

## 1. Identification

|   |   |  |
|---|---|--|
| <b>Product identifier</b>                                     | <b>Engine Shampoo and Degreaser</b>   |  |
| <b>Other means of identification</b>                          |   |  |
| <b>FIR No.</b>  | 187340  |  |
| <b>Recommended use</b>  | Engine shampoo and degreaser  |  |
| <b>Recommended restrictions</b>                               | None known.   |  |
| <b>Manufacturer/Importer/Supplier/Distributor information</b> |   |  |
| <b>Supplier</b>   |   |  |
| <b>Company Name</b>   | Ford Motor Company  |  |
| <b>Address</b>  | Attention: MSDS Information, P.O. Box 1899<br>Dearborn, Michigan 48121<br>USA                                     |  |
| <b>Telephone</b>  | 1-800-392-3673  |  |
| <b>MSDS Information</b>                                       | 1-800-448-2063<br>msds@brownart.com   |  |
| <b>Emergency telephone numbers</b>                            | Poison Control Center: USA and Canada: 1-800-959-3673<br>INFOTRAC (Transportation): USA and Canada 1-800-535-5053 |  |

## 2. Hazard(s) identification

|                              |  |               |
|------------------------------|--|---------------|
| <b>Physical hazards</b>      | Flammable aerosols                                     | Category 2    |
|                              | Gases under pressure                                   | Dissolved gas |
| <b>Health hazards</b>        | Carcinogenicity  | Category 2    |
|                              | Aspiration hazard                                      | Category 1    |
| <b>Environmental hazards</b> | Hazardous to the aquatic environment, acute hazard     | Category 2    |
|                              | Hazardous to the aquatic environment, long-term hazard | Category 2    |
| <b>OSHA defined hazards</b>  | Not classified.  |               |

### Label elements



|                                |   |
|--------------------------------|---|
| <b>Signal word</b>             | Danger  |
| <b>Hazard statement</b>        | Flammable aerosol. Contains gas under pressure; may explode if heated. May be fatal if swallowed and enters airways. Suspected of causing cancer. Toxic to aquatic life. Toxic to aquatic life with long lasting effects.   |
| <b>Precautionary statement</b> |   |
| <b>Prevention</b>              | 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. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. |
| <b>Response</b>                | If swallowed: Immediately call a poison center/doctor. If exposed or concerned: Get medical advice/attention. Do NOT induce vomiting. Collect spillage.   |
| <b>Storage</b>                 | Store locked up. Protect from sunlight. Store in a well-ventilated place. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.  |
| <b>Disposal</b>                | Dispose of contents/container in accordance with local/regional/national/international regulations.   |

**Hazard(s) not otherwise classified (HNOC)** May cause irritation of respiratory tract. May irritate eyes and skin. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. May be harmful if absorbed through skin.

**Supplemental information** None.

### 3. Composition/information on ingredients

#### Mixtures

| Chemical name                               | Common name and synonyms | CAS number | %         |
|---|--------------------------|------------|-----------|
| Distillates (petroleum), hydrotreated light |                          | 64742-47-8 | 20 - < 30 |
| 2-BUTOXYETHANOL                             |                          | 111-76-2   | 1 - < 3   |
| BUTANE                                      |                          | 106-97-8   | 1 - < 3   |
| PROPANE                                     |                          | 74-98-6    | 1 - <= 3  |
| Solvent naphtha (petroleum), heavy arom.    |                          | 64742-94-5 | 1 - <= 3  |
| ammonia, anhydrous                          |                          | 7664-41-7  | < 1       |
| NAPHTHALENE                                 |                          | 91-20-3    | < 1       |

Specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

### 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** Wash off with soap and water. Get medical attention if irritation develops and persists. Take off contaminated clothing and wash before reuse.

**Eye contact** Immediately flush eyes with plenty of water for at least 15 minutes. 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.

**Most important symptoms/effects, acute and delayed** Headache. Nausea, vomiting. Aspiration may cause pulmonary edema and pneumonitis.

**Indication of immediate medical attention and special treatment needed** Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

**General information** 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.

### 5. Fire-fighting measures

**Suitable extinguishing media** Alcohol resistant foam. Water fog. Dry chemical powder. Dry chemicals. 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** Contents under pressure. Pressurized container may explode when exposed to heat or flame. During fire, gases hazardous to health may be formed. Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

**Special protective equipment and precautions for firefighters** Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

**Fire fighting equipment/instructions** In case of fire: Stop leak if safe to do so. Do not move cargo or vehicle if cargo has been exposed to heat. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions. ALWAYS stay away from tanks engulfed in flame. Move containers from fire area if you can do so without risk. Cool containers exposed to heat with water spray and remove container, if no risk is involved. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

**Specific methods** Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. In the event of fire and/or explosion do not breathe fumes.

