

# SAFETY DATA SHEET

according to Regulation (EC) No. 453/2010

## EZ MUL® LA

Revision Date: 08-Apr-2014

Revision Number: 4

### 1. Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product Identifier

Product Name EZ MUL® LA

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

Recommended Use Emulsifier

#### 1.3 Details of the supplier of the safety data sheet

Halliburton Manufacturing Services, Ltd.

Halliburton House, Howemoss Crescent

Kirkhill Industrial Estate

Dyce

Aberdeen, AB21 0GN

United Kingdom

Emergency Phone Number: +44 1224 795277 or +1 281 575 5000

[www.halliburton.com](http://www.halliburton.com)

For further information, please contact

E-Mail address: [fdunexchem@halliburton.com](mailto:fdunexchem@halliburton.com)

#### 1.4 Emergency telephone number

+44 1224 795277 or +1 281 575 5000

#### Emergency telephone - §45 - (EC)1272/2008

Europe	112
Denmark	Poison Control Hotline (DK): +45 82 12 12 12
France	ORFILA (FR): + 01 45 42 59 59
Germany	Poison Center Berlin (DE): +49 030 30686 790
Italy	Poison Center, Milan (IT): +39 02 6610 1029
Netherlands	National Poisons Information Center (NL): +31 30 274 88 88 (NB: this service is only available to health professionals)
Norway	Poisons Information (NO): +47 22 591300
Poland	Poison Control and Information Centre, Warsaw (PL): +48 22 619 66 54; +48 22 619 08 97
Spain	Poison Information Service (ES): +34 91 562 04 20
United Kingdom	NHS Direct (UK): +44 0845 46 47

### 2. Hazards Identification

#### 2.1 Classification of the substance or mixture

##### REGULATION (EC) No 1272/2008

Acute Inhalation Toxicity - Vapors	Category 4 - H332
Skin Corrosion / irritation	Category 2 - H315
Serious Eye Damage / Eye Irritation	Category 2 - H319
Skin Sensitization	Category 1 - H317
Carcinogenicity	Category 2 - H351
Specific Target Organ Toxicity - (Repeated Exposure)	Category 2 - H373

Classification according to EU Directives 67/548/EEC or 1999/45/EC

For the full text of the R-phrases mentioned in this Section, see Section 16

**Classification** Xn - Harmful.

**Risk Phrases**

R20 Harmful by inhalation.  
 R40 Limited evidence of a carcinogenic effect.  
 R43 May cause sensitization by skin contact.  
 R36/38 Irritating to eyes and skin.

## 2.2 Label Elements

### Hazard Pictograms



### Signal Word

### Warning

#### Hazard Statements

H315 - Causes skin irritation  
 H317 - May cause an allergic skin reaction  
 H319 - Causes serious eye irritation  
 H332 - Harmful if inhaled  
 H351 - Suspected of causing cancer  
 H373 - May cause damage to organs through prolonged or repeated exposure

#### Precautionary Statements - EU (§28, 1272/2008)

P202 - Do not handle until all safety precautions have been read and understood  
 P280 - Wear protective gloves/eye protection/face protection  
 P302 + P352 - IF ON SKIN: Wash with plenty of soap and water  
 P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention  
 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

#### Contains

#### Substances

Fatty acid, tall-oil, reaction product with diethylenetriamine, maleic anhydride, tetraethylenepentamine, and triethylenetetramine

#### CAS Number

68990-47-6

Diesel fuel

68334-30-5

Ethylene glycol monobutyl ether

111-76-2

Diethylene glycol monobutyl ether

112-34-5

## 2.3 Other Hazards

None known

## 3. Composition/information on Ingredients

Substances	EINECS	CAS Number	PERCENT (w/w)	EEC Classification	EU - CLP Substance Classification	REACH No.
Fatty acid, tall-oil, reaction product with diethylenetriamine, maleic anhydride, tetraethylenepentamine, and triethylenetetramine	273-601-0	68990-47-6	60 - 100%	Xi; R43	Skin Sens. 1 (H317)	01-2119496070-42

Diesel fuel	269-822-7	68334-30-5	10 - 30%	Carc.Cat.3; R40 Xn;; R20 R65 Xi; R38	Acute Tox. 4 (532) Skin Irrit. 2 (H315) Carc. 2 (H351) STOT-RE 2 (H373)	No data available
Ethylene glycol monobutyl ether	203-905-0	111-76-2	1 - 5%	Xn; R20/21/22 Xi; R36/38	Acute Tox. 4 (H302) Acute Tox. 4 (H312) Acute Tox. 4 (H332) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319)	01-2119475108-36
Diethylene glycol monobutyl ether	203-961-6	112-34-5	1 - 5%	Xi; R36	Eye Irrit. 2 (H319)	01-2119475104-44

