-20-3 |
| CERCLA/SARA - Haz Substances and their RQs | TOLUENE | 108-88-3 |
| CERCLA/SARA - Haz Substances and their RQs | XYLENE | 1330-20-7 |
| CERCLA/SARA - Section 313 - Emission Reporting | CUMENE | 98-82-8 |
| CERCLA/SARA - Section 313 - Emission Reporting | ETHYL BENZENE | 100-41-4 |
| CERCLA/SARA - Section 313 - Emission Reporting | N-HEXANE | 110-54-3 |
| CERCLA/SARA - Section 313 - Emission Reporting | NAPHTHALENE | 91-20-3 |
| CERCLA/SARA - Section 313 - Emission Reporting | TOLUENE | 108-88-3 |
| CERCLA/SARA - Section 313 - Emission Reporting | XYLENE | 1330-20-7 |
| CWA (Clean Water Act) - Hazardous Substances | ETHYL BENZENE | 100-41-4 |
| CWA (Clean Water Act) - Hazardous Substances | NAPHTHALENE | 91-20-3 |
| CWA (Clean Water Act) - Hazardous Substances | TOLUENE | 108-88-3 |
| CWA (Clean Water Act) - Hazardous Substances | XYLENE | 1330-20-7 |
| CWA (Clean Water Act) - Priority Pollutants | ETHYL BENZENE | 100-41-4 |
| CWA (Clean Water Act) - Priority Pollutants | NAPHTHALENE | 91-20-3 |
| CWA (Clean Water Act) - Priority Pollutants | TOLUENE | 108-88-3 |
| CWA (Clean Water Act) - Toxic Pollutants | ETHYL BENZENE | 100-41-4 |
| CWA (Clean Water Act) - Toxic Pollutants | NAPHTHALENE | 91-20-3 |
| CWA (Clean Water Act) - Toxic Pollutants | TOLUENE | 108-88-3 |
| DEA - List II Essential Chemicals | TOLUENE | 108-88-3 |
| IARC - Group 2B (Possibly carcinogenic to humans) | ETHYL BENZENE | 100-41-4 |
| IARC - Group 2B (Possibly carcinogenic to humans) | NAPHTHALENE | 91-20-3 |
| IARC - Group 3 (not classifiable) | TOLUENE | 108-88-3 |
| IARC - Group 3 (not classifiable) | XYLENE | 1330-20-7 |
| Inventory - Australia (AICS) | CUMENE | 98-82-8 |
| Inventory - Australia (AICS) | DIETHYLENE GLYCOL MONOETHYL ETHER | 111-90-0 |
| Inventory - Australia (AICS) | ETHYL BENZENE | 100-41-4 |
| Inventory - Australia (AICS) | HYDRODESULFURIZED KEROSENE | 64742-81-0 |
| Inventory - Australia (AICS) | N-HEXANE | 110-54-3 |
| Inventory - Australia (AICS) | NAPHTHALENE | 91-20-3 |
| Inventory - Australia (AICS) | TOLUENE | 108-88-3 |
| Inventory - Australia (AICS) | XYLENE | 1330-20-7 |
| Inventory - Canada - Domestic Substances List | CUMENE | 98-82-8 |

