



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product identifier	TURBO DIESEL
Other means of identification	
MSDS number	LT16618a
Product code	CC2588 (1 Pint / 470 mL); CC2588 X (1 Pint / 470 mL)
Product use	Diesel fuel additive.
Chemical family	Mixture of: Petroleum distillates; Hydrocarbons; Ether
Manufacturer	
Company name	Cummins Filtration
Address	1200 Fleetguard Road Cookeville, TN, U.S.A. 38506
Telephone	(931) 526 9551
Website	www.cumminsfiltration.com
E-Mail	fleetmaster.us@cummins.com
Supplier information	Refer to Manufacturer
Emergency phone number	Chemtrec 1-800-424-9300 (Within Continental U.S.); Chemtrec 703-527-3887 (Outside U.S.).

2. Hazard(s) Identification

Emergency overview	Light coloured liquid. Hydrocarbon odour. WARNING! Combustible liquid and vapour. May be harmful or fatal if swallowed. Can enter the lungs and cause damage. May be harmful if inhaled. May cause respiratory irritation. May cause nausea, vomiting, headache and other central nervous system effects. May cause eye and skin irritation. Contains material which can cause damage to the blood system, the liver and the kidneys. Possible cancer hazard - contains material which may cause cancer. Possible birth defect hazard - contains material that may cause birth defects, based on animal data. Contains material that may be harmful in the environment.
Potential health effects	
Routes of exposure	
Routes of entry skin & eye	May cause moderate skin irritation. Mild to moderate eye irritant.
Routes of entry skin absorption	May be absorbed through the skin.
Routes of entry inhalation	May cause irritation to the respiratory system. May cause central nervous system depression.
Routes of entry ingestion	Aspiration hazard May cause gastrointestinal irritation.
Target organs	Eyes, skin, respiratory system, central nervous system, blood system, liver, brain and kidneys.
Chronic effects	Prolonged or repeated contact may cause drying, cracking and defatting of the skin. Repeated overexposure to naphthalene may cause destruction of red blood cells with anemia, fever, jaundice and kidney and liver damage. For further information, please refer to section 11 of the MSDS.
Most important symptoms/effects, acute and delayed	May be an aspiration hazard. Aspiration into the lungs during swallowing or subsequent vomiting may cause chemical pneumonitis, which can be fatal. Causes skin irritation. Contact may cause redness, swelling and a painful sensation. Causes eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Symptoms may include upper respiratory irritation, coughing and breathing difficulties. May cause central nervous system depression. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects.

Suspected of causing cancer. Symptoms may include persistent coughing, shortness of breath, coughing up blood and wheezing.
 Suspected of damaging the unborn child. Symptoms may include reduced fetal weight, delayed ossification and persistent behavioural effects.
 Causes damage to the blood system if swallowed. Contains: Naphthalene. Repeated overexposure to naphthalene may cause destruction of red blood cells with anemia, fever, and subsequent liver and kidney effects.
 Prolonged overexposure may cause slight liver effects, such as increased organ weights.

Potential environmental effects Toxic to aquatic life with long lasting effects. Avoid release to the environment. See Section 12 for more environmental information.

3. Composition/information on ingredients

Mixture

Chemical name	CAS #	Percent
Aromatic solvent	178535-25-6	30.0 - 60.0
2-Ethylhexyl nitrate	27247-96-7	15.0 - 25.0
Solvent naphtha (petroleum), heavy aromatic	64742-94-5	7.0 - 13.0
1,3,5-Triethylbenzene	102-25-0	7.0 - 13.0
Diethylene glycol monomethyl ether	111-77-3	1.0 - 5.0
Naphthalene	91-20-3	1.0 - 5.0
1,2,4-Trimethylbenzene	95-63-6	0.1 - 1.0
Xylene	1330-20-7	0.1 - 0.5
Ethylbenzene	100-41-4	0.1 - 0.3

4. First Aid Measures

First aid procedures

Inhalation Move to fresh air. If breathing is difficult, give oxygen by qualified medical personnel only. If breathing has stopped, give artificial respiration. Get medical attention.

