Revision Number 3



SAFETY DATA SHEET

Revision Date 07-May-2018

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1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name Polar Flow

Other means of identification

Issuing Date 07-May-2015

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Fuel additive

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Name Enertech Labs, Inc.

Supplier Address Enertech Labs, Inc.

144 Urban st Buffalo, NY 14211

US

Supplier Phone Number Tel: 716-597-5761

Toll Free:800-759-2080 Fax: 716-328-1766

Supplier Email sales@enertechlabs.com

Emergency telephone number Chemtrec 800-424-9300

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Item 745

| Acute toxicity - Oral | Category 4 |
|--|-------------|
| Acute toxicity - Inhalation (Dusts/Mists) | Category 4 |
| Skin corrosion/irritation | Category 2 |
| Serious eye damage/eye irritation | Category 2 |
| Germ cell mutagenicity | Category 1B |
| Carcinogenicity | Category 1B |
| Specific target organ toxicity (single exposure) | Category 3 |
| Specific target organ toxicity (repeated exposure) | Category 2 |
| Aspiration toxicity | Category 1 |
| Flammable liquids | Category 4 |

GHS Label elements, including precautionary statements

Emergency Overview

Signal word Danger

Hazard Statements

Harmful if swallowed

Harmful if inhaled

Causes skin irritation

Causes serious eye irritation

May cause genetic defects

May cause cancer

May cause respiratory irritation

May cause damage to organs through prolonged or repeated exposure

May be fatal if swallowed and enters airways

Combustible liquid



Appearance Amber Physical state Liquid Odor Sweet

Precautionary Statements - Prevention

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Use personal protective equipment as required

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Use only outdoors or in a well-ventilated area

Do not breathe dust/fume/gas/mist/vapors/spray

Keep away from heat/sparks/open flames/hot surfaces. - No smoking

Keep cool

Wear eye/face protection

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

Specific treatment (see supplemental first aid instructions on this label)

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Eyes

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

Skin

IF ON SKIN: Wash with plenty of soap and water If skin irritation occurs: Get medical advice/attention Take off contaminated clothing and wash before reuse

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Ingestion

Rinse mouth

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

Do NOT induce vomiting

Fire

In case of fire: Use CO2, dry chemical, or foam for extinction

Precautionary Statements - Storage

Store locked up

Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

Unknown Toxicity

4.15% of the mixture consists of ingredient(s) of unknown toxicity

Other information

May be harmful in contact with skin
Toxic to aquatic life with long lasting effects
Harmful to aquatic life
PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION
INHALATION MAY CAUSE CENTRAL NERVOUS SYSTEM EFFECTS

Interactions with Other Chemicals

Use of alcoholic beverages may enhance toxic effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS Item 745

| Chemical Name | CAS No | Weight-% | Trade Secret |
|-------------------------------------|------------|----------|--------------|
| butyl cellosolve l | 111-76-2 | 10 - 30 | * |
| Petroleum naphtha, light aromatic | 64742-95-6 | 10 - 30 | * |
| 1,2,4 Trimethylbenzene | 95-63-6 | 10 - 30 | * |
| Naphtha (petroleum), heavy aromatic | 64742-94-5 | 10 - 30 | * |
| Xylene | 1330-20-7 | 5 - 10 | * |
| Cumene | 98-82-8 | 1 - 5 | * |
| 1,3,5-Trimethylbenzene | 108-67-8 | 1 - 5 | * |
| Diethylbenzene | 25340-17-4 | 1 - 5 | * |
| Ethylene glycol | 107-21-1 | 1 - 5 | * |
| 2-Ethylhexanol | 104-76-7 | 1 - 5 | * |
| Naphthalene | 91-20-3 | 1 - 5 | * |
| Ethylbenzene | 100-41-4 | 1 - 5 | * |
| Vinyl acetate | 108-05-4 | 0.1 - 1 | * |

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

4. FIRST AID MEASURES

First aid measures

General Advice Show this safety data sheet to the doctor in attendance. Immediate medical

attention is required.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15

minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and

easy to do. Continue rinsing. Get medical attention if irritation develops and

persists. Do not rub affected area.

Skin contact Wash off immediately with soap and plenty of water for at least 15 minutes. Get

medical attention if irritation develops and persists.

