

Safety Data Sheet

BIOBOR MD®

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking
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1.1 Product identifier

- Product Name** • **Biobor MD®**
- Synonyms** • Diesel fuel additive

1.2 Relevant identified uses of the substance or mixture and uses advised against

- Relevant identified use(s)** • Diesel Fuel Additive

1.3 Details of the supplier of the safety data sheet

- Manufacturer** • Hammonds Fuel Additives, Inc.
 6951 W Little York Rd
 Houston, TX 77040
 United States
 www.biobor.com
 sales@biobor.com
- Telephone (General)** • (800) 548-9166

1.4 Emergency telephone number

- Manufacturer** • Chemtrec - US - (800) 424-9300
- Manufacturer** • 001-703-527-3887 - Chemtrec INT

Section 2: Hazards Identification
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EU/EEC

According to: Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010]
 According to: EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

2.1 Classification of the substance or mixture

- CLP**
- Aspiration 1 - H304
 - Eye Irritation 2 - H319
 - Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation - H335
 - Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects - H336
 - Germ Cell Mutagenicity 1B - H340
 - Carcinogenicity 1B - H350
 - Hazardous to the aquatic environment Chronic 2 - H411
- DSD/DPD**
- Harmful (Xn)
 - Mutagenic Substances - Category 2
 - Carcinogenic Substances - Category 2
 - Dangerous to the Environment (N)
 - R45, R46, R51, R53, R65

2.2 Label Elements

CLP

DANGER



- Hazard statements** • H304 - May be fatal if swallowed and enters airways
 H319 - Causes serious eye irritation
 H335 - May cause respiratory irritation
 H336 - May cause drowsiness or dizziness
 H340 - May cause genetic defects.
 H350 - May cause cancer.
 H411 - Toxic to aquatic life with long lasting effects

Precautionary statements

- Prevention** • P201 - Obtain special instructions before use.
 P202 - Do not handle until all safety precautions have been read and understood.
 P261 - Avoid breathing mist, vapours and/or spray.
 P264 - Wash thoroughly after handling.
 P271 - Use only outdoors or in a well-ventilated area.
 P273 - Avoid release to the environment.
 P280 - Wear eye/face protection , .
 P281 - Use personal protective equipment as required.

- Response** • P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P312 - Call a POISON CENTER or doctor/physician if you feel unwell.
 P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337+P313 - If eye irritation persists: Get medical advice/attention.
 P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
 P331 - Do NOT induce vomiting.
 P308+P313 - IF exposed or concerned: Get medical advice/attention.
 P391 - Collect spillage.

- Storage/Disposal** • P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
 P405 - Store locked up.
 P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

DSD/DPD



- Risk phrases** • R45 - May cause cancer.
 R46 - May cause heritable genetic damage.
 R51 - Toxic to aquatic organisms.
 R53 - May cause long-term adverse effects in the aquatic environment.
 R65 - Harmful: may cause lung damage if swallowed.

- Safety phrases** • S53 - Avoid exposure - obtain special instructions before use.
 S57 - Use appropriate containment to avoid environmental contamination.

2.3 Other Hazards

- CLP** • According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous.

- DSD/DPD** • According to European Directive 1999/45/EC this material is considered dangerous.

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

- OSHA HCS 2012** • Flammable Liquids 4
 Aspiration 1

Eye Irritation 2
 Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation
 Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects
 Carcinogenicity 2
 Reproductive Toxicity 1B
 Specific Target Organ Toxicity Repeated Exposure 1

2.2 Label elements

OSHA HCS 2012

DANGER



- Hazard statements** • Combustible liquid
 May be fatal if swallowed and enters airways
 Causes serious eye irritation
 May cause respiratory irritation
 May cause drowsiness or dizziness
 Suspected of causing cancer.
 May damage fertility or the unborn child.
 Causes damage to organs through prolonged or repeated exposure.

Precautionary statements

- 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 and/or hot surfaces. - No smoking.
 Do not breathe mists, vapours, and/or spray.
 Wash thoroughly after handling.
 Do not eat, drink or smoke when using this product.
 Use only outdoors or in a well-ventilated area.
 Wear protective gloves/protective clothing/eye protection/face protection.
- Response** • In case of fire: Use appropriate media for extinction.
 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.
 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 SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
 Do NOT induce vomiting.
 IF exposed or concerned: Get medical advice/attention.
 Get medical advice/attention if you feel unwell.
- Storage/Disposal** • Store in a well-ventilated place. Keep container tightly closed.
 Keep cool.
 Store locked up.
 Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3 Other hazards

OSHA HCS 2012

- Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Canada

According to: WHMIS

2.1 Classification of the substance or mixture

WHMIS

- Combustible Liquids - B3
 Toxic - D1B
 Other Toxic Effects - D2A
 Other Toxic Effects - D2B

2.2 Label elements

WHMIS



- Combustible Liquids - B3
- Toxic - D1B
- Other Toxic Effects - D2A
- Other Toxic Effects - D2B

2.3 Other hazards

WHMIS

- In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

Section 3 - Composition/Information on Ingredients

3.1 Substances

- Material does not meet the criteria of a substance.

3.2 Mixtures

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
Nitric acid, 2-ethylhexyl ester	CAS:27247-96-7 EINECS:248-363-6	40% TO 60%	Ingestion/Oral-Rat LD50 • >10 mL/kg Skin-Rabbit LD50 • >5 mL/kg	EU DSD/DPD: Not Classified EU CLP: Not Classified OSHA HCS 2012: Not Classified	NDA
Solvent naphtha	CAS:64742-94-5 EC Number:265-198-5 EU Index:649-424-00-3	15% TO 30%	Inhalation-Rat LC50 • >590 mg/m ³ 4 Hour(s) Skin-Rabbit LD50 • >2 mL/kg	EU DSD/DPD: Not Classified EU CLP: Not Classified OSHA HCS 2012: Not Classified	NDA
Solvent naphtha (petroleum), light aromatic	CAS:64742-95-6 EC Number:265-199-0 EU Index:649-356-00-4	5% TO 15%	Ingestion/Oral-Rat LD50 • 8400 mg/kg	EU DSD/DPD: Annex VI, Table 3.2: Xn, R65; Carc. 3, R40, R67, Xi, R37 EU CLP: Annex VI, Table 3.1: Asp. Tox. 1, H304; Carc. 2, H351; STOT SE 3: Narc., H336; STOT SE 3: Resp. Irrit., H335 OSHA HCS 2012: Eye Irrit. 2; Asp. Tox. 1; STOT SE 3: Narc.; STOT SE 3: Resp Irrit.	NDA
Dipropylene glycol monomethyl ether	CAS:34590-94-8 EC Number:252-104-2	5% TO 15%	Ingestion/Oral-Rat LD50 • 5400 µL/kg Skin-Rabbit LD50 • 10 mL/kg	EU DSD/DPD: Xi; R36 EU CLP: Eye Irrit. 2, H319 OSHA HCS 2012: Flam. Liq. 4; Eye Irrit. 2	NDA
Naphthalene	CAS:91-20-3 EC Number:202-049-5	< 3%	Skin-Rabbit LD50 • >20 g/kg Ingestion/Oral-Rat	EU DSD/DPD: Annex VI, Table 3.2: Carc. Cat. 3, R40; Xn, R22; N, R50, R53 EU CLP: Annex VI, Table 3.1: Carc. 2, H351; Acute Tox. 4, H302; Aquatic Acute 1, H400; Aquatic Chronic 1, H410	NDA