Skin contact Remove contaminated clothing. Wash off immediately with soap and plenty of water. If irritation persists, seek prompt medical attention. Wash contaminated clothing before reuse.

Eye contact Immediately flush eyes with running water for at least 15 minutes. Get medical attention.

Ingestion Do NOT induce vomiting. Seek immediate medical attention/advice. Never give anything by mouth if victim is unconscious.

Notes to physician Immediate medical attention is required. Aspiration hazard if swallowed - can enter lungs and cause damage.
 Provide general supportive measures and treat symptomatically.

General Information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire Fighting Measures

Flammable properties Flammable by WHMIS criteria.

Extinguishing media

Suitable extinguishing media Dry chemical, foam, carbon dioxide and water fog.

Unsuitable extinguishing media Do not use water jet, as this may spread burning material.

Protection of firefighters

Specific hazards arising from the chemical

Vapours are heavier than air and collect in confined and low-lying areas. Material will float on water and can be re-ignited at the water's surface. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure. Toxic fumes may be released during a fire.

Protective equipment for firefighters

Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode.

Fire fighting equipment/instructions

Move containers from fire area if safe to do so. Use water spray to keep containers cool. Do not allow run-off from fire fighting to enter drains or water courses. Dike for water control.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

Explosion data

Sensitivity to static discharge

Not expected to be sensitive to static discharge.

Sensitivity to mechanical impact

Not expected to be sensitive to mechanical impact.

Hazardous combustion products

Carbon oxides; Hydrocarbons; Aldehydes; Sulphur oxides; Nitrogen oxides (NOx); Other unidentified organic compounds.

General fire hazards

Combustible liquid and vapour. May be ignited by open flames and sparks.

6. Accidental Release Measures

Personal precautions

Restrict access to area until completion of clean-up. Keep all other personnel upwind and away from the spill/release. Ensure clean-up is conducted by trained personnel only. All persons dealing with the clean-up should wear the appropriate personal protective equipment. Refer to protective measures listed in sections 7 and 8.

Environmental precautions

Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. If necessary, dike well ahead of the spill to prevent runoff into drains, sewers, or any natural waterway or drinking supply. Contact local authorities in case of spillage to drain/aquatic environment.

Methods and materials for containment and cleaning up

Ventilate the area. Stop the spill at source if it is safe to do so. Eliminate all ignition sources. Use only non-sparking tools and equipment in the clean-up process.

Clean-up methods - small spillage: Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand). Pick up and transfer to properly labelled containers. Never return spills in original containers for re-use. Contaminated absorbent material may pose the same hazards as the spilled product.

Clean-up methods - large spillage: Contain spilled liquid with non-combustible, inert absorbent material (e.g. sand). Remove liquid by pumps or vacuum equipment. Keep in properly labelled containers.

Notify the appropriate authorities as required. Refer to Section 13 for disposal of contaminated material.

Other information

Clean up in accordance with all applicable regulations.

7. Handling and Storage

Handling

Wear suitable protective equipment during handling. Wear protective gloves/clothing and eye/face protection. Use only outdoors or in a well-ventilated area. Do not ingest. Do not breathe mist or vapors. Avoid contact with eyes, skin and clothing. Keep away from heat, sparks, and open flames. Keep away from incompatibles. Use caution when opening cap. Keep containers tightly closed when not in use. Empty containers retain residue (liquid and/or vapour) and can be dangerous. Wash thoroughly after handling. Keep out of the reach of children. Do not cut, weld, drill or grind on or near this container.

Storage

Store in a cool, dry, well-ventilated area. Store away from areas of excessive heat, open flames, sparks, and other possible sources of ignition. Keep away from incompatibles. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. Store locked up. Keep out of the reach of children. Do not store near any incompatible materials (see Section 10).