Inhalation Remove to fresh air. Get medical attention immediately if symptoms occur.

> Aspiration into lungs can produce severe lung damage. If breathing has stopped, give artificial respiration. Get medical attention immediately. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur.

Ingestion Rinse mouth immediately and drink plenty of water. Never give anything by mouth

to an unconscious person. Do NOT induce vomiting. Aspiration hazard if

swallowed - can enter lungs and cause damage. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Call a physician or poison control

center immediately.

Self-protection of the first aider Avoid contact with skin, eyes or clothing. Use personal protective equipment as

required. Wear personal protective clothing (see section 8). Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Remove all sources of ignition.

Most important symptoms and effects, both acute and delayed

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Most Important Symptoms and Burning sensation. Coughing and/ or wheezing. Difficulty in breathing. Dizziness. **Effects**

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Dry chemical. Carbon dioxide (CO2). Water spray. Alcohol resistant foam.

Unsuitable extinguishing media

CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical

Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray.

Uniform Fire Code Irritant: Liquid

Toxic: Liquid

Combustible Liquid: III-A

Hazardous Combustion Products

Carbon oxides. Carbon monoxide. Carbon dioxide (CO₂).

Explosion Data

Sensitivity to Mechanical Impact No.

Sensitivity to Static Discharge Yes.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

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Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal

protective equipment as required. Avoid breathing vapors or mists. Avoid generation of dust. Evacuate personnel to safe areas. See section 8 for more information. Take precautionary measures against static discharges. Do not touch or walk through spilled

material.

Other Information Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental precautions Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage

if safe to do so.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so. Do not touch or walk through spilled

material. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up Take precautionary measures against static discharges. Dam up. Soak up with inert

absorbent material. Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Do not breathe dust/fume/gas/mist/vapors/spray.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach

of children. Store locked up. Protect from moisture. Store away from other materials. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Store in accordance with the

particular national regulations. Store in accordance with local regulations.

Incompatible Products Strong acids. Strong oxidizing agents. Strong bases. Acid chlorides. Acid anhydrides.

Chloroformates. Strong reducing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

| Chemical Name ACGIH TLV OSHA PEL NIOSH IDLH |
|---|
|---|

Item 745 IDLH: 700 ppm TWA: 20 ppm TWA: 50 ppm butyl cellosolve TWA: 240 mg/m³ TWA: 5 ppm 111-76-2 (vacated) TWA: 25 ppm TWA: 24 mg/m³ (vacated) TWA: 120 mg/m³ (vacated) S* 1,2,4 Trimethylbenzene TWA: 25 ppm TWA: 125 mg/m³ 95-63-6 TWA: 100 ppm STEL: 150 ppm Xvlene 1330-20-7 TWA: 435 mg/m³ TWA: 100 ppm (vacated) TWA: 100 ppm (vacated) TWA: 435 mg/m³ (vacated) STEL: 150 ppm (vacated) STEL: 655 mg/m³ TWA: 50 ppm Cumene TWA: 50 ppm IDLH: 900 ppm TWA: 245 mg/m³ 98-82-8 TWA: 50 ppm TWA: 245 mg/m³ (vacated) TWA: 50 ppm (vacated) TWA: 245 mg/m³ (vacated) S* S* 1,3,5-Trimethylbenzene TWA: 25 ppm 108-67-8 TWA: 125 mg/m³ Ethylene glycol Ceiling: 100 mg/m³ aerosol only (vacated) Ceiling: 50 ppm 107-21-1 (vacated) Ceiling: 125 mg/m³ TWA: 50 ppm 2-Ethylhexanol TWA: 270 mg/m³ 104-76-7 TWA: 10 ppm Naphthalene TWA: 10 ppm IDLH: 250 ppm 91-20-3 S TWA: 50 mg/m³ TWA: 10 ppm (vacated) TWA: 10 ppm TWA: 50 mg/m³ (vacated) TWA: 50 mg/m³ STEL: 15 ppm STEL: 75 mg/m³ (vacated) STEL: 15 ppm (vacated) STEL: 75 mg/m³ TWA: 100 ppm TWA: 435 mg/m³ Ethylbenzene TWA: 20 ppm IDLH: 800 ppm 100-41-4 TWA: 100 ppm TWA: 435 mg/m³ (vacated) TWA: 100 ppm (vacated) TWA: 435 mg/m³ STEL: 125 ppm STEL: 545 mg/m³ (vacated) STEL: 125 ppm (vacated) STEL: 545 mg/m³ Vinyl acetate STEL: 15 ppm (vacated) TWA: 10 ppm Ceiling: 4 ppm 15 min Ceiling: 15 mg/m³ 108-05-4 TWA: 10 ppm (vacated) TWA: 30 mg/m³ 15 min (vacated) STEL: 20 ppm (vacated) STEL: 60 mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits Immediately Dangerous to Life or Health

Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d

962 (11th Cir., 1992) See section 15 for national exposure control parameters

Appropriate engineering controls

Engineering Measures Showers

Eyewash stations Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection None required for consumer use. If splashes are likely to occur:. Tight sealing safety

goggles.

Skin and body protection Wear protective gloves and protective clothing. Long sleeved clothing. Impervious gloves.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are

exceeded or irritation is experienced, ventilation and evacuation may be required.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical stateLiquidAppearanceAmberOdorSweetColorNo information availableOdor ThresholdNo information available

Property Values Remarks Method **UNKNOWN** Hq None known Melting / freezing point No data available None known Boiling point / boiling range 113 °C / 235 °F None known Flash Point 61 C / 142 F None known **Evaporation Rate** No data available None known Flammability (solid, gas) No data available None known Flammability Limit in Air **Upper flammability limit** No data available Lower flammability limit No data available Vapor pressure No data available None known Vapor density No data available None known **Specific Gravity** No data available None known **Water Solubility** Slightly soluble None known Solubility in other solvents No data available None known Partition coefficient: n-octanol/waterNo data available None known **Autoignition temperature** No data available None known **Decomposition temperature** No data available None known Kinematic viscosity No data available None known Dynamic viscosity 4.8 None known **Explosive properties** No data available Oxidizing properties No data available

Other Information

Softening Point

VOC Content (%)

Particle Size

No data available

No data available

No data available

Particle Size Distribution

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10. STABILITY AND REACTIVITY

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Reactivity

No data available.

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization

Hazardous polymerization does not occur.

Conditions to avoid

Excessive heat. Heat, flames and sparks.

Incompatible materials

Strong acids. Strong oxidizing agents. Strong bases. Acid chlorides. Acid anhydrides. Chloroformates. Strong reducing agents.

Hazardous Decomposition Products

Carbon oxides. Carbon monoxide. Carbon dioxide (CO2).

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available. May cause irritation of

respiratory tract. Harmful by inhalation. (based on components). Aspiration into lungs can produce severe lung damage. May cause pulmonary edema. Pulmonary edema can be

fatal.

Eye contact Specific test data for the substance or mixture is not available. Expected to be an irritant

based on components. Irritating to eyes. May cause redness, itching, and pain. May cause

temporary eye irritation. May cause irritation.

Skin contact Specific test data for the substance or mixture is not available. Expected to be an irritant

based on components. Irritating to skin. Prolonged contact may cause redness and

irritation. Repeated exposure may cause skin dryness or cracking.

Ingestion Specific test data for the substance or mixture is not available. Ingestion may cause

irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Harmful if swallowed. (based on components). Potential for aspiration if swallowed. May cause lung damage if swallowed. Aspiration may cause pulmonary edema and pneumonitis. May be fatal if swallowed and enters airways.

Component Information

| Chemical Name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|--|--------------------|-----------------------|--|
| butyl cellosolve 111-76-2 | = 470 mg/kg (Rat) | = 220 mg/kg (Rabbit) | = 450 ppm (Rat) 4 h |
| Petroleum naphtha, light aromatic 64742-95-6 | - | > 2000 mg/kg (Rabbit) | > 5.2 mg/L (Rat) 4 h = 3400 ppm (Rat) 4 h |
| 1,2,4 Trimethylbenzene 95-63-6 | = 3400 mg/kg (Rat) | > 3160 mg/kg (Rabbit) | = 18 g/m ³ (Rat) 4 h |
| Naphtha (petroleum), heavy aromatic | > 5000 mg/kg (Rat) | > 2 mL/kg (Rabbit) | > 590 mg/m ³ (Rat)4 h |