	EU Index: 601-052-00-2		LD50 • 490 mg/kg	OSHA HCS 2012: Flam. Sol. 2; Acute Tox. 4 (orl); Skin Irrit. 2; Muta. 2; Carc. 2; Repr. 2; STOT SE 3: Narc.; STOT RE 1 (Blood, Eyes; Oral, Inhl)	
1,2,4-Trimethylbenzene	CAS: 95-63-6 EC Number: 202-436-9 EU Index: 601-043-00-3	< 3%	Ingestion/Oral-Rat LD50 • 5 g/kg Inhalation-Rat LC50 • 18000 mg/m ³ 4 Hour (s)	EU DSD/DPD: Annex VI, Table 3.2: R10; Xn, R20; Xi, R36/37/38; N, R51, R53 EU CLP: Annex VI, Table 3.1: Flam. Liq. 3, H226; Acute Tox. 4, H332; Eye Irrit. 2, H319; STOT SE 3: Resp. Irrit., H335; Skin Irrit. 2, H315; Aquatic Chronic 2, H411 OSHA HCS 2012: Flam. Liq. 3; Skin Irrit. 2; Eye Irrit. 2; STOT SE 3: Narc.; STOT SE 3: Resp. Irrit. (inhl); Asp. Tox. 1	NDA
Xylene	CAS: 1330-20-7 EC Number: 215-535-7 EU Index: 601-022-00-9	< 1%	Ingestion/Oral-Rat LD50 • 4300 mg/kg Inhalation-Rat LC50 • 5000 ppm 4 Hour(s) Skin-Rabbit LD50 • >1700 mg/kg	EU DSD/DPD: Annex VI, Table 3.2: R10; Xn, R20/21; Xi, R38 EU CLP: Annex VI, Table 3.1: Flam. Liq. 3, H226; Acute Tox. 4, H332; Acute Tox. 4, H312; Skin Irrit. 2, H315 OSHA HCS 2012: Flam. Liq. 3; Acute Tox. 4 (Inhl); Skin Irrit. 2; Eye Irrit. 2; Repr. 1B (Inhl); STOT SE 3: Narc.; STOT SE 3: Resp. Irrit.	NDA
Benzene, trimethyl-	CAS: 25551-13-7 EC Number: 247-099-9	< 0.5%	Ingestion/Oral-Rat LD50 • 8970 mg/kg	EU DSD/DPD: R10; Xi; R38; R67; Xn; R65 EU CLP: Flam. Liq. 3, H226; Skin Irrit. 2, H315; STOT SE 3: Narc., H336; Asp. Tox. 1, H304 OSHA HCS 2012: Flam. Liq. 3; Eye Irrit. 2; Skin Irrit. 2; STOT SE 3: Narc.; Asp. Tox. 1	NDA
Ethylbenzene	CAS: 100-41-4 EC Number: 202-849-4 EU Index: 601-023-00-4	< 0.3%	Ingestion/Oral-Rat LD50 • 3500 mg/kg Skin-Rabbit LD50 • >5000 mg/kg Inhalation-Rabbit LC50 • 4000 ppm 4 Hour(s)	EU DSD/DPD: Annex VI, Table 3.2: F, R11; Xn, R20, R48/20, R65 EU CLP: Annex VI, Table 3.1: Flam. Liq. 2, H225; Acute Tox. 4 *, H332; STOT RE 2, H373 (hearing organs); Asp. Tox. 1, H304 OSHA HCS 2012: Flam. Liq. 2; Acute Tox. 4 (Inhl); Eye Irrit. 2; Carc. 2 (Inhl); Repr. 2 (Inhl); STOT SE 3: Narc.; STOT SE 3: Resp. Irrit. (Inhl); STOT RE 2 (Ear, Inhl); Asp. Tox. 1	NDA
1-Methylethylbenzene	CAS: 98-82-8 EC Number: 202-704-5 EU Index: 601-024-00-X	< 0.2%	Ingestion/Oral-Rat LD50 • 1400 mg/kg Skin-Rabbit LD50 • 12300 µL/kg Inhalation-Rat LC50 • 39000 mg/m ³ 4 Hour (s)	EU DSD/DPD: Annex VI, Table 3.2: R10; Xn, R65; Xi, R37; N, R51, R53 EU CLP: Annex VI, Table 3.1: Flam. Liq. 3, H226; Asp. Tox. 1, H304; STOT SE 3: Resp. Irrit., H335; Aquatic Chronic 2, H411 OSHA HCS 2012: Flam. Liq. 3; Acute Tox. 4 (orl); Skin Irrit. 2; Eye Irrit. 2; Carc. 2 (inhl); STOT SE 3: Narc.; STOT SE 3: Resp. Irrit. (inhl); Asp. Tox. 1	NDA
Acetic acid, vinyl ester	CAS: 108-05-4 EC Number: 203-545-4 EU Index: 607-023-00-0	< 0.1%	Ingestion/Oral-Rat LD50 • 2900 mg/kg Inhalation-Rat LC50 • 11400 mg/m ³ 4 Hour(s) Skin-Rabbit LD50 • 2335 mg/kg	EU CLP: Community workplace exposure limit OSHA HCS 2012: Exposure limits	NDA

See Section 16 for full text of H-statements and R-phrases.

Section 4 - First Aid Measures

4.1 Description of first aid measures

Inhalation

- Move victim to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. Get medical attention if symptoms occur.

- Skin**
- In case of contact with substance, immediately flush skin with running water for at least 20 minutes. Remove and isolate contaminated clothing. Wash skin with soap and water. If irritation develops and persists, get medical attention.
- Eye**
- In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. If eye irritation persists: Get medical advice/attention.
- Ingestion**
- Do NOT induce vomiting. Rinse mouth. Drink 2 - 4 cupfuls of water. Do not give anything by mouth to an unconscious person. Obtain medical attention immediately if ingested.

4.2 Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to Physician

- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Section 5 - Firefighting Measures

5.1 Extinguishing media

- Suitable Extinguishing Media**
- LARGE FIRES: Water spray, fog or alcohol-resistant foam.
SMALL FIRES: Dry chemical, CO₂, water spray or alcohol-resistant foam.
- Unsuitable Extinguishing Media**
- Do not use straight water stream.

5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards

- Containers may explode when heated.
Vapor explosion hazard indoors, outdoors or in sewers.
HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames.
Many liquids are lighter than water.
Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks).
Runoff to sewer may create fire or explosion hazard.
Vapors may form explosive mixtures with air.
Vapors may travel to source of ignition and flash back.
When heated above 100°C, may undergo a self-accelerating, exothermic reaction which causes a rapid rise in temperature and pressure.