8. Exposure Controls / Personal Protection

Occupational exposure limits

U.S. OSHA Exposure Limits (29 CFR 1910)

	Type	Value
Solvent naphtha (petroleum), heavy (CAS 8004-742-94-5)	TWA	500 ppm (as petroleum distillates, naphtha)
Naphthalene (CAS 91-20-3)	TWA	10 ppm (50 mg/m ³)
1,2,4-Trimethylbenzene (CAS 95-63-6)	TWA	25 ppm (trimethylbenzene isomers) (final rule limit)
Xylene (CAS 1330-20-7)	TWA	100 ppm (435 mg/m ³)
Ethylbenzene (CAS 100-41-4)	TWA	100 ppm (435 mg/m ³)

US. ACGIH Threshold Limit Values

	Type	Value
Naphthalene (CAS 91-20-3)	TWA	10 ppm (skin)
1,2,4-Trimethylbenzene (CAS 95-63-6)	TWA	25 ppm (trimethylbenzene isomers)
Xylene (CAS 1330-20-7)	STEL	150 ppm
	TWA	100 ppm
Ethylbenzene (CAS 100-41-4)	TWA	20 ppm

Biological limit values

Naphthalene	(CAS 91-20-3)	Parameter 1-Naphthol with hydrolysis plus 2-Naphthol with hydrolysis (nonquantitative, nonspecific)
Xylene	(CAS 1330-20-7)	1.5 g/g, Creatinine; Medium: Urine; Parameter: Methylhippuric acid
Ethylbenzene	(CAS 100-41-4)	0.15 g/g Creatinine, Medium: Urine, Parameter: Sum of mandelic acid and phenylglyoxylic acid (nonspecific)

US ACGIH Threshold Limit Values: Skin designation

Naphthalene(CAS 91-20-3)

Can be absorbed through skin

Engineering controls

Use only outdoors or in a well-ventilated area. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal protective equipment

Eye / face protection

Wear as appropriate: Tightly fitting safety goggles; Safety glasses with side-shields. A full face shield may also be necessary.

Skin protection

Wear protective gloves. Advice should be sought from glove suppliers. Wear protective clothing to cover as much of the exposed skin area as possible. Where extensive exposure to product is possible, use resistant coveralls, apron and boots to prevent contact.

Respiratory protection

Respiratory protection is required if the concentrations exceed the TLV. NIOSH-approved respirators are recommended. Seek advice from respiratory protection specialists. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with CSA Z94.4-02.

Hand protection Ensure that eyewash stations and safety showers are close to the workstation location. Other equipment may be required depending on workplace standards.

9. Physical and chemical properties
Appearance

Physical state Liquid.
Form Thin liquid.
Colour Light coloured liquid.

Odour Petroleum odour.

Odour threshold N/Av

pH N/Av

Melting point /freezing point N/Av

Initial boiling point and boiling range

> 100°C (212°F) (based on ingredients)

Flash point 63°C (145°F)
 Tag closed cup

Evaporation rate N/Av

Flammability (solid, gas) N/Av

Lower flammability/explosive limit N/Av

Upper flammability/explosive limit N/Av

Vapour pressure N/Av

Vapour density N/Av

Relative density 0.92 @ 15.6°C (60°F)

Solubility(ies)

Other solubility(ies) N/Av

Solubility (water) Insoluble.

Partition coefficient (n-octanol/water) N/Av

Auto-ignition temperature N/Av

Decomposition temperature N/Av

Viscosity N/Av

Other information

Explosive properties Not explosive

Oxidizing properties None known.

Specific gravity 0.92 @ 15.6°C (60°F)

VOC N/Av

Volatilities % N/Av

Other physical/chemical data No additional information.

10. Stability and reactivity

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Stable under the recommended storage and handling conditions prescribed.

Possibility of hazardous reactions No dangerous reaction known under conditions of normal use. Hazardous polymerization does not occur.

Conditions to avoid Avoid excessive heat, sparks and open flame. Do not use in areas without adequate ventilation. Avoid contact with incompatible materials.

Incompatible materials Strong oxidizing agents; Strong acids; Strong bases; Halogenated materials.

Hazardous decomposition products None known, refer to hazardous combustion products in Section 5.