Item 745 64742-94-5 Xylene = 4300 mg/kg (Rat) > 1700 mg/kg (Rabbit) = 47635 mg/L (Rat) 4 h = 50001330-20-7 Rat) 4 h ppm = 1400 mg/kg Cumene (Rat) = 12300 µL/kg (Rabbit) 98-82-8 1,3,5-Trimethylbenzene $= 24 \text{ g/m}^3 \text{ (Rat) 4 h}$ 108-67-8 Ethylene glycol = 4000 mg/kg (Rat) 107-21-1 2-Ethylhexanol 1516 - 2774 mg/kg (Rat) > 1600 mg/kg (Rat) = 0.237 mg/L (Rat) 4 h 104-76-7 > 3160 mg/kg (Rabbit) Naphthalene > 20 g/kg (Rabbit) $> 340 \text{ mg/m}^3 \text{ (Rat) 1 h}$ 91-20-3 = 15354 mg/kg (Rabbit) Ethylbenzene = 3500 mg/kg (Rat) = 17.2 mg/L (Rat) 4 h 100-41-4 = 2920 mg/kg (Rat) = 2320 mg/kg (Rabbit) Vinyl acetate $= 11400 \text{ mg/m}^3 \text{ (Rat) 4 h} = 11.4$ 108-05-4 mg/L (Rat)4h

Information on toxicological effects

Symptoms Erythema (skin redness). May cause redness and tearing of the eyes. Coughing and/ or

wheezing. Difficulty in breathing. Asthma-like and/ or skin allergy-like symptoms.

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

Sensitization No information available.

Mutagenic Effects There is no data available for this product. Contains a known or suspected mutagen.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Chemical Name | ACGIH | IARC | NTP | OSHA |
|------------------------------|-------|----------|------------------------|------|
| butyl cellosolve 111-76-2 | A3 | Group 3 | | |
| Xylene 1330-20-7 | | Group 3 | | |
| Cumene 98-82-8 | | Group 2B | | Х |
| Naphthalene 91-20-3 | A3 | Group 2B | Reasonably Anticipated | X |
| Ethylbenzene 100-41-4 | A3 | Group 2B | | X |
| Vinyl acetate 108-05-4 | A3 | Group 2B | | Х |

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 2B - Possibly Carcinogenic to Humans

Group 3 - Not Classifiable as to Carcinogenicity in Humans

NTP (National Toxicology Program)

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity No information available.

STOT - single exposure Respiratory system.

STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure. Based on

classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR

1910.1200), this product has been determined to cause systemic target organ toxicity from

chronic or repeated exposure. (STOT RE).

Chronic Toxicity Contains a known or suspected mutagen. Possible risk of irreversible effects. Contains a

known or suspected carcinogen. Aspiration may cause pulmonary edema and pneumonitis. Avoid repeated exposure. Prolonged exposure may cause chronic effects. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver

effects.

Target Organ Effects Respiratory system. Eyes. Skin. May affect the genetic material in germ cells (sperm and

eggs). Gastrointestinal tract (GI). Blood. Central Nervous System (CNS). Hematopoietic system. Kidney. Liver. Heart. Lungs. Nasal cavities. Thyroid. Central Vascular System

(CVS). Testes.

Aspiration Hazard No information available.

Numerical measures of toxicity Product Information

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

ATEmix (oral)
1,560.00 mg/kg
ATEmix (dermal)
3,701.00 mg/kg (ATE)
ATEmix (inhalation-gas)
15,322.00 ppm (4 hr)
ATEmix (inhalation-dust/mist)
3.00 mg/l
ATEmix (inhalation-vapor)
36.00 ATEmix

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12. ECOLOGICAL INFORMATION

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Ecotoxicity

Harmful to aquatic life. Toxic to aquatic life with long lasting effects.