Hazardous Combustion Products

- Hazardous decomposition products are oxides of carbon and nitrogen including CO and CO₂.

5.3 Advice for firefighters

- Structural firefighters' protective clothing will only provide limited protection. Wear positive pressure self-contained breathing apparatus (SCBA). Move containers from fire area if you can do it without risk.
LARGE FIRES: Cool containers with flooding quantities of water until well after fire is out.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions

- Ventilate enclosed areas. Do not walk through spilled material. Wear appropriate personal protective equipment, avoid direct contact. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Spills are extremely slippery.

Emergency Procedures

- As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions. 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. LARGE SPILL: Consider initial downwind evacuation for at least 300 meters (1000 feet) ELIMINATE all ignition sources (no

smoking, flares, sparks or flames in immediate area). Keep unauthorized personnel away. Stay upwind. Keep out of low areas.

6.2 Environmental precautions

- Prevent entry into waterways, sewers, basements or confined areas.

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures

- Stop leak if you can do it without risk.
Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
Use clean non-sparking tools to collect absorbed material.
A vapor suppressing foam may be used to reduce vapors.
All equipment used when handling the product must be grounded.
LARGE SPILLS: Dike far ahead of liquid spill for later disposal.
LARGE SPILLS: Water spray may reduce vapor; but may not prevent ignition in closed spaces.

6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling

- Use only in well ventilated areas. Avoid contact with heat and ignition sources. Do not use sparking tools. Take precautionary measures against static charges. All equipment used when handling the product must be grounded. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode and cause injury or death. Wear appropriate personal protective equipment, avoid direct contact. Do not breathe mist, vapours and/or spray. Avoid contact with skin, eyes, and clothing. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco. Empty drums should be completely drained, properly bunged, and promptly returned to a drum reconditioner, or properly disposed of.

7.2 Conditions for safe storage, including any incompatibilities

Storage

- Keep container tightly closed. Store in a cool/low-temperature, well-ventilated dry place away from heat and ignition sources. Protect from direct sunlight.

7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

Exposure Limits/Guidelines				
	Result	ACGIH	NIOSH	OSHA
Acetic acid, vinyl ester (108-05-4)	STELs	15 ppm STEL	Not established	Not established
	TWAs	10 ppm TWA	Not established	Not established
	Ceilings	Not established	4 ppm Ceiling (15 min); 15 mg/m ³ Ceiling (15 min)	Not established
1-Methylethylbenzene (98-82-8)	TWAs	50 ppm TWA	50 ppm TWA; 245 mg/m ³ TWA	50 ppm TWA; 245 mg/m ³ TWA
Ethylbenzene (100-41-4)	TWAs	20 ppm TWA	100 ppm TWA; 435 mg/m ³ TWA	100 ppm TWA; 435 mg/m ³ TWA
	STELs	Not established	125 ppm STEL; 545 mg/m ³ STEL	Not established

Benzene, trimethyl- (25551-13-7)	TWAs	25 ppm TWA	Not established	Not established
Xylene (1330-20-7)	TWAs	100 ppm TWA	Not established	100 ppm TWA; 435 mg/m ³ TWA
	STELs	150 ppm STEL	Not established	Not established
Naphthalene (91-20-3)	TWAs	10 ppm TWA	10 ppm TWA; 50 mg/m ³ TWA	10 ppm TWA; 50 mg/m ³ TWA
	STELs	Not established	15 ppm STEL; 75 mg/m ³ STEL	Not established
1,2,4- Trimethylbenzene (95-63-6)	TWAs	Not established	25 ppm TWA; 125 mg/m ³ TWA	Not established
Dipropylene glycol monomethyl ether (34590-94-8)	TWAs	100 ppm TWA	100 ppm TWA; 600 mg/m ³ TWA	100 ppm TWA; 600 mg/m ³ TWA
	STELs	150 ppm STEL	150 ppm STEL; 900 mg/m ³ STEL	Not established

8.2 Exposure controls

Engineering Measures/Controls

- Good general ventilation 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. Use explosion-proof electrical/ventilating/lighting/equipment.

Personal Protective Equipment

Respiratory

- In case of insufficient ventilation, wear suitable respiratory equipment. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face

- Wear chemical splash safety goggles.

Skin/Body

- Wear appropriate gloves. Wear long sleeves and/or protective coveralls.

Environmental Exposure Controls

- Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways. Follow best practice for site management and disposal of waste.

Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene

NIOSH = National Institute of Occupational Safety and Health

OSHA = Occupational Safety and Health Administration

STEL = Short Term Exposure Limits are based on 15-minute exposures

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

Section 9 - Physical and Chemical Properties

9.1 Information on Physical and Chemical Properties

Material Description			
Physical Form	Liquid	Appearance/Description	Amber liquid with aromatic hydrocarbon odor.
Color	Amber	Odor	Aromatic hydrocarbon.
Odor Threshold	Data lacking		
General Properties			
Boiling Point	Data lacking	Melting Point/Freezing Point	Data lacking
Decomposition Temperature	Data lacking	pH	Data lacking
Specific Gravity/Relative Density	= 0.931 @ 60 F(15.5556 C) Water=1	Water Solubility	Data lacking
Viscosity	Data lacking	Explosive Properties	Data lacking
Oxidizing Properties:	Data lacking		
Volatility			

Vapor Pressure	Data lacking	Vapor Density	Data lacking
Evaporation Rate	Data lacking		
Flammability			
Flash Point	63.9 C(147.02 F) TCC (Tagliabue Closed Cup)	UEL	Data lacking
LEL	Data lacking	Autoignition	Data lacking
Flammability (solid, gas)	Data lacking		
Environmental			
Octanol/Water Partition coefficient	Data lacking		

9.2 Other Information

- No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity

- No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

- Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions

- Hazardous polymerization will not occur.

10.4 Conditions to avoid

- Excess heat, sparks, open flame. Temperatures above 50°C (122°F) - 60°C (140°F).

10.5 Incompatible materials

- Avoid contact with strong oxidizing agents, such as nitric and sulfuric acids, halogens, hydrogen peroxide and chlorinating agents. May burn or react violently with fluorine/oxygen mixtures with 50-100% fluorine.