11. Toxicological information
Toxicological data

Components	Species	Test Results
Aromatic solvent		
Acute		
<i>Dermal</i>		
LD50	Rabbit	N/Av
<i>Inhalation</i>		
LC50	Rat	N/Av
<i>Oral</i>		
LD50	Rat	> 2000 mg/kg (No mortality)
Solvent naphtha (petroleum), heavy aromatic		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 3160 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 17.1 mg/L (mist)
<i>Oral</i>		
LD50	Rat	> 6000 mg/kg
1,3,5-Triethylbenzene		
Acute		
<i>Dermal</i>		
LD50	Rabbit	N/Av
<i>Inhalation</i>		
LC50	Rat	N/Av
<i>Oral</i>		
LD50	Rat	N/Av
Diethylene glycol monomethyl ether		
Acute		
<i>Dermal</i>		
LD50	Rabbit	9404 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 50 mg/L (aerosol)
<i>Oral</i>		
LD50	Rat	6830 mg/kg
Naphthalene		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 20 000 mg/kg
<i>Inhalation</i>		
LC50	Rat	N/Av
<i>Oral</i>		
LD50	Rat	490 mg/kg (rat) 533 mg/kg (mouse)
1,2,4-Trimethylbenzene		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 3160 mg/kg
<i>Inhalation</i>		
LC50	Rat	18 mg/L (vapour)

Xylene	<i>Oral</i>		
	LD50	Rat	5000 mg/kg
	Acute		
	<i>Dermal</i>		
Ethylbenzene	LD50	Rabbit	12 180 mg/kg
	<i>inhalation</i>		
	LC50	Rat	6350 ppm (27.6 mg/L) (vapours)
	<i>Oral</i>		
2-Ethylhexyl nitrate	LD50	Rat	3253 mg/kg
	Acute		
	<i>Dermal</i>		
	LD50	Rabbit	15 380 mg/kg
	<i>inhalation</i>		
	LC50	Rat	4000 ppm (17.4 mg/L) (vapour)
	<i>Oral</i>		
	LD50	Rat	3500 mg/kg
	Acute		
	<i>Dermal</i>		
	LD50	Rabbit	> 4800 mL/kg
	<i>inhalation</i>		
	LC50	Rat	> 14 mg/L
	<i>Oral</i>		
	LD50	Rat	> 9600 mg/kg

Acute effects

May be harmful or fatal if swallowed. Causes mild to moderate skin and eye irritation. May cause respiratory irritation. May cause central nervous system depression.

Product (based on similar blends):

LD50 (Rat, oral): >5000mg/kg (supplier)

LD50 (Rabbit, dermal): >2000mg/kg (supplier).

See data above for individual ingredient acute toxicity data.

Sensitization

Not expected to be a skin or respiratory sensitizer.

Chronic effects

Prolonged or repeated contact may cause drying, cracking and defatting of the skin. Repeated overexposure to naphthalene may cause destruction of red blood cells with anemia, fever, jaundice and kidney and liver damage.

For further information, please refer to section 11 of the MSDS.

Carcinogenicity

Contains: Naphthalene; Ethylbenzene. Naphthalene is classified as carcinogenic by IARC (Group 2B) and NTP (Group 2 - Reasonably anticipated). Ethylbenzene is classified as possibly carcinogenic by IARC (Group 2B) and the ACGIH (Category A3). See below for ingredients present on regulatory lists.

IARC Monographs. Overall Evaluation of Carcinogenicity

Naphthalene(CAS 91-20-3)	Group 2B (Possibly Carcinogenic to Humans)
Xylene(CAS 1330-20-7)	Group 3 (Not Classifiable)
Ethylbenzene(CAS 100-41-4)	Group 2B (Possibly Carcinogenic to Humans)

ACGIH Carcinogenicity

Naphthalene(CAS 91-20-3)	A4 - Not Classifiable as a Human Carcinogen
Xylene(CAS 1330-20-7)	A4 - Not Classifiable as a Human Carcinogen
Ethylbenzene(CAS 100-41-4)	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

Skin corrosion/irritation

May cause moderate skin irritation.

Serious eye damage/irritation

Mild to moderate eye irritant.

Mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Reproductive effects Not expected to cause reproductive effects.