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|---|---|---|
| Inventory - Canada - Domestic Substances List | DIETHYLENE GLYCOL MONOETHYL ETHER | 111-90-0 |
| Inventory - Canada - Domestic Substances List | ETHYL BENZENE | 100-41-4 |
| Inventory - Canada - Domestic Substances List | HYDRODESULFURIZED KEROSENE | 64742-81-0 |
| Inventory - Canada - Domestic Substances List | N-HEXANE | 110-54-3 |
| Inventory - Canada - Domestic Substances List | NAPHTHALENE | 91-20-3 |
| Inventory - Canada - Domestic Substances List | TOLUENE | 108-88-3 |
| Inventory - Canada - Domestic Substances List | XYLENE | 1330-20-7 |
| Inventory - China | CUMENE | 98-82-8 |
| Inventory - China | DIETHYLENE GLYCOL MONOETHYL ETHER | 111-90-0 |
| Inventory - China | ETHYL BENZENE | 100-41-4 |
| Inventory - China | HYDRODESULFURIZED KEROSENE | 64742-81-0 |
| Inventory - China | N-HEXANE | 110-54-3 |
| Inventory - China | NAPHTHALENE | 91-20-3 |
| Inventory - China | TOLUENE | 108-88-3 |
| Inventory - China | XYLENE | 1330-20-7 |
| Inventory - European EINECS Inventory | CUMENE | 98-82-8 |
| Inventory - European EINECS Inventory | DIETHYLENE GLYCOL MONOETHYL ETHER | 111-90-0 |
| Inventory - European EINECS Inventory | ETHYL BENZENE | 100-41-4 |
| Inventory - European EINECS Inventory | HYDRODESULFURIZED KEROSENE | 64742-81-0 |
| Inventory - European EINECS Inventory | N-HEXANE | 110-54-3 |
| Inventory - European EINECS Inventory | NAPHTHALENE | 91-20-3 |
| Inventory - European EINECS Inventory | TOLUENE | 108-88-3 |
| Inventory - European EINECS Inventory | XYLENE | 1330-20-7 |
| Inventory - Japan - (ENCS) | CUMENE | 98-82-8 |
| Inventory - Japan - (ENCS) | DIETHYLENE GLYCOL MONOETHYL ETHER | 111-90-0 |
| Inventory - Japan - (ENCS) | ETHYL BENZENE | 100-41-4 |
| Inventory - Japan - (ENCS) | N-HEXANE | 110-54-3 |
| Inventory - Japan - (ENCS) | NAPHTHALENE | 91-20-3 |
| Inventory - Japan - (ENCS) | TOLUENE | 108-88-3 |
| Inventory - Japan - (ENCS) | XYLENE | 1330-20-7 |
| Inventory - Korea - Existing and Evaluated | CUMENE | 98-82-8 |
| Inventory - Korea - Existing and Evaluated | DIETHYLENE GLYCOL MONOETHYL ETHER | 111-90-0 |
| Inventory - Korea - Existing and Evaluated | ETHYL BENZENE | 100-41-4 |
| Inventory - Korea - Existing and Evaluated | HYDRODESULFURIZED KEROSENE | 64742-81-0 |
| Inventory - Korea - Existing and Evaluated | N-HEXANE | 110-54-3 |
| Inventory - Korea - Existing and Evaluated | NAPHTHALENE | 91-20-3 |
| Inventory - Korea - Existing and Evaluated | TOLUENE | 108-88-3 |
| Inventory - Korea - Existing and Evaluated | XYLENE | 1330-20-7 |
| Inventory - New Zealand | CUMENE | 98-82-8 |
| Inventory - New Zealand | DIETHYLENE GLYCOL MONOETHYL ETHER | 111-90-0 |
| Inventory - New Zealand | ETHYL BENZENE | 100-41-4 |
| Inventory - New Zealand | HYDRODESULFURIZED KEROSENE | 64742-81-0 |
| Inventory - New Zealand | N-HEXANE | 110-54-3 |
| Inventory - New Zealand | NAPHTHALENE | 91-20-3 |
| Inventory - New Zealand | TOLUENE | 108-88-3 |
| Inventory - New Zealand | XYLENE | 1330-20-7 |
| Inventory - Philippines Inventory (PICCS) | CUMENE | 98-82-8 |
| Inventory - Philippines Inventory (PICCS) | DIETHYLENE GLYCOL MONOETHYL ETHER | 111-90-0 |
| Inventory - Philippines Inventory (PICCS) | ETHYL BENZENE | 100-41-4 |