10.6 Hazardous decomposition products

- In the case of fire, a complex mixture of airborne solids, liquids and gases, including carbon monoxide, carbon dioxide, smoke and other organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Components		
Nitric acid, 2-ethylhexyl ester (40% TO 60%)	27247-96-7	Acute Toxicity: Ingestion/Oral-Rat LD50 • >10 mL/kg; Skin-Rabbit LD50 • >5 mL/kg; Multi-dose Toxicity: Ingestion/Oral-Rat TDLo • 2800 mg/kg 28 Day(s)-Continuous; <i>Liver:Changes in liver weight; Kidney, Ureter, and Bladder:Changes in tubules (including acute renal failure, acute tubular necrosis); Kidney, Ureter, and Bladder:Other changes in urine composition</i>
Solvent naphtha (15% TO 30%)	64742-94-5	Acute Toxicity: Inhalation-Rat LC50 • >590 mg/m ³ 4 Hour(s); Skin-Rabbit LD50 • >2 mL/kg; <i>Behavioral:Somnolence (general depressed activity); Behavioral:Changes in motor activity (specific assay); Behavioral:Irritability;</i> Irritation: Skin-Rabbit • 500 µL 24 Hour(s) • Mild irritation
Solvent naphtha (petroleum), light aromatic (5% TO 15%)	64742-95-6	Acute Toxicity: Ingestion/Oral-Rat LD50 • 8400 mg/kg; <i>Behavioral:Somnolence (general depressed activity); Behavioral:Tremor; Lungs, Thorax, or Respiration:Other changes;</i> Irritation: Eye-Rabbit • 100 µL 24 Hour(s) • Mild irritation; Reproductive: Inhalation-Rat TCLo • 1500 ppm (9W male/9W pre-16D post); <i>Reproductive Effects:Effects on Newborn:Growth statistics (e.g., reduced weight gain)</i>

Dipropylene glycol monomethyl ether (5% TO 15%)	34590-94-8	Acute Toxicity: Ingestion/Oral-Rat LD50 • 5400 µL/kg; Skin-Rabbit LD50 • 10 mL/kg; Irritation: Eye-Rabbit • 500 mg 24 Hour(s) • Mild irritation; Skin-Rabbit • 500 mg-Open • Mild irritation; Multi-dose Toxicity: Skin-Rabbit TDLo • 650 mL/kg 13 Week(s)-Intermittent; <i>Behavioral:General anesthetic;</i> <i>Nutritional and Gross Metabolic:Gross Metabolite Changes:Weight loss or decreased weight gain;</i> <i>Related to Chronic Data:Death in the Other Multiple Dose data type field</i>
1,2,4-Trimethylbenzene (< 3%)	95-63-6	Acute Toxicity: Ingestion/Oral-Rat LD50 • 5 g/kg; Inhalation-Rat LC50 • 18000 mg/m ³ 4 Hour(s); Multi-dose Toxicity: Inhalation-Rat TCLo • 100 ppm 6 Hour(s) 20 Day(s)-Intermittent; <i>Behavioral:Changes in motor activity (specific assay); Behavioral:Analgesia; Behavioral:Alteration of operant conditioning;</i> Inhalation-Rat TCLo • 20 mg/m ³ 24 Hour(s) 17 Week(s)-Intermittent; <i>Kidney, Ureter, and Bladder:Other changes in urine composition; Biochemical:Enzyme inhibition, induction, or change in blood or tissue levels:Catalases</i>
Naphthalene (< 3%)	91-20-3	Acute Toxicity: Ingestion/Oral-Rat LD50 • 490 mg/kg; Ingestion/Oral-Mouse TDLo • 158 mg/kg; <i>Brain and Coverings:Other degenerative changes; Liver:Other changes; Biochemical:Metabolism (intermediary):Lipids, including transport;</i> Inhalation-Human TCLo • 250 mg/m ³ ; <i>Sense Organs and Special Senses:Eye:Lacrimation; Behavioral:Headache;</i> Skin-Rabbit LD50 • >20 g/kg; Unreported-Guinea Pig LD50 • 1200 mg/kg; <i>Behavioral:Somnolence (general depressed activity);</i> Irritation: Skin-Rabbit • 0.05 mL 24 Hour(s) • Severe irritation; Multi-dose Toxicity: Ingestion/Oral-Rat TDLo • 500 mg/kg 10 Day(s)-Intermittent; <i>Behavioral:Sleep; Lungs, Thorax, or Respiration:Dyspnea;</i> Ingestion/Oral-Rat TDLo • 4500 mg/kg 10 Day(s)-Intermittent; <i>Brain and Coverings:Other degenerative changes;</i> Mutagen: Specific locus test • Inhalation-Rat • 30 ppm 13 Week(s)-Intermittent; Micronucleus test • Unreported Route-Human • Lymphocyte (Somatic cell) • 30 mg/L; Reproductive: Ingestion/Oral-Mouse TDLo • 2400 mg/kg (7-14D preg); <i>Reproductive Effects:Effects on Newborn:Live birth index; Reproductive Effects:Effects on Newborn:Viability index (e.g., # alive at day 4 per # born alive);</i> Ingestion/Oral-Rat TDLo • 4500 mg/kg (6-15D preg); <i>Reproductive Effects:Effects on Embryo or Fetus:Fetotoxicity (except death, e.g., stunted fetus); Reproductive Effects:Specific Developmental Abnormalities:Other developmental abnormalities;</i> Tumorigen / Carcinogen: Inhalation-Rat TCLo • 1575 mg/kg 105 Week(s)-Intermittent; <i>Tumorigenic:Carcinogenic by RTECS criteria; Sense Organs and Special Senses:Olfaction:Tumors;</i> Inhalation-Rat TCLo • 30 ppm 6 Hour(s) 105 Week(s)-Intermittent; <i>Tumorigenic:Equivocal tumorigenic agent by RTECS criteria; Sense Organs and Special Senses:Olfaction:Tumors;</i> Inhalation-Rat TCLo • 60 ppm 6 Hour(s) 105 Week(s)-Intermittent; <i>Tumorigenic:Carcinogenic by RTECS criteria; Sense Organs and Special Senses:Olfaction:Tumors</i>
Xylene (< 1%)	1330-20-7	Acute Toxicity: Ingestion/Oral-Rat LD50 • 4300 mg/kg; <i>Liver:Other changes; Kidney, Ureter, and Bladder:Other changes;</i> Inhalation-Rat LC50 • 5000 ppm 4 Hour(s); Inhalation-Man LCLo • 10000 ppm 6 Hour (s); <i>Behavioral:General anesthetic; Lungs, Thorax, or Respiration:Cyanosis; Blood:Other changes;</i> Inhalation-Human TCLo • 200 ppm; <i>Sense Organs and Special Senses:Olfaction:Other changes; Sense Organs and Special Senses:Eye:Conjunctive irritation; Lungs, Thorax, or Respiration:Other changes;</i> Skin-Rabbit LD50 • >1700 mg/kg; Irritation: Eye-Rabbit • 5 mg 24 Hour(s) • Severe irritation; Skin-Rabbit • 500 mg 24 Hour(s) • Moderate irritation; Reproductive: Inhalation-Mouse TCLo • 1 g/m ³ 12 Hour(s)(6-15D preg); <i>Reproductive Effects:Effects on Embryo or Fetus:Fetotoxicity (except death, e.g., stunted fetus); Reproductive Effects:Specific Developmental Abnormalities:Musculoskeletal system;</i> Inhalation-Rat TCLo • 50 mg/m ³ 6 Hour(s)(1-21D preg); <i>Reproductive Effects:Effects on Fertility:Post-implantation mortality; Reproductive Effects:Effects on Embryo or Fetus:Fetotoxicity (except death, e.g., stunted fetus); Reproductive Effects:Specific Developmental Abnormalities:Craniofacial (including nose and tongue)</i>
Benzene, trimethyl- (< 0.5%)	25551-13-7	Acute Toxicity: Ingestion/Oral-Rat LD50 • 8970 mg/kg; Irritation: Eye-Rabbit • 500 mg 24 Hour(s) • Mild irritation; Skin-Rabbit • 500 mg 24 Hour(s) • Moderate irritation
		Acute Toxicity: Ingestion/Oral-Rat LD50 • 3500 mg/kg; Inhalation-Guinea Pig LCLo • 2500 ppm 8 Hour(s); <i>Behavioral:Coma;</i> Inhalation-Human TCLo • 21700 mg/m ³ ; <i>Behavioral:Antipsychotic;</i> Inhalation-Mouse TCLo • 600 ppm 6 Minute(s); <i>Lungs, Thorax, or Respiration:Respiratory depression;</i> Skin-Rabbit LD50 • 17800 µL/kg; Irritation: Eye-Rabbit • 500 mg • Severe irritation; Skin-Rabbit • 15 mg 24 Hour(s)-Open • Mild irritation; Multi-dose Toxicity: Inhalation-Rat TCLo • 550 ppm 8 Hour(s) 5 Day(s)-Intermittent; <i>Sense Organs and Special Senses:Ear:Change in acuity; Sense Organs and Special Senses:Ear:Changes in cochlear structure or function;</i> Inhalation-Rat TDLo • 200 ppm 13 Week(s)-Intermittent; <i>Sense Organs and Special Senses:Ear:Changes in cochlear structure or function;</i> Mutagen: Specific locus test • Intraperitoneal-Mouse • 754 µmol/L; Micronucleus test • Unreported Route-