For the full text of the R-phrases mentioned in this Section, see Section 16

## 4. First aid measures

### 4.1 Description of first aid measures

<b>Inhalation</b>	If inhaled, remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult give oxygen. Get medical attention.
<b>Eyes</b>	In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing.
<b>Skin</b>	In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes. Get medical attention.
<b>Ingestion</b>	Get medical attention! If vomiting occurs, keep head lower than hips to prevent aspiration.

### 4.2 Most Important symptoms and effects, both acute and delayed

May cause eye and skin irritation. Potential carcinogen. May be harmful if inhaled

### 4.3 Indication of any immediate medical attention and special treatment needed

**Notes to Physician** Treat symptomatically

## 5. Firefighting Measures

### 5.1 Extinguishing media

#### Suitable Extinguishing Media

Water fog, carbon dioxide, foam, dry chemical.

#### Extinguishing media which must not be used for safety reasons

None known.

### 5.2 Special hazards arising from the substance or mixture

#### Special Exposure Hazards

Decomposition in fire may produce toxic gases.

### 5.3 Advice for firefighters

#### Special Protective Equipment for Fire-Fighters

Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

## 6. Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Use appropriate protective equipment.

See Section 8 for additional information

### 6.2 Environmental precautions

Prevent from entering sewers, waterways, or low areas.

### 6.3 Methods and material for containment and cleaning up

Isolate spill and stop leak where safe. Remove ignition sources and work with non-sparking tools. Contain spill with sand or other inert materials. Scoop up and remove.

### 6.4 Reference to other sections

See Section 8 and 13 for additional information.

## 7. Handling and Storage

### 7.1 Precautions for Safe Handling

Avoid contact with eyes, skin, or clothing. Avoid breathing vapors.

#### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice

### 7.2 Conditions for safe storage, including any incompatibilities

Store away from oxidizers. Keep from heat, sparks, and open flames. Keep container closed when not in use. Product has a shelf life of 12 months.

### 7.3 Specific End Use(s)

Exposure Scenario	No information available
Other Guidelines	No information available

## 8. Exposure Controls/Personal Protection

### 8.1 Control parameters

#### Exposure Limits

Substances	CAS Number	EU	UK OEL	Netherlands	France OEL
Fatty acid, tall-oil, reaction product with diethylenetriamine, maleic anhydride, tetraethylenepentamine, and triethylenetetramine	68990-47-6	Not applicable	Not applicable	Not applicable	Not applicable
Diesel fuel	68334-30-5	Not applicable	Not applicable	Not applicable	Not applicable
Ethylene glycol monobutyl ether	111-76-2	Not applicable	STEL: 50 ppm STEL: 246 mg/m <sup>3</sup> TWA: 25 ppm TWA: 123 mg/m <sup>3</sup>	TWA: 100 mg/m <sup>3</sup> STEL: 246 mg/m <sup>3</sup>	2 ppm
Diethylene glycol monobutyl ether	112-34-5	STEL: 15 ppm STEL: 101.2 mg/m <sup>3</sup> TWA: 10 ppm TWA: 67.5 mg/m <sup>3</sup>	STEL: 15 ppm STEL: 101.2 mg/m <sup>3</sup> TWA: 10 ppm TWA: 67.5 mg/m <sup>3</sup>	TWA: 50 mg/m <sup>3</sup> STEL: 100 mg/m <sup>3</sup>	10 ppm