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| Inventory - Philippines Inventory (PICCS) | HYDRODESULFURIZED KEROSENE | 64742-81-0 |
| Inventory - Philippines Inventory (PICCS) | N-HEXANE | 110-54-3 |
| Inventory - Philippines Inventory (PICCS) | NAPHTHALENE | 91-20-3 |
| Inventory - Philippines Inventory (PICCS) | TOLUENE | 108-88-3 |
| Inventory - Philippines Inventory (PICCS) | XYLENE | 1330-20-7 |
| Inventory - TSCA - Sect. 8(b) Inventory | CUMENE | 98-82-8 |
| Inventory - TSCA - Sect. 8(b) Inventory | DIETHYLENE GLYCOL MONOETHYL ETHER | 111-90-0 |
| Inventory - TSCA - Sect. 8(b) Inventory | ETHYL BENZENE | 100-41-4 |
| Inventory - TSCA - Sect. 8(b) Inventory | HYDRODESULFURIZED KEROSENE | 64742-81-0 |
| Inventory - TSCA - Sect. 8(b) Inventory | N-HEXANE | 110-54-3 |
| Inventory - TSCA - Sect. 8(b) Inventory | NAPHTHALENE | 91-20-3 |
| Inventory - TSCA - Sect. 8(b) Inventory | TOLUENE | 108-88-3 |
| Inventory - TSCA - Sect. 8(b) Inventory | XYLENE | 1330-20-7 |
| Massachusetts - Right To Know List | CUMENE | 98-82-8 |
| Massachusetts - Right To Know List | ETHYL BENZENE | 100-41-4 |
| Massachusetts - Right To Know List | N-HEXANE | 110-54-3 |
| Massachusetts - Right To Know List | NAPHTHALENE | 91-20-3 |
| Massachusetts - Right To Know List | TOLUENE | 108-88-3 |
| Massachusetts - Right To Know List | XYLENE | 1330-20-7 |
| New Jersey - Department of Health RTK List | CUMENE | 98-82-8 |
| New Jersey - Department of Health RTK List | ETHYL BENZENE | 100-41-4 |
| New Jersey - Department of Health RTK List | N-HEXANE | 110-54-3 |
| New Jersey - Department of Health RTK List | NAPHTHALENE | 91-20-3 |
| New Jersey - Department of Health RTK List | TOLUENE | 108-88-3 |
| New Jersey - Department of Health RTK List | XYLENE | 1330-20-7 |
| New Jersey - Env Hazardous Substances List | CUMENE | 98-82-8 |
| New Jersey - Env Hazardous Substances List | ETHYL BENZENE | 100-41-4 |
| New Jersey - Env Hazardous Substances List | N-HEXANE | 110-54-3 |
| New Jersey - Env Hazardous Substances List | NAPHTHALENE | 91-20-3 |
| New Jersey - Env Hazardous Substances List | TOLUENE | 108-88-3 |
| New Jersey - Env Hazardous Substances List | XYLENE | 1330-20-7 |
| New Jersey - Special Hazardous Substances | CUMENE | 98-82-8 |
| New Jersey - Special Hazardous Substances | ETHYL BENZENE | 100-41-4 |
| New Jersey - Special Hazardous Substances | N-HEXANE | 110-54-3 |
| New Jersey - Special Hazardous Substances | NAPHTHALENE | 91-20-3 |
| New Jersey - Special Hazardous Substances | TOLUENE | 108-88-3 |
| New Jersey - Special Hazardous Substances | XYLENE | 1330-20-7 |
| NTP - Report on Carcinogens - Suspect Carcinogens | NAPHTHALENE | 91-20-3 |
| OSHA - Final PELs - Ceiling Limits | TOLUENE | 108-88-3 |
| OSHA - Final PELs - Skin Notations | CUMENE | 98-82-8 |
| OSHA - Final PELs - Time Weighted Averages | CUMENE | 98-82-8 |
| OSHA - Final PELs - Time Weighted Averages | ETHYL BENZENE | 100-41-4 |
| OSHA - Final PELs - Time Weighted Averages | N-HEXANE | 110-54-3 |
| OSHA - Final PELs - Time Weighted Averages | NAPHTHALENE | 91-20-3 |
| OSHA - Final PELs - Time Weighted Averages | TOLUENE | 108-88-3 |
| OSHA - Final PELs - Time Weighted Averages | XYLENE | 1330-20-7 |
| OSHA - Hazard Communication Carcinogens | ETHYL BENZENE | 100-41-4 |
| OSHA - Hazard Communication Carcinogens | NAPHTHALENE | 91-20-3 |
| Pennsylvania - RTK (Right to Know) List | CUMENE | 98-82-8 |
| Pennsylvania - RTK (Right to Know) List | ETHYL BENZENE | 100-41-4 |
| Pennsylvania - RTK (Right to Know) List | N-HEXANE | 110-54-3 |
| Pennsylvania - RTK (Right to Know) List | NAPHTHALENE | 91-20-3 |
| Pennsylvania - RTK (Right to Know) List | TOLUENE | 108-88-3 |
| Pennsylvania - RTK (Right to Know) List | XYLENE | 1330-20-7 |
| Pennsylvania - RTK - Environmental Hazard List | CUMENE | 98-82-8 |
| Pennsylvania - RTK - Environmental Hazard List | ETHYL BENZENE | 100-41-4 |
| Pennsylvania - RTK - Environmental Hazard List | NAPHTHALENE | 91-20-3 |
| Pennsylvania - RTK - Environmental Hazard List | TOLUENE | 108-88-3 |

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| Pennsylvania - RTK - Environmental Hazard List | XYLENE | 1330-20-7 |
| TSCA - Sect. 12(b) - Export Notification | NAPHTHALENE | 91-20-3 |
| TSCA - Section 4 - Chemical Test Rules | NAPHTHALENE | 91-20-3 |
| U.S. - DOT - Hazardous Substances and RQs (App A) | CUMENE | 98-82-8 |
| U.S. - DOT - Hazardous Substances and RQs (App A) | ETHYL BENZENE | 100-41-4 |
| U.S. - DOT - Hazardous Substances and RQs (App A) | N-HEXANE | 110-54-3 |
| U.S. - DOT - Hazardous Substances and RQs (App A) | NAPHTHALENE | 91-20-3 |
| U.S. - DOT - Hazardous Substances and RQs (App A) | TOLUENE | 108-88-3 |
| U.S. - DOT - Hazardous Substances and RQs (App A) | XYLENE | 1330-20-7 |

**Title III Classifications Sections 311,312:**

- Acute: **YES**
- Chronic: **YES**
- Fire: **YES**
- Reactivity: **NO**
- Sudden Release of Pressure: **NO**

## 16. OTHER INFORMATION

Follow all MSDS/label precautions even after container is emptied because it may retain product residue. Email Address: For MSDS requests/information please contact sunocomsds@sunocoinc.com