**General fire hazards** Flammable aerosol. Contents under pressure. Pressurized container may explode when exposed to heat or flame.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of vapors or mists. Avoid contact with eyes, skin, and clothing. 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

Refer to attached safety data sheets and/or instructions for use. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material.

**Large Spills:** Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Use water spray to reduce vapors or divert vapor cloud drift. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Scoop up used absorbent into drums or other appropriate container. Prevent product from entering drains. Following product recovery, flush area with water.

**Small Spills:** Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

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. Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. All equipment used when handling the product must be grounded. Avoid breathing mist or vapor. Do not get in eyes, on skin, or on clothing. Avoid prolonged or repeated contact with skin. Avoid prolonged exposure. Should be handled in closed systems, if possible. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

### Conditions for safe storage, including any incompatibilities

Store locked up. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Keep away from heat and sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Secure cylinders in an upright position at all times, close all valves when not in use. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Store in accordance with local/regional/national/international regulation.

## 8. Exposure controls/personal protection

### Occupational exposure limits

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

| Components  | Type | Value                 |
|---|------|-----------------------|
| 2-BUTOXYETHANOL (CAS 111-76-2)                            | PEL  | 240 mg/m3             |
| ammonia, anhydrous (CAS 7664-41-7)                        | PEL  | 50 ppm<br>35 mg/m3    |
| NAPHTHALENE (CAS 91-20-3)                                 | PEL  | 50 ppm<br>50 mg/m3    |
| PROPANE (CAS 74-98-6)                                     | PEL  | 10 ppm<br>1800 mg/m3  |
| Solvent naphtha (petroleum), heavy arom. (CAS 64742-94-5) | PEL  | 1000 ppm<br>400 mg/m3 |
|   |      | 100 ppm               |

**US. ACGIH Threshold Limit Values**

| Components                         | Type | Value    |
|------------------------------------|------|----------|
| 2-BUTOXYETHANOL (CAS 111-76-2)     | TWA  | 20 ppm   |
| ammonia, anhydrous (CAS 7664-41-7) | STEL | 35 ppm   |
|                                    | TWA  | 25 ppm   |
| BUTANE (CAS 106-97-8)              | STEL | 1000 ppm |
| NAPHTHALENE (CAS 91-20-3)          | TWA  | 10 ppm   |

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

| Components   | Type | Value      |
|--|------|------------|
| 2-BUTOXYETHANOL (CAS 111-76-2)                               | TWA  | 24 mg/m3   |
|  |      | 5 ppm      |
| ammonia, anhydrous (CAS 7664-41-7)                           | STEL | 27 mg/m3   |
|  |      | 35 ppm     |
|  | TWA  | 18 mg/m3   |
|  |      | 25 ppm     |
| BUTANE (CAS 106-97-8)  | TWA  | 1900 mg/m3 |
|  |      | 800 ppm    |
| Distillates (petroleum), hydrotreated light (CAS 64742-47-8) | TWA  | 100 mg/m3  |
| NAPHTHALENE (CAS 91-20-3)                                    | STEL | 75 mg/m3   |
|  |      | 15 ppm     |
|  | TWA  | 50 mg/m3   |
|  |      | 10 ppm     |
| PROPANE (CAS 74-98-6)  | TWA  | 1800 mg/m3 |
|  |      | 1000 ppm   |
| Solvent naphtha (petroleum), heavy arom. (CAS 64742-94-5)    | TWA  | 400 mg/m3  |
|  |      | 100 ppm    |

**Biological limit values****ACGIH Biological Exposure Indices**

| Components                     | Value    | Determinant                              | Specimen            | Sampling Time |
|--------------------------------|----------|--|---------------------|---------------|
| 2-BUTOXYETHANOL (CAS 111-76-2) | 200 mg/g | Butoxyacetic acid (BAA), with hydrolysis | Creatinine in urine | *             |

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

**Exposure guidelines****US - California OELs: Skin designation**

2-BUTOXYETHANOL (CAS 111-76-2) Can be absorbed through the skin.

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

2-BUTOXYETHANOL (CAS 111-76-2) Skin designation applies.