<p>Ethylbenzene (< 0.3%)</p>	<p>100-41-4</p>	<p>Hamster • Embryo (Somatic cell) • 25 mg/L; Sister chromatid exchange • Unreported Route-Human • Lymphocyte (Somatic cell) • 10 mmol/L; Mutation in Mammalian Somatic Cells • Unreported Route-Mouse • Lymphocyte (Somatic cell) • 80 mg/L; Reproductive: Inhalation-Rabbit TClO • 1 g/m³ 24 Hour(s)(7-20D preg); <i>Reproductive Effects:Effects on Fertility:Abortion</i>; Inhalation-Rat TClO • 1000 ppm (6H/6-20D preg); <i>Reproductive Effects:Specific Developmental Abnormalities:Other developmental abnormalities</i>; <i>Reproductive Effects:Specific Developmental Abnormalities:Musculoskeletal system</i>; Inhalation-Rat TClO • 96 ppm 7 Hour(s)(1-19D preg); <i>Reproductive Effects:Specific Developmental Abnormalities:Musculoskeletal system</i>; Inhalation-Rat TClO • 600 mg/m³ 24 Hour(s)(7-15D preg); <i>Reproductive Effects:Effects on Fertility:Post-implantation mortality</i>; <i>Reproductive Effects:Effects on Embryo or Fetus:Fetal death</i>; <i>Reproductive Effects:Specific Developmental Abnormalities:Musculoskeletal system</i>; Tumorigen / Carcinogen: Inhalation-Mouse TClO • 750 ppm 6 Hour(s) 2 Year(s)-Intermittent; <i>Tumorigenic:Carcinogenic by RTECS criteria</i>; <i>Lungs, Thorax, or Respiration:Bronchiogenic carcinoma</i>; <i>Liver:Tumors</i>; Inhalation-Rat TClO • 23400 mg/kg 104 Week(s)-Intermittent; <i>Tumorigenic:Equivocal tumorigenic agent by RTECS criteria</i>; <i>Kidney, Ureter, and Bladder:Kidney tumors</i>; <i>Reproductive Effects:Tumorigenic Effects:Testicular tumors</i>; Inhalation-Rat TClO • 750 ppm 6 Hour(s) 2 Year(s)-Intermittent; <i>Tumorigenic:Carcinogenic by RTECS criteria</i>; <i>Kidney, Ureter, and Bladder:Tumors</i></p>
<p>1-Methylethylbenzene (< 0.2%)</p>	<p>98-82-8</p>	<p>Acute Toxicity: Ingestion/Oral-Rat LD50 • 1400 mg/kg; <i>Gastrointestinal:Gastritis</i>; Inhalation-Rat LC50 • 39000 mg/m³ 4 Hour(s); Inhalation-Human TClO • 200 ppm; <i>Behavioral:Somnolence (general depressed activity)</i>; <i>Behavioral:Antipsychotic</i>; <i>Behavioral:Irritability</i>; Inhalation-Mouse TClO • 5150 mg/m³ 2 Hour(s); <i>Behavioral:General anesthetic</i>; Inhalation-Rat TClO • 300 ppm 30 Minute(s); <i>Lungs, Thorax, or Respiration:Respiratory depression</i>; Skin-Rabbit LD50 • 12300 µL/kg; Irritation: Eye-Rabbit • 500 mg 24 Hour(s) • Mild irritation; Skin-Rabbit • 100 mg 24 Hour(s) • Moderate irritation; Multi-dose Toxicity: Inhalation-Mouse TClO • 2000 mg/m³ 14 Week(s)-Continuous; <i>Behavioral:Somnolence (general depressed activity)</i>; Inhalation-Rabbit TClO • 10000 mg/m³ 2 Hour(s) 24 Week(s)-Intermittent; <i>Lungs, Thorax, or Respiration:Acute pulmonary edema</i>; <i>Blood:Hemorrhage</i>; <i>Blood:Changes in leucocyte (WBC) count</i>; Inhalation-Rat TClO • 1200 ppm 6 Hour(s) 13 Week(s)-Intermittent; <i>Sense Organs and Special Senses:Eye:Other</i>; <i>Behavioral:Changes in motor activity (specific assay)</i>; <i>Blood: Pigmented or nucleated red blood cells</i>; Mutagen: Mutation in microorganisms • Unreported Route-Salmonella typhimurium • 100 µg/plate 3 Hour(s)(-S9)</p>

GHS Properties	Classification
Respiratory sensitization	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Serious eye damage/Irritation	EU/CLP • Eye Irritation 2 OSHA HCS 2012 • Eye Irritation 2
Acute toxicity	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Aspiration Hazard	EU/CLP • Aspiration 1 OSHA HCS 2012 • Aspiration 1
Carcinogenicity	EU/CLP • Carcinogenicity 1B OSHA HCS 2012 • Carcinogenicity 2
Skin corrosion/Irritation	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Skin sensitization	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
STOT-RE	EU/CLP • Data lacking OSHA HCS 2012 • Specific Target Organ Toxicity Repeated Exposure 1
STOT-SE	EU/CLP • Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects; Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation OSHA HCS 2012 • Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects; Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation

Toxicity for Reproduction	EU/CLP • Data lacking OSHA HCS 2012 • Toxic to Reproduction 1B
Germ Cell Mutagenicity	EU/CLP • Germ Cell Mutagenicity 1B OSHA HCS 2012 • Data lacking

Potential Health Effects

Inhalation

- Acute (Immediate)** • May cause respiratory irritation. May affect the central nervous system. Symptoms may include dizziness, drowsiness, lethargy, coma and death.
- Chronic (Delayed)** • No data available.