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

| Chemical Name | Toxicity to Algae | Toxicity to Fish | Toxicity to Microorganisms | Daphnia Magna (Water Flea) |
|---|---|--|--|--|
| butyl cellosolve 111-76-2 | | 98h LC50: = 1490 mg/L (Lepomis macrochirus) 96h LC50: = 2950 mg/L (Lepomis macrochirus) | | 48h EC50: > 1000 mg/L 24h EC50: 1698 - 1940 mg/L |
| Petroleum naphtha, light aromatic 64742-95-6 | | 96h LC50: = 9.22 mg/L (Oncorhynchus mykiss) | | 48h EC50: = 6.14 mg/L |
| 1,2,4 Trimethylbenzene 95-63-6 | | 96h LC50: 7.19 - 8.28 mg/L (Pimephales promelas) | | 48h EC50: = 6.14 mg/L |
| Naphtha (petroleum), heavy aromatic 84742-94-5 | 72h EC50: = 2.5 mg/L (Skeletonema costatum) | 98h LC50: = 19 mg/L (Pimephales promelas) 96h LC50: = 2.34 mg/L (Oncorhynchus mykiss) 96h LC50: = 1740 mg/L (Lepomis macrochirus) 96h LC50: = 45 mg/L (Pimephales promelas) 96h LC50: = 41 mg/L (Pimephales promelas) | | 48h EC50: = 0.96 mg/L |
| Xylene 1330-20-7 | | 98h LC50: = 13.4 mg/L (Pimephales prometas) 96h LC50: 2.681 - 4.093 mg/L (Oncorhynchus mykias) 96h LC50: 13.5 - 17.3 mg/L (Oncorhynchus mykias) 96h LC50: 13.1 - 16.5 mg/L (Lepomis macrochirus) 96h LC50: = 19 mg/L (Lepomis macrochirus) 96h LC50: 7.711 - 9.591 mg/L (Lepomis macrochirus) 96h LC50: 23.53 - 29.97 mg/L (Pimephales prometas) 96h LC50: = 780 mg/L (Cyprinus carpio) 96h LC50: > 780 mg/L (Cyprinus carpio) 96h LC50: 30.26 - 40.75 mg/L (Poecilia reticularia) | | 48h EC50: = 3.82 mg/L 48h LC50: = 0.6 mg/L |
| Cumene 98-82-8 | 72h EC50: = 2.6 mg/L (Pseudokirchneriella subcapitata) | 96h LC50: 6.04 - 6.61 mg/L (Pimephales prometas) 96h LC50: = 4.8 mg/L (Oncorhynchus mykiss) 96h LC50: = 2.7 mg/L (Oncorhynchus mykiss) 96h LC50: = 5.1 mg/L (Poecilia reticulata) | EC50 = 0.89 mg/L 5 min EC50 = 1.10 mg/L 15 min EC50 = 1.48 mg/L 30 min EC50 = 172 mg/L 24 h | 48h EC50: = 0.6 mg/L 48h EC50: 7.9 - 14.1 mg/L |
| 1,3,5-Trimethylbenzene 108-67-8 | | 96h LC50: = 3.48 mg/L (Pimephales promelas) | | 24h EC50: = 50 mg/L |
| Ethylene glycol 107-21-1 | 96h EC50: 6500 - 13000 mg/L (Pseudokirchneriella subcapitata) | 98h LC50: = 41000 mg/L (Oncorhynchus mykiss) 98h LC50: 14 - 18 mL/L (Oncorhynchus mykiss) 98h LC50: = 40761 mg/L (Oncorhynchus mykiss) 96h LC50: = 27540 mg/L (Lepomis macrochirus) 98h LC50: = 16000 mg/L (Poecilia reticulata) 98h LC50: 40000 - 60000 mg/L (Pimephales prometas) | EC50 = 10000 mg/L 16 h EC50 = 620 mg/L 30 min EC50 = 620.0 mg/L 30 min | 48h EC50: = 46300 mg/L |
| 2-Ethylhexanol 104-76-7 | 72h EC50: = 11.5 mg/L (Desmodesmus subspicatus) | 96h LC50: > 7.5 mg/L (Oncorhynchus mykiss) 96h LC50: 27 - 29.5 mg/L (Pimephales promelas) 96h LC50: = 29.7 mg/L (Pimephales promelas) 96h LC50: 10.0 - 33.0 mg/L (Lepomis macrochirus) 96h LC50: 32 - 37 mg/L (Oncorhynchus mykiss) | | 48h EC50: = 39 mg/L |
| Naphthalene 91-20-3 | 72h EC50: = 0.4 mg/L (Skeletonema costatum) | 96h LC50: 5.74 - 6.44 mg/L (Pimephales prometas) 96h LC50: = 1.6 mg/L (Oncorhynchus mykiss) 96h LC50: 0.91 - 2.82 mg/L (Oncorhynchus mykiss) 96h LC50: = 1.99 mg/L (Pimephales prometas) 96h LC50: = 31.0265 mg/L (Lepomis macrochirus) | EC50 = 0.93 mg/L 30 min EC50 > 20 mg/L 18 h | 48h LC50: = 2.16 mg/L 48h EC50: = 1.96 mg/L 48h EC50: 1.09 - 3.4 mg/L |
| Oleic acid 112-80-1 | | 96h LC50: = 205 mg/L (Pimephales promelas) | | |
| Ethylbenzene 100-41-4 | 72h EC50: = 4.6 mg/L (Pseudokirchneriella subcapitata) 96h EC50: > 438 mg/L (Pseudokirchneriella subcapitata) 72h EC50: 2.6 - 11.3 mg/L (Pseudokirchneriella subcapitata) 96h EC50: 1.7 - 7.6 mg/L (Pseudokirchneriella subcapitata) | 98h LC50: 11.0 - 18.0 mg/L (Oncortynchus mykiss) 98h LC50: = 4.2 mg/L (Oncortynchus mykiss) 98h LC50: 7.55 - 11 mg/L (Pimephales prometas) 98h LC50: = 32 mg/L (Lepomis macrochirus) 96h LC50: = 9.1 - 15.8 mg/L (Pimephales prometas) 98h LC50: = 9.6 mg/L (Poecilia reticulata) | EC50 = 9.88 mg/L 30 min EC50 = 96 mg/L 24 h | 48h EC50: 1.8 - 2.4 mg/L |
| Vinyl acetate 108-05-4 | | 96h LC50: = 14 mg/L (Pimephales prometas) 96h LC50: 15.04 - 21.54 mg/L (Lepomis macrochirus) 96h LC50: 26.1 - 36.63 mg/L (Poecilia reticulata) | EC50 = 2080 mg/L 5 min | 24h EC50: = 52 mg/L |