Teratogenicity This product contains Diethylene glycol monomethyl ether. Diethylene glycol monomethyl ether was found to be fetotoxic, embryotoxic and/or teratogenic in the absence of maternal toxicity, based on animal data. This product contains Xylene. Xylene may cause fetotoxic effects at doses which are not maternally toxic, based on animal data.

Most important symptoms/effects, acute and delayed

May be an aspiration hazard. Aspiration into the lungs during swallowing or subsequent vomiting may cause chemical pneumonitis, which can be fatal.

Causes skin irritation. Contact may cause redness, swelling and a painful sensation.

Causes eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

May cause respiratory irritation. Symptoms may include upper respiratory irritation, coughing and breathing difficulties.

May cause central nervous system depression. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects.

Suspected of causing cancer. Symptoms may include persistent coughing, shortness of breath, coughing up blood and wheezing.

Suspected of damaging the unborn child. Symptoms may include reduced fetal weight, delayed ossification and persistent behavioural effects.

Causes damage to the blood system if swallowed. Contains: Naphthalene. Repeated overexposure to naphthalene may cause destruction of red blood cells with anemia, fever, and subsequent liver and kidney effects.

Prolonged overexposure may cause slight liver effects, such as increased organ weights.

Further information None known or reported by the manufacturer.

12. Ecological information

<i>Ecotoxicity data:</i>				
Components	CAS No	Toxicity to Fish		
		LC50 / 96h	NOEC / 21 day	M Factor
Aromatic solvent	178535-25-6	N/Av	N/Av	None.
Solvent naphtha (petroleum), heavy aromatic	64742-94-5	3.6 mg/L (Rainbow trout)	N/Av	None.
1,3,5-Triethylbenzene	102-25-0	4.15 mg/L (Fathead minnow) (Read-across)	N/Av	None.
Diethylene glycol monomethyl ether	111-77-3	5700 mg/L (Fathead minnow)	N/Av	None.
Naphthalene	91-20-3	0.96 mg/L (pink salmon)	0.12 mg/L/40 days	1
1,2,4-Trimethylbenzene	95-63-6	7.72 mg/L (Fathead minnow)	N/Av	None.
Xylene	1330-20-7	8.2 mg/L (Rainbow trout)	N/Av	None.
Ethylbenzene	100-41-4	4.2 mg/L (Rainbow trout)	1.13 mg/L/30 days	None.
2-Ethylhexyl nitrate	27247-96-7	2 mg/L (Zebra fish)	N/Av	None.

Components	CAS No	Toxicity to Daphnia		
		EC50 / 48h	NOEC / 21 day	M Factor
Aromatic solvent	178535-25-6	1.3 mg/L (Daphnia magna)	N/Av	None.
Solvent naphtha (petroleum), heavy aromatic	64742-94-5	1.1 mg/L (Daphnia magna)	N/Av	None.
1,3,5-Triethylbenzene	102-25-0	N/Av	N/Av	None.
Diethylene glycol monomethyl ether	111-77-3	1192 mg/L (Daphnia magna)	N/Av	None.
Naphthalene	91-20-3	3.4 mg/L (Daphnia magna)	0.22 - 0.6 mg/L	None.
1,2,4-Trimethylbenzene	95-63-6	3.6 mg/L (Daphnia magna)	N/Av	None.
Xylene	1330-20-7	3.2 - 9.56 mg/L (Daphnia magna)	N/Av	None.
Ethylbenzene	100-41-4	1.81 mg/L (Daphnia magna)	N/Av	None.
2-Ethylhexyl nitrate	27247-96-7	> 12.6 mg/L (Daphnia magna)	N/Av	None.