Skin

- Acute (Immediate)** • May cause slight to mild irritation.
- Chronic (Delayed)** • Prolonged or repeated contact may dry the skin and lead to irritation (i.e. dermatitis)

Eye

- Acute (Immediate)** • Causes serious eye irritation.
- Chronic (Delayed)** • No data available.

Ingestion

- Acute (Immediate)** • Material may be aspirated into lungs during ingestion and/or subsequent vomiting. Aspiration of this material will cause severe lung injury, chemical pneumonitis, pulmonary edema or death.
- Chronic (Delayed)** • No data available.

Other

- Chronic (Delayed)** • Chronic exposure of workers to naphthalene has been reported to cause cataracts and retinal hemorrhage. Exposure to a large amount of naphthalene may cause hemolytic anemia.

Mutagenic Effects

- Repeated and prolonged exposure may cause mutagenic effects.

Carcinogenic Effects

- Repeated and prolonged exposure may cause cancer.

Carcinogenic Effects			
	CAS	IARC	NTP
Acetic acid, vinyl ester	108-05-4	Group 2B-Possible Carcinogen	Not Listed
1-Methylethylbenzene	98-82-8	Group 2B-Possible Carcinogen	Reasonably Anticipated to be Human Carcinogen
Ethylbenzene	100-41-4	Group 2B-Possible Carcinogen	Not Listed
Naphthalene	91-20-3	Group 2B-Possible Carcinogen	Reasonably Anticipated to be Human Carcinogen

Reproductive Effects

- Repeated and prolonged exposure may cause reproductive effects.

Key to abbreviations

- LC = Lethal Concentration
- LD = Lethal Dose
- TC = Toxic Concentration
- TD = Toxic Dose

Section 12 - Ecological Information

12.1 Toxicity

Biobor MD®					
Dosage	Species	Duration	Results	Exposure Conditions	Comments

7.72 mg/L	Fish: Pimephales promelas (Fathead Minnow)	96 Hour (s)	LC50	NDA	1,2,4-Trimethylbenzene (95-63-6)
3.6063 mg/L	Crustacea: Daphnia magna (Water Flea)	48 Hour (s)	EC50	NDA	1,2,4-Trimethylbenzene (95-63-6)
213 mg/L	Fish: Melanotaeni a fluviatilis (Chrimson-Spotted Rainbowfish)	96 Hour (s)	LC50	NDA	Naphthalene (91-20-3)
136 mg/L	Crustacea: Daphnia magna (Water Flea)	48 Hour (s)	EC50	NDA	Naphthalene (91-20-3)
1 mg/L	Crustacea: Daphnia magna (Water Flea)	48 Hour (s)	NOEC	NDA	Naphthalene (91-20-3)
4.15 mg/L	Aquatic Plant(s): Scenedesmus subspicatus (Green Algae)	7 Day(s)	NOEC	NDA	Naphthalene (91-20-3)
2.7 mg/L	Fish: Pimephales promelas (Fathead Minnow)	96 Hour (s)	LC50	NDA	1-Methylethylbenzene (98-82-8)
7.4 mg/L	Crustacea: Artemia sp.(Brine Shrimp)	48 Hour (s)	EC50	NDA	1-Methylethylbenzene (98-82-8)
2.6 mg/L	Aquatic Plant(s): Pseudokirchneriella subcapitata (Green Algae)	72 Hour (s)	EC50	NDA	1-Methylethylbenzene (98-82-8)

- Toxic to aquatic life with long lasting effects.

12.2 Persistence and degradability

- No data is available on this product.

12.3 Bioaccumulative potential

- No data is available on this product.

12.4 Mobility in Soil

- No data is available on this product.

12.5 Results of PBT and vPvB assessment

- No PBT and vPvB assessment has been conducted.

12.6 Other adverse effects

- No studies have been found.

Section 13 - Disposal Considerations

13.1 Waste treatment methods

Product waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	NA1993	Combustible liquid, n.o.s.	NDA	NDA	NDA
TDG	UN1993	FLAMMABLE LIQUID, N.O.S. (Contains Petroleum Naphtha, 2-Ethylhexylnitrate)	3	III	NDA

IMO/IMDG	UN1993	FLAMMABLE LIQUID, N.O.S. (Contains Petroleum Naphtha, 2-Ethylhexylnitrate)	3	III	NDA
IATA/ICAO	UN1993	Flammable liquid, n.o.s. (Contains Petroleum Naphtha, 2-Ethylhexylnitrate)	3	III	NDA

14.6 Special precautions for user • None specified.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code • Data lacking.

14.8 Other information

DOT • This material is not regulated for US DOT transportation in quantities less than 119 Gallons. If shipping overseas, or via air, the proper shipping name is: Flammable liquid, n.o.s. (Contains Petroleum Naphtha, 2-Ethylhexylnitrate), 3, UN1993, PGIII. This material is a marine pollutant when shipped in containers of greater than 119 gallons. It is not recommended to ship this product via air in quantities greater than one liter.

Section 15 - Regulatory Information

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

SARA Hazard Classifications • Acute, Chronic, Fire

Inventory						
Component	CAS	Canada DSL	Canada NDSL	EU EINECS	EU ELNICS	TSCA
1,2,4-Trimethylbenzene	95-63-6	Yes	No	Yes	No	Yes
1-Methylethylbenzene	98-82-8	Yes	No	Yes	No	Yes
Acetic acid, vinyl ester	108-05-4	Yes	No	Yes	No	Yes
Benzene, trimethyl-	25551-13-7	Yes	No	Yes	No	Yes
Dipropylene glycol monomethyl ether	34590-94-8	Yes	No	Yes	No	Yes
Ethylbenzene	100-41-4	Yes	No	Yes	No	Yes
Naphthalene	91-20-3	Yes	No	Yes	No	Yes
Nitric acid, 2-ethylhexyl ester	27247-96-7	Yes	No	Yes	No	Yes
Solvent naphtha	64742-94-5	Yes	No	Yes	No	Yes
Solvent naphtha (petroleum), light aromatic	64742-95-6	Yes	No	Yes	No	Yes
Xylene	1330-20-7	Yes	No	Yes	No	Yes

Canada

Labor

Canada - WHMIS - Classifications of Substances

- | | | |
|----------------------------|------------|-----------------|
| • Acetic acid, vinyl ester | 108-05-4 | B2, D1B, D2A, F |
| • Naphthalene | 91-20-3 | B4, D2A |
| • Benzene, trimethyl- | 25551-13-7 | B3 |