**US - Tennessee OELs: Skin designation**

2-BUTOXYETHANOL (CAS 111-76-2) Can be absorbed through the skin.

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

NAPHTHALENE (CAS 91-20-3) Can be absorbed through the skin.

**US NIOSH Pocket Guide to Chemical Hazards: Skin designation**

2-BUTOXYETHANOL (CAS 111-76-2) Can be absorbed through the skin.

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

2-BUTOXYETHANOL (CAS 111-76-2) Can be absorbed through the skin.

**Appropriate engineering controls**

Use adequate ventilation to control airborne concentrations below the exposure limits/guidelines. If user operations generate a vapor, dust and/or mist, use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended exposure limits/guidelines.

## Individual protection measures, such as personal protective equipment

|                                       |   |
|---------------------------------------|---|
| <b>Eye/face protection</b>            | Wear safety glasses with side shields (or goggles). Chemical goggles are recommended.   |
| <b>Skin protection</b>                |   |
| <b>Hand protection</b>                | Suitable chemical protective gloves should be worn when the potential exists for prolonged or repeated skin exposure. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Nitrile gloves are recommended.                               |
| <b>Other</b>                          | Wear suitable protective clothing. Wear appropriate chemical resistant clothing if applicable.  |
| <b>Respiratory protection</b>         | If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, an approved respirator must be worn. Respirator selection, use and maintenance should be in accordance with the requirements of OSHA Respiratory Protection Standard 29 CFR 1910.134 and/or Canadian Standard CSA Z94.4. |
| <b>Thermal hazards</b>                | Wear appropriate thermal protective clothing, when necessary.   |
| <b>General hygiene considerations</b> | When using do not 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

|   |                          |
|---|--------------------------|
| <b>Physical state</b>                               | Liquid.                  |
| <b>Form</b>   | Aerosol.                 |
| <b>Color</b>  | Amber.                   |
| <b>Odor</b>   | Not available.           |
| <b>Odor threshold</b>                               | Not available.           |
| <b>pH</b>   | 7 ASTM D1293             |
| <b>pH concentration</b>                             | 1 % v/v                  |
| <b>Melting point/freezing point</b>                 | Not available.           |
| <b>Initial boiling point and boiling range</b>      | Not available.           |
| <b>Flash point</b>                                  | -20.2 °F (-29.0 °C) PMCC |
| <b>Evaporation rate</b>                             | Not available.           |
| <b>Flammability (solid, gas)</b>                    | Not applicable.          |
| <b>Upper/lower flammability or explosive limits</b> |                          |
| <b>Explosive limit - lower (%)</b>                  | 0.7 %                    |
| <b>Explosive limit - upper (%)</b>                  | 10.6 %                   |
| <b>Vapor pressure</b>                               | Not available.           |
| <b>Vapor density</b>                                | Not available.           |
| <b>Relative density</b>                             | 0.9                      |
| <b>Relative density temperature</b>                 | 77 °F (25 °C)            |
| <b>Solubility(ies)</b>                              |                          |
| <b>Solubility (water)</b>                           | Not available.           |
| <b>Partition coefficient (n-octanol/water)</b>      | Not available.           |
| <b>Auto-ignition temperature</b>                    | Not available.           |
| <b>Decomposition temperature</b>                    | Not available.           |
| <b>Viscosity</b>                                    | Not available.           |
| <b>Other information</b>                            |                          |
| <b>VOC (Weight %)</b>                               | 33.9 %                   |

## 10. Stability and reactivity

|                           |   |
|---------------------------|---|
| <b>Reactivity</b>         | The product is stable and non-reactive under normal conditions of use, storage and transport. |
| <b>Chemical stability</b> | Material is stable under normal conditions.   |

|   |  |
|---|--|
| <b>Possibility of hazardous reactions</b> | Hazardous polymerization does not occur.   |
| <b>Conditions to avoid</b>                | Heat. Avoid temperatures exceeding the flash point. Contact with incompatible materials.                         |
| <b>Incompatible materials</b>             | Strong oxidizing agents.   |
| <b>Hazardous decomposition products</b>   | Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. |

## 11. Toxicological information

### Information on likely routes of exposure

|   |   |
|---|---|
| <b>Inhalation</b>   | May cause irritation to the respiratory system. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Prolonged inhalation may be harmful. |
| <b>Skin contact</b>   | 2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.                  |
| <b>Eye contact</b>  | Direct contact with eyes may cause temporary irritation.  |
| <b>Ingestion</b>  | Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.  |
| <b>Symptoms related to the physical, chemical and toxicological characteristics</b> | Headache. Nausea, vomiting. Aspiration may cause pulmonary edema and pneumonitis.   |