Substances	CAS Number	Germany MAK/TRK	Spain	Portugal	Finland
Fatty acid, tall-oil, reaction product with diethylenetriamine, maleic anhydride, tetraethylenepentamine, and triethylenetetramine	68990-47-6	Not applicable	Not applicable	Not applicable	Not applicable
Diesel fuel	68334-30-5	Not applicable	Not applicable	TWA: 100 mg/m <sup>3</sup>	Not applicable
Ethylene glycol monobutyl ether	111-76-2	TWA: 20 ppm TWA: 98 mg/m <sup>3</sup> MAK: 10 ppm MAK: 49 mg/m <sup>3</sup>	50 ppm VLA-EC; 245 mg/m <sup>3</sup> VLA-EC VLA-ED: 20 ppm VLA-ED: 98 mg/m <sup>3</sup>	TWA: 20 ppm	STEL: 50 ppm STEL: 250 mg/m <sup>3</sup> TWA: 20 ppm TWA: 98 mg/m <sup>3</sup>
Diethylene glycol monobutyl ether	112-34-5	TWA: 100 mg/m <sup>3</sup> MAK: 10 ppm MAK: 67 mg/m <sup>3</sup>	15 ppm VLA-EC; 101.2 mg/m <sup>3</sup> VLA-EC VLA-ED: 10 ppm VLA-ED: 67.5 mg/m <sup>3</sup>	Not applicable	TWA: 10 ppm TWA: 68 mg/m <sup>3</sup>

Substances	CAS Number	Austria	Ireland	Switzerland	Norway
Fatty acid, tall-oil, reaction product with diethylenetriamine, maleic anhydride, tetraethylenepentamine, and triethylenetetramine	68990-47-6	Not applicable	Not applicable	Not applicable	Not applicable
Diesel fuel	68334-30-5	Not applicable	Not applicable	Not applicable	Not applicable
Ethylene glycol monobutyl ether	111-76-2	Not applicable	Not applicable	Not applicable	STEL: 20 ppm STEL: 75 mg/m <sup>3</sup> TWA: 10 ppm TWA: 50 mg/m <sup>3</sup>
Diethylene glycol monobutyl ether	112-34-5	Not applicable	Not applicable	Not applicable	STEL: 20 ppm STEL: 102 mg/m <sup>3</sup> TWA: 10 ppm TWA: 68 mg/m <sup>3</sup>

Substances	CAS Number	Italy	Poland	Hungary	Czech Republic
Fatty acid, tall-oil, reaction product with diethylenetriamine, maleic anhydride, tetraethylenepentamine, and triethylenetetramine	68990-47-6	Not applicable	Not applicable	Not applicable	Not applicable
Diesel fuel	68334-30-5	Not applicable	NDS: 0.5 mg/m <sup>3</sup>	Not applicable	Not applicable
Ethylene glycol monobutyl ether	111-76-2	STEL: 50 ppm STEL: 246 mg/m <sup>3</sup> TWA: 20 ppm TWA: 98 mg/m <sup>3</sup>	NDSCh: 200 mg/m <sup>3</sup> NDS: 98 mg/m <sup>3</sup>	TWA: 98 mg/m <sup>3</sup> STEL: 246 mg/m <sup>3</sup>	TWA: 100 mg/m <sup>3</sup>
Diethylene glycol monobutyl ether	112-34-5	STEL: 15 ppm STEL: 101.2 mg/m <sup>3</sup> TWA: 10 ppm TWA: 67.5 mg/m <sup>3</sup>	NDSCh: 100 mg/m <sup>3</sup> NDS: 67 mg/m <sup>3</sup>	TWA: 67.5 mg/m <sup>3</sup> STEL: 101.2 mg/m <sup>3</sup>	TWA: 100 mg/m <sup>3</sup>

Substances	CAS Number	Denmark
Fatty acid, tall-oil, reaction product with diethylenetriamine, maleic anhydride, tetraethylenepentamine, and triethylenetetramine	68990-47-6	Not applicable
Diesel fuel	68334-30-5	Not applicable
Ethylene glycol monobutyl ether	111-76-2	TWA: 20 ppm TWA: 98 mg/m <sup>3</sup>
Diethylene glycol monobutyl ether	112-34-5	TWA: 10 ppm TWA: 67.5 mg/m <sup>3</sup>