• 1-Methylethylbenzene	98-82-8	B2, D2A
• Dipropylene glycol monomethyl ether	34590-94-8	B3
• Ethylbenzene	100-41-4	B2, D2A, D2B
• Xylene	1330-20-7	B2, D2A, D2B
• 1,2,4-Trimethylbenzene	95-63-6	B3
• Solvent naphtha (petroleum), light aromatic	64742-95-6	B3, D2B
• Solvent naphtha	64742-94-5	Not Listed
• Nitric acid, 2-ethylhexyl ester	27247-96-7	Not Listed

Canada - WHMIS - Ingredient Disclosure List

• Acetic acid, vinyl ester	108-05-4	1 %
• Naphthalene	91-20-3	1 %
• Benzene, trimethyl-	25551-13-7	1 %
• 1-Methylethylbenzene	98-82-8	1 %
• Dipropylene glycol monomethyl ether	34590-94-8	1 %
• Ethylbenzene	100-41-4	0.1 %
• Xylene	1330-20-7	Not Listed
• 1,2,4-Trimethylbenzene	95-63-6	0.1 %
• Solvent naphtha (petroleum), light aromatic	64742-95-6	Not Listed
• Solvent naphtha	64742-94-5	Not Listed
• Nitric acid, 2-ethylhexyl ester	27247-96-7	Not Listed

Environment

Canada - CEPA - Priority Substances List

• Acetic acid, vinyl ester	108-05-4	Not Listed
• Naphthalene	91-20-3	Not Listed
• Benzene, trimethyl-	25551-13-7	Not Listed
• 1-Methylethylbenzene	98-82-8	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• Ethylbenzene	100-41-4	Not Listed
• Xylene	1330-20-7	Priority Substance List 1 (substance not considered toxic)
• 1,2,4-Trimethylbenzene	95-63-6	Not Listed
• Solvent naphtha (petroleum), light aromatic	64742-95-6	Not Listed
• Solvent naphtha	64742-94-5	Not Listed
• Nitric acid, 2-ethylhexyl ester	27247-96-7	Not Listed

United States

Labor

U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals

• Acetic acid, vinyl ester	108-05-4	Not Listed
• Naphthalene	91-20-3	Not Listed
• Benzene, trimethyl-	25551-13-7	Not Listed
• 1-Methylethylbenzene	98-82-8	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• Ethylbenzene	100-41-4	Not Listed
• Xylene	1330-20-7	Not Listed
• 1,2,4-Trimethylbenzene	95-63-6	Not Listed
• Solvent naphtha (petroleum), light aromatic	64742-95-6	Not Listed
• Solvent naphtha	64742-94-5	Not Listed
• Nitric acid, 2-ethylhexyl ester	27247-96-7	Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

• Acetic acid, vinyl ester	108-05-4	Not Listed
• Naphthalene	91-20-3	Not Listed
• Benzene, trimethyl-	25551-13-7	Not Listed
• 1-Methylethylbenzene	98-82-8	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• Ethylbenzene	100-41-4	Not Listed
• Xylene	1330-20-7	Not Listed
• 1,2,4-Trimethylbenzene	95-63-6	Not Listed
• Solvent naphtha (petroleum), light aromatic	64742-95-6	Not Listed
• Solvent naphtha	64742-94-5	Not Listed
• Nitric acid, 2-ethylhexyl ester	27247-96-7	Not Listed

Environment**U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants**

• Acetic acid, vinyl ester	108-05-4	
• Naphthalene	91-20-3	
• Benzene, trimethyl-	25551-13-7	Not Listed
• 1-Methylethylbenzene	98-82-8	
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• Ethylbenzene	100-41-4	(listed under Ethyl benzene)
• Xylene	1330-20-7	(isomers and mixtures)
• 1,2,4-Trimethylbenzene	95-63-6	Not Listed
• Solvent naphtha (petroleum), light aromatic	64742-95-6	Not Listed
• Solvent naphtha	64742-94-5	Not Listed
• Nitric acid, 2-ethylhexyl ester	27247-96-7	Not Listed

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

• Acetic acid, vinyl ester	108-05-4	5000 lb final RQ; 2270 kg final RQ
• Naphthalene	91-20-3	100 lb final RQ; 45.4 kg final RQ
• Benzene, trimethyl-	25551-13-7	Not Listed
• 1-Methylethylbenzene	98-82-8	5000 lb final RQ; 2270 kg final RQ
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• Ethylbenzene	100-41-4	1000 lb final RQ; 454 kg final RQ
• Xylene	1330-20-7	100 lb final RQ; 45.4 kg final RQ
• 1,2,4-Trimethylbenzene	95-63-6	Not Listed
• Solvent naphtha (petroleum), light aromatic	64742-95-6	Not Listed
• Solvent naphtha	64742-94-5	Not Listed
• Nitric acid, 2-ethylhexyl ester	27247-96-7	Not Listed

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

• Acetic acid, vinyl ester	108-05-4	Not Listed
• Naphthalene	91-20-3	Not Listed
• Benzene, trimethyl-	25551-13-7	Not Listed
• 1-Methylethylbenzene	98-82-8	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• Ethylbenzene	100-41-4	Not Listed
• Xylene	1330-20-7	Not Listed
• 1,2,4-Trimethylbenzene	95-63-6	Not Listed

• Solvent naphtha (petroleum), light aromatic	64742-95-6	Not Listed
• Solvent naphtha	64742-94-5	Not Listed
• Nitric acid, 2-ethylhexyl ester	27247-96-7	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

• Acetic acid, vinyl ester	108-05-4	5000 lb EPCRA RQ
• Naphthalene	91-20-3	Not Listed
• Benzene, trimethyl-	25551-13-7	Not Listed
• 1-Methylethylbenzene	98-82-8	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• Ethylbenzene	100-41-4	Not Listed
• Xylene	1330-20-7	Not Listed
• 1,2,4-Trimethylbenzene	95-63-6	Not Listed
• Solvent naphtha (petroleum), light aromatic	64742-95-6	Not Listed
• Solvent naphtha	64742-94-5	Not Listed
• Nitric acid, 2-ethylhexyl ester	27247-96-7	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

• Acetic acid, vinyl ester	108-05-4	1000 lb TPQ
• Naphthalene	91-20-3	Not Listed
• Benzene, trimethyl-	25551-13-7	Not Listed
• 1-Methylethylbenzene	98-82-8	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• Ethylbenzene	100-41-4	Not Listed
• Xylene	1330-20-7	Not Listed
• 1,2,4-Trimethylbenzene	95-63-6	Not Listed
• Solvent naphtha (petroleum), light aromatic	64742-95-6	Not Listed
• Solvent naphtha	64742-94-5	Not Listed
• Nitric acid, 2-ethylhexyl ester	27247-96-7	Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

• Acetic acid, vinyl ester	108-05-4	0.1 % de minimis concentration
• Naphthalene	91-20-3	0.1 % de minimis concentration
• Benzene, trimethyl-	25551-13-7	Not Listed
• 1-Methylethylbenzene	98-82-8	1.0 % de minimis concentration
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• Ethylbenzene	100-41-4	0.1 % de minimis concentration
• Xylene	1330-20-7	1.0 % de minimis concentration
• 1,2,4-Trimethylbenzene	95-63-6	1.0 % de minimis concentration
• Solvent naphtha (petroleum), light aromatic	64742-95-6	Not Listed
• Solvent naphtha	64742-94-5	Not Listed
• Nitric acid, 2-ethylhexyl ester	27247-96-7	Not Listed