### Information on toxicological effects

|                       |   |
|-----------------------|---|
| <b>Acute toxicity</b> | May be fatal if swallowed and enters airways. |
|-----------------------|---|

| Components                         | Species    | Calculated/Test Results |
|------------------------------------|------------|-------------------------|
| 2-BUTOXYETHANOL (CAS 111-76-2)     |            |                         |
| <b>Acute</b>                       |            |                         |
| <i>Dermal</i>                      |            |                         |
| LD50                               | Rabbit     | 400 mg/kg               |
| <i>Inhalation</i>                  |            |                         |
| LC50                               | Mouse      | 700 ppm, 7 Hours        |
|                                    | Rat        | 450 ppm, 4 Hours        |
| <i>Oral</i>                        |            |                         |
| LD50                               | Guinea pig | 1.2 g/kg                |
|                                    | Mouse      | 1.2 g/kg                |
|                                    | Rabbit     | 0.32 g/kg               |
|                                    | Rat        | 560 mg/kg               |
| ammonia, anhydrous (CAS 7664-41-7) |            |                         |
| <b>Acute</b>                       |            |                         |
| <i>Inhalation</i>                  |            |                         |
| LC50                               | Cat        | 0.746 mg/l, 1 Hours     |
|                                    | Mouse      | 7.105 mg/l, 10 Minutes  |
|                                    |            | 3.36 mg/l, 1 Hours      |
|                                    |            | 3.31 mg/l, 2 Hours      |
|                                    | Rabbit     | 7.05 mg/l, 1 Hours      |
|                                    | Rat        | 4000 ppm, 1 Hours       |
|                                    |            | 7.6 mg/l, 2 Hours       |
|                                    |            | 5.1 mg/l, 1 Hours       |
| <i>Oral</i>                        |            |                         |
| LD50                               | Rat        | 350 mg/kg               |
| BUTANE (CAS 106-97-8)              |            |                         |
| <b>Acute</b>                       |            |                         |
| <i>Inhalation</i>                  |            |                         |
| LC50                               | Mouse      | 680 mg/l, 2 Hours       |

| Components  | Species  | Calculated/Test Results     |
|---|--|-----------------------------|
|   | Rat  | 658 mg/l, 4 Hours           |
| <b>NAPHTHALENE (CAS 91-20-3)</b>                                      |  |                             |
| <b>Acute</b>  |  |                             |
| <i>Dermal</i>   |  |                             |
| LD50  | Rabbit   | > 2 g/kg                    |
|   | Rat  | > 20 g/kg                   |
| <i>Oral</i>   |  |                             |
| LD50  | Guinea pig   | 1200 mg/kg                  |
|   | Rat  | 490 mg/kg                   |
| <b>PROPANE (CAS 74-98-6)</b>  |  |                             |
| <b>Acute</b>  |  |                             |
| <i>Inhalation</i>   |  |                             |
| LC50  | Rat  | > 1442.847 mg/l, 15 Minutes |
| <b>Solvent naphtha (petroleum), heavy arom. (CAS 64742-94-5)</b>      |  |                             |
| <b>Acute</b>  |  |                             |
| <i>Inhalation</i>   |  |                             |
| LC50  | Rat  | 61 mg/l, 4 Hours            |
| <i>Oral</i>   |  |                             |
| LD50  | Rat  | > 25 ml/kg                  |
| <b>Skin corrosion/irritation</b>                                      | Prolonged skin contact may cause temporary irritation.   |                             |
| <b>Serious eye damage/eye irritation</b>                              | Direct contact with eyes may cause temporary irritation.   |                             |
| <b>Respiratory or skin sensitization</b>                              |  |                             |
| <b>Respiratory sensitization</b>                                      | Not a respiratory sensitizer.  |                             |
| <b>Skin sensitization</b>   | This product is not expected to cause skin sensitization.  |                             |
| <b>Germ cell mutagenicity</b>   | No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.   |                             |
| <b>Carcinogenicity</b>  | Suspected of causing cancer.   |                             |
| <b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>         |  |                             |
| 2-BUTOXYETHANOL (CAS 111-76-2)  | 3 Not classifiable as to carcinogenicity to humans.  |                             |
| NAPHTHALENE (CAS 91-20-3)   | 2B Possibly carcinogenic to humans.  |                             |
| <b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b> |  |                             |
| Not listed.   |  |                             |
| <b>US. National Toxicology Program (NTP) Report on Carcinogens</b>    |  |                             |
| NAPHTHALENE (CAS 91-20-3)   | Reasonably Anticipated to be a Human Carcinogen.   |                             |
| <b>Reproductive toxicity</b>  | Components in this product have been shown to cause birth defects and reproductive disorders in laboratory animals.                                      |                             |
| <b>Specific target organ toxicity - single exposure</b>               | Not classified.  |                             |
| <b>Specific target organ toxicity - repeated exposure</b>             | Not classified.  |                             |
| <b>Aspiration hazard</b>  | May be fatal if swallowed and enters airways.  |                             |
| <b>Chronic effects</b>  | May be harmful if absorbed through skin. Prolonged inhalation may be harmful.  |                             |
|   | 2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans. |                             |
|   | Prolonged exposure may cause chronic effects.  |                             |