### Derived No Effect Level (DNEL)

#### Worker

Substances	Long-term exposure - systemic effects, Inhalation	Acute / short term exposure - systemic effects, Inhalation	Long-term exposure - local effects, Inhalation	Acute / short term exposure - local effects, Inhalation	Long-term exposure - systemic effects, Dermal	Acute / short term exposure - systemic effects, Dermal	Long-term exposure - local effects, Dermal	Acute / short term exposure - local effects, Dermal	Hazards for the eyes - local effects
Fatty acid, tall-oil, reaction product with diethylenetriamine, maleic anhydride, tetraethylenepentamine, and triethylenetetramine	14693 µg/m <sup>3</sup>	29386 µg/m <sup>3</sup>	14693 µg/m <sup>3</sup>	14693 µg/m <sup>3</sup>	16666 µg/kg bw/day	33332 µg/kg bw/day	1388 µg/cm <sup>2</sup>	1388 µg/cm <sup>2</sup>	Not available
Ethylene glycol monobutyl ether	98 mg/m <sup>3</sup>	663 mg/m <sup>3</sup>	Not available	246 mg/m <sup>3</sup>	75 mg/kg bw/day	89 mg/kg bw/day	Not available	Not available	Not available
Diethylene glycol monobutyl ether	67.5 mg/m <sup>3</sup>	Not available	67.5 mg/m <sup>3</sup>	101.2 mg/m <sup>3</sup>	20 mg/kg bw/day	Not available	Not available	Not available	Not available

#### General Population

Substances	Long-term exposure - systemic effects, Inhalation	Acute / short term exposure - systemic effects, Inhalation	Long-term exposure - local effects, Inhalation	Acute / short term exposure - local effects, Inhalation	Long-term exposure - systemic effects, Dermal	Acute / short term exposure - systemic effects, Dermal	Long-term exposure - local effects, Dermal	Acute / short term exposure - local effects, Dermal	Long-term exposure - systemic effects, Oral	Acute / short term exposure - local effects, Oral	Hazards for the eyes - local effects
Fatty acid, tall-oil, reaction product with diethylenetriamine, maleic anhydride, tetraethylenepentamine, and triethylenetetramine	3623 µg/m <sup>3</sup>	7246 µg/m <sup>3</sup>	3623 µg/m <sup>3</sup>	3623 µg/m <sup>3</sup>	8333 µg/kg bw/day	16666 µg/kg bw/day	694 µg/cm <sup>2</sup>	694 µg/cm <sup>2</sup>	8333 µg/kg bw/day	16666 µg/kg bw/day	Not available
Ethylene glycol monobutyl ether	49 mg/m <sup>3</sup>	426 mg/m <sup>3</sup>	Not available	123 mg/m <sup>3</sup>	38 mg/kg bw/day	44.5 mg/kg bw/day	Not available	Not available	3.2 mg/kg bw/day	13.4 mg/kg bw/day	Not available
Diethylene glycol monobutyl ether	34 mg/m <sup>3</sup>	Not available	34 mg/m <sup>3</sup>	50.6 mg/m <sup>3</sup>	10 mg/kg bw/day	Not available	Not available	Not available	1.25 mg/kg bw/day	Not available	Not available

**Predicted No Effect Concentration (PNEC)**

Substances	Freshwater	Marine water	Intermittent release	Sewage treatment plant	Sediment (freshwater)	Sediment (marine water)	Air	Soil	Secondary poisoning
Fatty acid, tall-oil, reaction product with diethylenetriamine, maleic anhydride, tetraethylenepenta mine, and triethylenetetramine	0.00217 mg/L	0.000217 mg/L	0.0217 mg/L	1 mg/L	180 mg/kg sediment dw	18 mg/kg sediment dw	Not available	146 mg/kg soil dw	33.34 mg/kg food
Ethylene glycol monobutyl ether	8.8 mg/L	0.88 kg/L	9.1 mg/L	463 mg/L	34.6 mg/kg	3.46 mg/kg	Not available	3.13 mg/kg soil dw	0.02 g/kg food
Diethylene glycol monobutyl ether	1.0 mg/L	0.1 mg/L	3.9 mg/L	200 mg/L	4.0 mg/kg	0.4 mg/kg	Not available	0.4 mg/kg	56 mg/kg food

**8.2 Exposure controls****Engineering Controls**

A well ventilated area to control dust levels. Local exhaust ventilation should be used in areas without good cross ventilation.

**Personal protective equipment****Respiratory Protection**

Organic vapor respirator with a dust/mist filter. (A2P2/P3)

**Hand Protection**

Impervious rubber gloves.

**Skin Protection**

Rubber apron.

**Eye Protection**

Chemical goggles; also wear a face shield if splashing hazard exists.

**Other Precautions**

Eyewash fountains and safety showers must be easily accessible.