Components	CAS No	Toxicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
Aromatic solvent	178535-25-6	6.2 mg/L/72hr (Green algae)	3.2 mg/L/72hr	None.
Solvent naphtha (petroleum), heavy aromatic	64742-94-5	7.2 mg/L/72hr (Green algae)	0.22 mg/L/72hr	None.
1,3,5-Triethylbenzene	102-25-0	N/Av	N/Av	None.
Diethylene glycol monomethyl ether	111-77-3	> 500 mg/L/72hr (Green algae)	N/Av	None.
Naphthalene	91-20-3	0.4 mg/L/72hr Skeletonema costatum (Diatom)	N/Av	1
1,2,4-Trimethylbenzene	95-63-6	2.356 mg/L/96hr (Green algae) (QSAR)	N/Av	N/Av
Xylene	1330-20-7	3.2 - 4.9 mg/L/72hr (Green algae)	N/Av	None.
Ethylbenzene	100-41-4	3.6 mg/L/96hr (Green algae)	3.4 mg/L/96hr	None.
2-Ethylhexyl nitrate	27247-96-7	1.57 mg/L/72hr (Green algae)	12.6 mg/L/72hr	None.

Ecotoxicity

Toxic to aquatic life with long lasting effects. No data is available on the product itself.

See above for individual ingredient ecotoxicity data.

Environmental effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Aquatic toxicity

No data is available on the product itself. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters.

Persistence and degradability

No data is available on the product itself.

The following ingredients are considered to be readily biodegradable: Diethylene glycol monomethyl ether.

Contains the following chemicals which are considered to be inherently biodegradable: Xylene; Ethylbenzene.

Contains the following chemicals which are not readily biodegradable: Aromatic solvent; Solvent naphtha (petroleum), heavy aromatic; Naphthalene; 1,2,4-Trimethylbenzene; 1,3,5-Trimethylbenzene.

Bioaccumulation / accumulation

No data is available on the product itself.

See the following data for ingredient information.

<u>Components</u>	<u>Partition coefficient n-octanol/water (log Kow)</u>	<u>Bioconcentration factor (BCF)</u>
Aromatic solvent (CAS 178535-25-6)	> 3.43, < 6.5	N/Av
Solvent naphtha (petroleum), heavy aromatic (CAS 64742-94-5)	> 3, to < 6.5	N/Av
1,3,5-Triethylbenzene (CAS 102-25-0)	4.757	N/Av
Diethylene glycol monomethyl ether (CAS 111-77-3)	- 1.18	3
Naphthalene (CAS 91-20-3)	3.7	427 (Fathead minnow)
1,2,4-Trimethylbenzene (CAS 95-63-6)	3.78	31 - 275
Xylene (CAS 1330-20-7)	3.12 - 3.2	50 - 58
Ethylbenzene (CAS 100-41-4)	3.15	1.1 - 1.5
2-Ethylhexyl nitrate (CAS 27247-96-7)	5.24	N/Av

Mobility in soil No data is available on the product itself.





13. Disposal consideration



Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose in accordance with all applicable federal, state, provincial and local regulations.

Waste from residues / unused products Dispose of contents/container in accordance with local regulation. Empty containers should be disposed of in accordance with the requirements of the following legislation:

Contaminated packaging Empty containers should be taken for local recycling or waste disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

TDG			
UN Number	UN3082		
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-Ethylhexyl nitrate; Triethylbenzene)		
Transport hazard class(es)			
Class	9		
Subsidiary risk	None		
Packaging group	III		
Environmental hazards	Yes		
Special precautions for user	This material may be shipped as an exempted marine pollutant in accordance with TDG Section 1.45.1 and Special Provision 99. Read safety instructions, SDS and emergency procedures before handling.		
ICAO/IATA			
UN Number	UN3082		
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (2-Ethylhexyl nitrate; Triethylbenzene)		
Transport hazard class(es)			
Class	9		
Subsidiary risk	None		
Packaging group	III		

Environmental hazards	Yes
ERG Code	9L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling. Refer to the appropriate Packing Instruction, prior to shipping this material. Review all State and Operator Variations, prior to shipping this material.
Other information	
Passenger and cargo aircraft	Allowed
Cargo aircraft only	Allowed
IMDG	 
UN Number	UN3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-Ethylhexyl nitrate; Triethylbenzene)
Transport hazard class(es)	
Class	9
Subsidiary risk	None
Packaging group	III
Environmental hazards	Yes
Marine pollutant	Yes
EmS	F-A; S-F
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

General information This product meets the criteria for an environmentally hazardous material according to the IMDG Code. See Section 12 for more environmental information.