## 12. Ecological information

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

## Ecotoxicity

| Components   | Species | Calculated/Test Results                                      |                            |
|--|---------|--|----------------------------|
| 2-BUTOXYETHANOL (CAS 111-76-2)                               |         |  |                            |
| <b>Aquatic</b>   |         |  |                            |
| Fish   | LC50    | Inland silverside ( <i>Menidia beryllina</i> )               | 1250 mg/l, 96 hours        |
| ammonia, anhydrous (CAS 7664-41-7)                           |         |  |                            |
| <b>Aquatic</b>   |         |  |                            |
| Fish   | LC50    | Chinook salmon ( <i>Oncorhynchus tshawytscha</i> )           | 0.43 - 0.47 mg/l, 96 hours |
| Distillates (petroleum), hydrotreated light (CAS 64742-47-8) |         |  |                            |
| <b>Aquatic</b>   |         |  |                            |
| Fish   | LC50    | Rainbow trout,donaldson trout ( <i>Oncorhynchus mykiss</i> ) | 2.9 mg/l, 96 hours         |
| NAPHTHALENE (CAS 91-20-3)                                    |         |  |                            |
| <b>Aquatic</b>   |         |  |                            |
| Crustacea  | EC50    | Water flea ( <i>Daphnia magna</i> )                          | 1.09 - 3.4 mg/l, 48 hours  |
| Fish   | LC50    | Pink salmon ( <i>Oncorhynchus gorbuscha</i> )                | 1.11 - 1.68 mg/l, 96 hours |
| Solvent naphtha (petroleum), heavy arom. (CAS 64742-94-5)    |         |  |                            |
| <b>Aquatic</b>   |         |  |                            |
| Crustacea  | EC50    | Water flea ( <i>Daphnia pulex</i> )                          | 2.7 - 5.1 mg/l, 48 hours   |
| Fish   | LC50    | Rainbow trout,donaldson trout ( <i>Oncorhynchus mykiss</i> ) | 8.8 mg/l, 96 hours         |
|  |         |  | 8.8 mg/l, 96 hours         |

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

### Bioaccumulative potential

#### Partition coefficient n-octanol / water (log Kow)

|                 |      |
|-----------------|------|
| 2-BUTOXYETHANOL | 0.83 |
| BUTANE          | 2.89 |
| NAPHTHALENE     | 3.3  |
| PROPANE         | 2.36 |

**Mobility in soil** No data available.

**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. Contents under pressure. Do not puncture, incinerate or crush. 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.

**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. Do not re-use empty containers.

## 14. Transport information

### DOT

<Unspecified>

|                                |          |
|--------------------------------|----------|
| <b>UN number</b>               | UN1950   |
| <b>UN proper shipping name</b> | AEROSOLS |



**Transport hazard class(es)**

**Class** 2.1

**Subsidiary risk** -

**Label(s)** 2.1

**Packing group** Not applicable.

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

**IATA**

<Unspecified>

**UN number** UN1950

**UN proper shipping name** AEROSOLS, FLAMMABLE

**Transport hazard class(es)**

**Class** 2.1

**Subsidiary risk** -

**Label(s)** 2.1

**Packing group** Not applicable.

**Environmental hazards** No.

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

**Other information**

**Passenger and cargo aircraft** Forbidden.

**Cargo aircraft only** Forbidden.

**IMDG**

<Unspecified>

**UN number** UN1950

**UN proper shipping name** AEROSOLS

**Transport hazard class(es)**

**Class** 2.1

**Subsidiary risk** -

**Label(s)** 2.1

**Packing group** Not applicable.

**Environmental hazards**

**Marine pollutant** No.

**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.

**DOT**



**IATA; IMDG**



## 15. Regulatory information

### US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

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

Not regulated.