**Environmental Exposure Controls** No information available**9. Physical and Chemical Properties****9.1 Information on basic physical and chemical properties**

**Physical State:** Liquid

**Color:** Dark amber

**Odor:** Hydrocarbon

**Odor Threshold:** No information available

**Property****Remarks/ - Method****Values**

**pH:**

4-7

**Freezing Point/Range**

No data available

**Melting Point/Range**

No data available

**Boiling Point/Range**

No data available

**Flash Point**

81 °C PMCC

**Evaporation rate**

No data available

**Vapor Pressure**

No data available

**Vapor Density**

No data available

**Specific Gravity**

0.948

**Water Solubility**

Slightly soluble

**Solubility in other solvents**

No data available

**Partition coefficient: n-octanol/water**

No data available

**Autoignition Temperature**

No data available

**Decomposition Temperature**

No data available

**Viscosity**

No data available

**Explosive Properties**

No information available

**Oxidizing Properties**

No information available

**9.2 Other information****VOC Content (%)**

No data available

**10. Stability and Reactivity****10.1 Reactivity**

Not applicable

**10.2 Chemical Stability**

Stable

**10.3 Possibility of Hazardous Reactions**

Will Not Occur

**10.4 Conditions to Avoid**

Keep away from heat, sparks and flame.

**10.5 Incompatible Materials**

Strong oxidizers. Strong alkalis.

**10.6 Hazardous Decomposition Products**

Oxides of nitrogen. Hydrocarbons. Carbon monoxide and carbon dioxide.

**11. Toxicological Information****11.1 Information on Toxicological Effects****Acute Toxicity****Inhalation**

May cause respiratory irritation. May cause central nervous system depression including headache, dizziness, drowsiness, incoordination, slowed reaction time, slurred speech, giddiness and unconsciousness.

**Eye Contact**

May cause severe eye irritation.

**Skin Contact**

May cause skin irritation.

**Ingestion**

Aspiration into the lungs may cause chemical pneumonitis including coughing, difficulty breathing, wheezing, coughing up blood and pneumonia, which can be fatal. May cause central nervous system depression including headache, dizziness, drowsiness, muscular weakness, incoordination, slowed reaction time, fatigue blurred vision, slurred speech, giddiness, tremors and convulsions.

**Chronic Effects/Carcinogenicity**

Contains petroleum distillates which have been shown to cause skin cancer in laboratory animals. Prolonged or repeated exposure may cause liver damage.

**Toxicology data for the components**

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Fatty acid, tall-oil, reaction product with diethylenetriamine, maleic anhydride, tetraethylenepentamine, and triethylenetetramine	68990-47-6	> 2020 mg/kg (Rat)	> 2000 mg/kg (Rat)	No data available
Diesel fuel	68334-30-5	> 5000 mg/kg (Rat) 7600 mg/kg (Rat)	> 2000 mg/kg (Rabbit) > 4300 mg/kg (Rabbit)	4.1 mg/L (Rat, vapour, 4h)
Ethylene glycol monobutyl ether	111-76-2	470 mg/kg (Rat) 1414 mg/kg (Guinea pig) 1746 mg/kg (Rat) 320 mg/kg (Rabbit) 530 mg/kg (Rat) 560 mg/kg (Rat) 3000 mg/kg (Rat) 2400 (Rat)	220 mg/kg (Rabbit) 2270 mg/kg (Rat) 200 mg/kg (Guinea pig) >2000 mg/kg (Rabbit) 841 mg/kg (Rabbit) 435 mg/kg (Rabbit) >2000 mg/kg (Guinea pig) >2000 mg/kg (Rat) 100 mg/kg (Rabbit) 207 mg/kg (Guinea pig) 400-500 mg/kg (Rabbit)	450 ppm (Rat) 4h 2.174 mg/L (Rat) 4h 2.21 mg/L (Rat) 4h 450-486 ppm (Rat) 4h 925 ppm (Rat) 4h >633 ppm (Guinea pig) 1h
Diethylene glycol monobutyl ether	112-34-5	3384 mg/kg (Rat) 6560 mg/kg (Rat) 5660 mg/kg (Rat) 2406 mg/kg (Mouse) 2000 mg/kg (Guinea pig)	2700 mg/kg (Rabbit) 2764 mg/kg (Rabbit)	No data available

Substances	CAS Number	Skin corrosion/irritation
Fatty acid, tall-oil, reaction product with diethylenetriamine, maleic anhydride, tetraethylenepentamine, and triethylenetetramine	68990-47-6	Non-irritating to the skin
Diesel fuel	68334-30-5	Causes moderate skin irritation. (rabbit)
Ethylene glycol monobutyl ether	111-76-2	Irritating to skin. (rabbit)