Persistence and Degradability No information available.

Bloaccumulation

| Chemical Name | Log Pow |
|---|--------------------------|
| 2-Butoxyethanol 111-76-2 | Ŏ.81 |
| 1,2,4 Trimethylbenzene 95-63-6 | 3.63 |
| Naphtha (petroleum), heavy aromatic 64742-94-5 | 6.1 |
| Xylene 1330-20-7 | 3.15 |
| Cumene 96-82-8 | 3.56 |
| Ethylene glycol 107-21-1 | -1.93 |
| 2-Ethylhexanol 104-76-7 | 3.1 |
| Naphthalene 91-20-3 | 3.3 |
| Ethylbenzene 100-41-4 | 3.118 |
| Vinyl acetate 108-05-4 | 0.73 Page 12 / 17 |

Other adverse effects

13. DISPOSAL CONSIDERATIONS

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Waste treatment methods

Disposal methods

This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Packaging

Dispose of contents/containers in accordance with local regulations.

US EPA Waste Number

U055 U165 U239

| Chemical Name | RCRA | RCRA - Basis for Listing | RCRA - D Series Wastes | RCRA - U Series Wastes |
|--------------------------|------|--|------------------------|------------------------|
| Xylene 1330-20-7 | | Included in waste stream: F039 | | U239 |
| Cumene 98-82-8 | | | | U055 |
| Naphthalene 91-20-3 | U165 | Included in waste streams: F024, F025, F034, F039, K001, K035, K060, K087, K145 | | U165 |
| Ethylbenzene 100-41-4 | | Included in waste stream: F039 | | |

| Chemical Name | RCRA - Halogenated Organic Compounds | RCRA - P Series Wastes | RCRA - F Series Wastes | RCRA - K Series Wastes |
|---------------|---|------------------------|-------------------------------|------------------------|
| Naphthalene | | | Toxic waste | |
| 91-20-3 | | | waste number F025 | |
| | | | Waste description: | |
| | | | Condensed light ends, spent | |
| | | | filters and filter aids, and | |
| | | | spent desiccant wastes from | |
| | | | the production of certain | |
| | | | chlorinated aliphatic | |
| | | | hydrocarbons, by free radical | |
| | | | catalyzed processes. | |
| | | | These chlorinated aliphatic | |
| | | | hydrocarbons are those | |
| | | | having carbon chain lengths | |
| | | | ranging from one to and | |
| | | | including five, with varying | |
| | | | amounts and positions of | |
| | | | chlorine substitution. | |