15. Regulatory information

Canadian regulations Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL). This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and this MSDS contains all the information required by the CPR.

WHMIS status Controlled

WHMIS classification
 B3 - Combustible Liquid
 D2A - Other toxic effects - Very toxic
 D2B - Other Toxic Effects - Toxic

WHMIS labeling



International Inventories

TSCA: All listed ingredients appear on the Toxic Substances Control Act (TSCA) inventory.

Components listed below are present on the following International Inventory lists:

<u>Ingredients</u>	CAS #	European EINECs	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	NewZealand IOC
Aromatic solvent	178535-25-6	700-371-5	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

Solvent naphtha (petroleum), heavy aromatic	64742-94-5	265-198-5	Present	Present	(9)-2578	KE-31656	Present	May be used as a single component chemical under an appropriate group standard
1,3,5-Triethylbenzene	102-25-0	203-017-3	Not listed	Present	(3)-3427	Not listed	Not listed	May be used as a component in a product covered by a group standard, but is not approved for use as a chemical in its own right.
Diethylene glycol monomethyl ether	111-77-3	203-906-6	Present	Present	(7)-97; (2)-422; (2)-2979	KE-23278	Present	HSR002752
Naphthalene	91-20-3	202-049-5	Present	Present	(4)-311	KE-25545	Present	HSR001287
1,2,4-Trimethylbenzene	95-63-6	202-436-9	Present	Present	(3)-7; (3)-3427	KE-34410	Present	HSR001382
Xylene	1330-20-7	215-535-7	Present	Present	(3)-60; (3)-3	KE-35427	Present	HSR000983
Ethylbenzene	100-41-4	202-849-4	Present	Present	(3)-60; (3)-28	KE-13532	Present	HSR001151
2-Ethylhexyl nitrate	27247-96-7	248-363-6	Present	Present	(2)-3598	KE-13803	Present	May be used as a single component chemical under an appropriate group standard

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

NFPA Rating	0 - Minimal	1 - Slight	2 - Moderate	3 - Serious	
	: <i>Health:</i> 2 <i>Flammability:</i> 2 <i>Instability:</i> 0 <i>Special Hazards:</i> None.				
HMIS Rating	* - Chronic hazard	0 - Minimal	1 - Slight	2 - Moderate	3 - Serious
	: <i>Health:</i> *2 <i>Flammability:</i> 2 <i>Reactivity:</i> 0				
Issue date	05/30/2015				
Version #	1				
Legend	ACGIH: American Conference of Governmental Industrial Hygienists AICS: Australian Inventory of Chemical Substances CAS: Chemical Abstract Services CEPA: Canadian Environmental Protection Act COC: Cleveland Open Cup CSA: Canadian Standards Association EC50: Effective Concentration 50%. EINECS: European Inventory of Existing Commercial chemical Substances HMIS: Hazardous Materials Identification System HSDB: Hazardous Substances Data Bank IARC: International Agency for Research on Cancer IATA: International Air Transport Association IBC: Intermediate Bulk Container ICAO: International Civil Aviation Organisation IECSC: Inventory of Existing Chemical Substances IMDG: International Maritime Dangerous Goods Inh: Inhalation IOC: Inventory of Chemicals KECI: Korean Existing Chemicals Inventory KECL: Korean Existing Chemicals List LC: Lethal Concentration LD: Lethal Dose				

MATERIAL SAFETY DATA SHEET

MSDS: Material Safety Data Sheet
N/Av: Not Applicable
N/Av: Not Available
NFPA: National Fire Protection Association
NIOSH: National Institute of Occupational Safety and Health
NOEC: No observable effect concentration
NTP: National Toxicology Program
OECD: Organisation for Economic Co-operation and Development
OSHA: Occupational Safety and Health Administration
PEL: Permissible exposure limit
PICCS: Philippine Inventory of Chemicals and Chemical Substances
RTECS: Registry of Toxic Effects of Chemical Substances
STEL: Short Term Exposure Limit
TDG: Canadian Transportation of Dangerous Goods Act & Regulations
TLV: Threshold Limit Values
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Identification System

Bibliography

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