U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing

• Acetic acid, vinyl ester	108-05-4	Not Listed
• Naphthalene	91-20-3	Not Listed
• Benzene, trimethyl-	25551-13-7	Not Listed
• 1-Methylethylbenzene	98-82-8	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed

• Ethylbenzene	100-41-4	Not Listed
• Xylene	1330-20-7	Not Listed
• 1,2,4-Trimethylbenzene	95-63-6	Not Listed
• Solvent naphtha (petroleum), light aromatic	64742-95-6	Not Listed
• Solvent naphtha	64742-94-5	Not Listed
• Nitric acid, 2-ethylhexyl ester	27247-96-7	Not Listed

United States - California

Environment

U.S. - California - Proposition 65 - Carcinogens List

• Acetic acid, vinyl ester	108-05-4	Not Listed
• Naphthalene	91-20-3	carcinogen, initial date 4/19/02
• Benzene, trimethyl-	25551-13-7	Not Listed
• 1-Methylethylbenzene	98-82-8	carcinogen, initial date 4/6/10
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• Ethylbenzene	100-41-4	carcinogen, initial date 6/11/04
• Xylene	1330-20-7	Not Listed
• 1,2,4-Trimethylbenzene	95-63-6	Not Listed
• Solvent naphtha (petroleum), light aromatic	64742-95-6	Not Listed
• Solvent naphtha	64742-94-5	Not Listed
• Nitric acid, 2-ethylhexyl ester	27247-96-7	Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity

• Acetic acid, vinyl ester	108-05-4	Not Listed
• Naphthalene	91-20-3	Not Listed
• Benzene, trimethyl-	25551-13-7	Not Listed
• 1-Methylethylbenzene	98-82-8	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• Ethylbenzene	100-41-4	Not Listed
• Xylene	1330-20-7	Not Listed
• 1,2,4-Trimethylbenzene	95-63-6	Not Listed
• Solvent naphtha (petroleum), light aromatic	64742-95-6	Not Listed
• Solvent naphtha	64742-94-5	Not Listed
• Nitric acid, 2-ethylhexyl ester	27247-96-7	Not Listed

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

• Acetic acid, vinyl ester	108-05-4	Not Listed
• Naphthalene	91-20-3	Not Listed
• Benzene, trimethyl-	25551-13-7	Not Listed
• 1-Methylethylbenzene	98-82-8	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• Ethylbenzene	100-41-4	Not Listed
• Xylene	1330-20-7	Not Listed
• 1,2,4-Trimethylbenzene	95-63-6	Not Listed
• Solvent naphtha (petroleum), light aromatic	64742-95-6	Not Listed
• Solvent naphtha	64742-94-5	Not Listed
• Nitric acid, 2-ethylhexyl ester	27247-96-7	Not Listed

U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

• Acetic acid, vinyl ester	108-05-4	Not Listed
• Naphthalene	91-20-3	5.8 µg/day NSRL
• Benzene, trimethyl-	25551-13-7	Not Listed
• 1-Methylethylbenzene	98-82-8	Not Listed

• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• Ethylbenzene	100-41-4	54 µg/day NSRL (inhalation); 41 µg/day NSRL (oral)
• Xylene	1330-20-7	Not Listed
• 1,2,4-Trimethylbenzene	95-63-6	Not Listed
• Solvent naphtha (petroleum), light aromatic	64742-95-6	Not Listed
• Solvent naphtha	64742-94-5	Not Listed
• Nitric acid, 2-ethylhexyl ester	27247-96-7	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Female

• Acetic acid, vinyl ester	108-05-4	Not Listed
• Naphthalene	91-20-3	Not Listed
• Benzene, trimethyl-	25551-13-7	Not Listed
• 1-Methylethylbenzene	98-82-8	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• Ethylbenzene	100-41-4	Not Listed
• Xylene	1330-20-7	Not Listed
• 1,2,4-Trimethylbenzene	95-63-6	Not Listed
• Solvent naphtha (petroleum), light aromatic	64742-95-6	Not Listed
• Solvent naphtha	64742-94-5	Not Listed
• Nitric acid, 2-ethylhexyl ester	27247-96-7	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

• Acetic acid, vinyl ester	108-05-4	Not Listed
• Naphthalene	91-20-3	Not Listed
• Benzene, trimethyl-	25551-13-7	Not Listed
• 1-Methylethylbenzene	98-82-8	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• Ethylbenzene	100-41-4	Not Listed
• Xylene	1330-20-7	Not Listed
• 1,2,4-Trimethylbenzene	95-63-6	Not Listed
• Solvent naphtha (petroleum), light aromatic	64742-95-6	Not Listed
• Solvent naphtha	64742-94-5	Not Listed
• Nitric acid, 2-ethylhexyl ester	27247-96-7	Not Listed

15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

15.3 Other Information

- WARNING: This product contains a chemical known to the State of California to cause cancer.

Section 16 - Other Information

Relevant Phrases (code & full text)

- H225 - Highly flammable liquid and vapour
- H226 - Flammable liquid and vapour
- H302 - Harmful if swallowed
- H312 - Harmful in contact with skin
- H315 - Causes skin irritation
- H332 - Harmful if inhaled
- H351 - Suspected of causing cancer.
- H373 - May cause damage to organs through prolonged or repeated exposure.
- H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

R10 - Flammable.

R11 - Highly flammable.

R20 - Harmful by inhalation.

R20/21 - Harmful by inhalation and in contact with skin.

R22 - Harmful if swallowed.

R36 - Irritating to eyes.

R36/37/38 - Irritating to eyes, respiratory system and skin.

R37 - Irritating to respiratory system.

R38 - Irritating to skin.

R40 - Limited evidence of a carcinogenic effect.

R48/20 - Harmful: danger of serious damage to health by prolonged exposure through inhalation.

R50 - Very toxic to aquatic organisms.

R67 - Vapours may cause drowsiness and dizziness.

Revision Date

- 04/August/2015

Preparation Date

- 16/January/2012

Disclaimer/Statement of Liability

- **USER'S RESPONSIBILITY:** A bulletin such as this cannot be expected to cover all possible individual situations. As the user has the responsibility to provide a safe workplace, all aspects of an individual operation should be examined to determine if, or where, precautions - in addition to those described herein - are required. Any health hazard and safety information herein should be passed on to your customers or employees, as the case may be. **DISCLAIMER OF LIABILITY:** The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. All chemicals may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist. Final determination of suitability of the chemical is the sole responsibility of the user. No representations or warranties, either expressed or implied, of merchantability, fitness for a particular purpose or any other nature are made hereunder with respect to the information contained herein or the chemical to which the information refers. It is the responsibility of the user to comply with all applicable federal, state and local laws and regulations.

Key to abbreviations

NDA = No data available