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

|                                    |         |
|------------------------------------|---------|
| 2-BUTOXYETHANOL (CAS 111-76-2)     | Listed. |
| ammonia, anhydrous (CAS 7664-41-7) | Listed. |
| BUTANE (CAS 106-97-8)              | Listed. |
| NAPHTHALENE (CAS 91-20-3)          | Listed. |
| PROPANE (CAS 74-98-6)              | Listed. |

#### SARA 304 Emergency release notification

ammonia, anhydrous (CAS 7664-41-7) 100 LBS

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

Not listed.

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

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

#### SARA 302 Extremely hazardous substance

| Chemical name      | CAS number | Reportable quantity | Threshold planning quantity | Threshold planning quantity, lower value | Threshold planning quantity, upper value |
|--------------------|------------|---------------------|-----------------------------|--|--|
| ammonia, anhydrous | 7664-41-7  | 100                 | 500 lbs                     |  |  |

**SARA 311/312 Hazardous chemical** No

#### SARA 313 (TRI reporting)

| Chemical name      | CAS number | % by wt. |
|--------------------|------------|----------|
| 2-BUTOXYETHANOL    | 111-76-2   | 1 - < 3  |
| ammonia, anhydrous | 7664-41-7  | < 1      |
| NAPHTHALENE        | 91-20-3    | < 1      |

### Other federal regulations

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

NAPHTHALENE (CAS 91-20-3)

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

ammonia, anhydrous (CAS 7664-41-7)  
BUTANE (CAS 106-97-8)  
PROPANE (CAS 74-98-6)

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

### US state regulations

#### US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

#### US. Massachusetts RTK - Substance List

2-BUTOXYETHANOL (CAS 111-76-2)  
ammonia, anhydrous (CAS 7664-41-7)  
BUTANE (CAS 106-97-8)  
Distillates (petroleum), hydrotreated light (CAS 64742-47-8)  
NAPHTHALENE (CAS 91-20-3)  
PROPANE (CAS 74-98-6)  
Solvent naphtha (petroleum), heavy arom. (CAS 64742-94-5)

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

2-BUTOXYETHANOL (CAS 111-76-2)  
ammonia, anhydrous (CAS 7664-41-7)  
BUTANE (CAS 106-97-8)  
Distillates (petroleum), hydrotreated light (CAS 64742-47-8)

NAPHTHALENE (CAS 91-20-3)  
PROPANE (CAS 74-98-6)  
Solvent naphtha (petroleum), heavy arom. (CAS 64742-94-5)

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

2-BUTOXYETHANOL (CAS 111-76-2)  
ammonia, anhydrous (CAS 7664-41-7)  
BUTANE (CAS 106-97-8)  
Distillates (petroleum), hydrotreated light (CAS 64742-47-8)  
NAPHTHALENE (CAS 91-20-3)  
PROPANE (CAS 74-98-6)

**US. Rhode Island RTK**

2-BUTOXYETHANOL (CAS 111-76-2)  
ammonia, anhydrous (CAS 7664-41-7)  
BUTANE (CAS 106-97-8)  
NAPHTHALENE (CAS 91-20-3)  
PROPANE (CAS 74-98-6)

**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.

**International Inventories**

All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

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

**Issue date** 05-15-2015  
**Version #** 01  
**HMIS® ratings** Health: 2  
Flammability: 2  
Physical hazard: 0  
**NFPA ratings** Health: 2  
Flammability: -  
Instability: 0

**Preparation Information and Disclaimer**

To the extent that there are any differences between this product's Safety Data Sheet (SDS) and the consumer packaged product labels, the SDS should be followed. This document was prepared by FCSD-Toxicology, Ford Motor Company, Diagnostic Service Center II, 1800 Fairlane Drive, Allen Park, MI 48101, USA, based in part on information provided by the manufacturer. The information on this data sheet represents our current data and is accurate to the best of our knowledge as to the proper handling of this product under normal conditions and in accordance with the application specified on the packaging and/or technical guidance literature. Any other use of the product which involves using the product in combination with any other product or any other process is the responsibility of the user. To the extent that there are any differences between this product's Safety Data Sheet (SDS) and the consumer packaged product labels, the SDS should be followed.

**Part number(s)** ZC-20