This product contains one or more substances that are listed with the State of California as a hazardous waste.

| Chemical Name | California Hazardous Waste |
|-----------------------------------|----------------------------|
| 1,2,4 Trimethylbenzene 95-63-6 | Toxic |
| Xylene | Toxic |
| 1330-20-7 | Ignitable |
| Cumene | Toxic |
| 98-82-8 | Ignitable |
| Naphthalene 91-20-3 | Toxic |
| Ethylbenzene | Toxic |
| 100-41-4 | Ignitable |
| Vinyl acetate | Toxic |
| 108-05-4 | Ignitable |

14. TRANSPORT INFORMATION

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DOTNOT REGULATEDProper Shipping NameNON REGULATED

Hazard Class N/A

TDG Not regulated

MEX Not regulated

ICAO Not regulated

IATA Not regulated

Proper Shipping Name NON REGULATED

Hazard Class N/A

IMDG/IMO Not regulated

Hazard Class N/A

Marine Pollutant Product is a marine pollutant according to the criteria set by IMDG/IMO

RID Not regulated

ADR Not regulated

ADN Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA Complies

DSL All components are listed either on the DSL or NDSL.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory **DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

| Chemical Name | CAS No | Weight-% | SARA 313 - Threshold Values % |
|----------------------------------|-----------|----------|----------------------------------|
| butyl cellosolve - 111-76-2 | 111-76-2 | 10 - 30 | 1.0 |
| 1,2,4 Trimethylbenzene - 95-63-6 | 95-63-6 | 10 - 30 | 1.0 |
| Xylene - 1330-20-7 | 1330-20-7 | 5 - 10 | 1.0 |
| Cumene - 98-82-8 | 98-82-8 | 1 - 5 | 1.0 |
| Ethylene glycol - 107-21-1 | 107-21-1 | 1 - 5 | 1.0 |
| Naphthalene - 91-20-3 | 91-20-3 | 1 - 5 | 0.1 |
| Ethylbenzene - 100-41-4 | 100-41-4 | 1 - 5 | 0.1 |
| Vinyl acetate - 108-05-4 | 108-05-4 | 0.1 - 1 | 0.1 |

SARA 311/312 Hazard Categories

Acute Health Hazard Yes Chronic Health Hazard Yes

Fire Hazard Yes
Sudden release of pressure hazard No
Reactive Hazard No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

| Chemical Name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|---------------------------|--------------------------------|------------------------|---------------------------|-------------------------------|
| Xylene 1330-20-7 | 100 lb | | | X |
| Naphthalene 91-20-3 | 100 lb | X | X | Х |
| Ethylbenzene 100-41-4 | 1000 lb | Х | Х | Х |
| Vinyl acetate 108-05-4 | 5000 lb | | | Х |

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

| Chemical Name | Hazardous Substances RQs | Extremely Hazardous Substances RQs | RQ |
|-----------------------------|--------------------------|------------------------------------|---|
| Xylene 1330-20-7 | 100 lb | | RQ 100 lb final RQ RQ 45.4 kg final RQ |
| Cumene 98-82-8 | 5000 lb | | RQ 5000 lb final RQ RQ 2270 kg final RQ |
| Ethylene glycol 107-21-1 | 5000 lb | | RQ 5000 lb final RQ RQ 2270 kg final RQ |
| Naphthalene 91-20-3 | 100 lb | | RQ 100 lb final RQ RQ 45.4 kg final RQ RQ 0.454 kg final RQ |
| Ethylbenzene 100-41-4 | 1000 lb | | RQ 1000 lb final RQ RQ 454 kg final RQ |
| Vinyl acetate 108-05-4 | 5000 lb | 5000 lb | RQ 5000 lb final RQ RQ 2270 kg final RQ |

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

| Chemical Name | California Proposition 65 |
|-------------------------|---------------------------|
| Cumene - 98-82-8 | Carcinogen |
| Naphthalene - 91-20-3 | Carcinogen |
| Ethylbenzene - 100-41-4 | Carcinogen |

U.S. State Right-to-Know Regulations

| Chemical Name | New Jersey | Massachusetts | Pennsylvania | Rhode Island | Illinois |
|------------------------------------|------------|---------------|--------------|--------------|----------|
| butyl cellosolve 111-76-2 | Х | X | Х | Х | Х |
| 1,2,4 Trimethylbenzene 95-63-6 | Х | X | X | X | X |
| Xylene 1330-20-7 | Х | Х | Х | Х | X |
| 1,3,5-Trimethylbenzene 108-67-8 | X | X | Х | | X |
| Cumene 98-82-8 | X | X | Х | X | X |

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| | | | | I | tem 745 |
|------------------------------|---|---|---|---|---------|
| Diethylbenzene 25340-17-4 | Х | | | | |
| Ethylene glycol 107-21-1 | Х | Х | Х | X | Х |
| 2-Ethylhexanol 104-76-7 | Х | Х | Х | | |
| Naphthalene 91-20-3 | Х | Х | Х | X | Х |
| Ethylbenzene 100-41-4 | Х | Х | Х | X | Х |
| Vinyl acetate 108-05-4 | Х | Х | Х | Х | Х |

International Regulations

Mexico

National occupational exposure limits

| Component | Carcinogen Status | Exposure Limits |
|---------------------------------------|-------------------|---------------------------------------|
| butyl cellosolve | | Mexico: TWA 26 ppm |
| 111-76-2 (10 - 30) | | Mexico: TWA 120 mg/m ³ |
| | | Mexico: STEL 75 ppm |
| | | Mexico: STEL 360 mg/m ³ |
| 1,2,4 Trimethylbenzene | | Mexico: TWA 25 ppm |
| 95-63-6 (10 - 30) | | Mexico: TWA 125 mg/m ³ |
| | | Mexico: STEL 35 ppm |
| | | Mexico: STEL 170 mg/m ³ |
| Xylene | | Mexico: TWA 100 ppm |
| 1330-20-7 (5 - 10) | | Mexico: TWA 435 mg/m ³ |
| , , , | | Mexico: STEL 150 ppm |
| | | Mexico: STEL 655 mg/m ³ |
| Cumene | | Mexico: TWA 50 ppm |
| 98-82-8 (1 - 5) | | Mexico: TWA 245 mg/m ³ |
| , , | | Mexico: STEL 75 ppm |
| | | Mexico: STEL 365 mg/m ³ |
| 1,3,5-Trimethylbenzene | | Mexico: TWA 25 ppm |
| 108-67-8 (1 - 5) | | Mexico: TWA 125 mg/m ³ |
| | | Mexico: STEL 35 ppm |
| | | Mexico: STEL 170 mg/m ³ |
| Ethylene glycol | | Mexico: Ceiling 100 mg/m ³ |
| 107-21-1 (1 - 5) | | |
| Naphthalene | | Mexico: TWA 10 ppm |
| 91-20-3 (1 - 5) | | Mexico: TWA 50 mg/m ³ |
| , | | Mexico: STEL 15 ppm |
| | | Mexico: STEL 75 mg/m ³ |
| Ethylbenzene | | Mexico: TWA 100 ppm |
| 100-41-4 (1 - 5) | | Mexico: TWA 435 mg/m ³ |
| , , , | | Mexico: STEL 125 ppm |
| | | Mexico: STEL 545 mg/m ³ |
| Vinyl acetate | A3 | Mexico: TWA 10 ppm |
| 108-05-4 (0.1 - 1) | | Mexico: TWA 30 mg/m ³ |
| \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | | Mexico: STEL 20 ppm |
| | | Mexico: STEL 60 mg/m ³ |

Mexico - Occupational Exposure Limits - Carcinogens

A3 - Confirmed Animal Carcinogen

Canada

WHMIS Hazard Class

B3 - Combustible liquid

D2A - Very toxic materials

D2B - Toxic materials



HMIS

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16. OTHER INFORMATION

NFPA Health Hazards 2 Flammability 2 Instability 0 Physical and

Flammability 2

Chemical Hazards - Physical Hazard 0 Personal Protection

Χ

Chronic Hazard Star Legend * = Chronic Health Hazard

Health Hazards 2 *

Prepared By Product Stewardship

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Disclaimer

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End of Safety Data Sheet