Diethylene glycol monobutyl ether	112-34-5	Mild skin irritation
<b>Substances</b>	<b>CAS Number</b>	<b>Eye damage/irritation</b>
Fatty acid, tall-oil, reaction product with diethylenetriamine, maleic anhydride, tetraethylenepentamine, and triethylenetetramine	68990-47-6	Non-irritating to the eye
Diesel fuel	68334-30-5	Non-irritating to the eye (rabbit)
Ethylene glycol monobutyl ether	111-76-2	Irritating to eyes. (rabbit)
Diethylene glycol monobutyl ether	112-34-5	May cause eye irritation (rabbit)
<b>Substances</b>	<b>CAS Number</b>	<b>Skin Sensitization</b>
Fatty acid, tall-oil, reaction product with diethylenetriamine, maleic anhydride, tetraethylenepentamine, and triethylenetetramine	68990-47-6	Skin sensitizer in guinea pig
Diesel fuel	68334-30-5	No information available
Ethylene glycol monobutyl ether	111-76-2	Did not cause sensitization on laboratory animals (guinea pig)
Diethylene glycol monobutyl ether	112-34-5	Did not cause sensitization on laboratory animals (guinea pig)
<b>Substances</b>	<b>CAS Number</b>	<b>Respiratory Sensitization</b>
Fatty acid, tall-oil, reaction product with diethylenetriamine, maleic anhydride, tetraethylenepentamine, and triethylenetetramine	68990-47-6	No information available
Diesel fuel	68334-30-5	Did not cause sensitization on laboratory animals (guinea pig)
Ethylene glycol monobutyl ether	111-76-2	No information available
Diethylene glycol monobutyl ether	112-34-5	No information available
<b>Substances</b>	<b>CAS Number</b>	<b>Mutagenic Effects</b>
Fatty acid, tall-oil, reaction product with diethylenetriamine, maleic anhydride, tetraethylenepentamine, and triethylenetetramine	68990-47-6	In vivo tests did not show mutagenic effects
Diesel fuel	68334-30-5	In vitro tests did not show mutagenic effects In vivo tests did not show mutagenic effects
Ethylene glycol monobutyl ether	111-76-2	In vivo tests did not show mutagenic effects In vitro tests did not show mutagenic effects
Diethylene glycol monobutyl ether	112-34-5	In vivo tests did not show mutagenic effects In vitro tests did not show mutagenic effects
<b>Substances</b>	<b>CAS Number</b>	<b>Carcinogenic Effects</b>
Fatty acid, tall-oil, reaction product with diethylenetriamine, maleic anhydride, tetraethylenepentamine, and triethylenetetramine	68990-47-6	Did not show carcinogenic effects in animal experiments
Diesel fuel	68334-30-5	Contains petroleum distillates which have been shown to cause skin cancer in laboratory animals.
Ethylene glycol monobutyl ether	111-76-2	Did not show carcinogenic effects in animal experiments
Diethylene glycol monobutyl ether	112-34-5	No information available.

Substances	CAS Number	Reproductive toxicity
Fatty acid, tall-oil, reaction product with diethylenetriamine, maleic anhydride, tetraethylenepentamine, and triethylenetetramine	68990-47-6	Animal testing did not show any effects on fertility.
Diesel fuel	68334-30-5	Animal testing did not show any effects on fertility. (similar substances)
Ethylene glycol monobutyl ether	111-76-2	Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments.
Diethylene glycol monobutyl ether	112-34-5	Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments.

Substances	CAS Number	STOT - single exposure
Fatty acid, tall-oil, reaction product with diethylenetriamine, maleic anhydride, tetraethylenepentamine, and triethylenetetramine	68990-47-6	No significant toxicity observed in animal studies at concentration requiring classification.
Diesel fuel	68334-30-5	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)
Ethylene glycol monobutyl ether	111-76-2	No significant toxicity observed in animal studies at concentration requiring classification.
Diethylene glycol monobutyl ether	112-34-5	No significant toxicity observed in animal studies at concentration requiring classification.

Substances	CAS Number	STOT - repeated exposure
Fatty acid, tall-oil, reaction product with diethylenetriamine, maleic anhydride, tetraethylenepentamine, and triethylenetetramine	68990-47-6	No significant toxicity observed in animal studies at concentration requiring classification.
Diesel fuel	68334-30-5	Causes damage to organs through prolonged or repeated exposure in contact with skin thymus (Liver) bone marrow
Ethylene glycol monobutyl ether	111-76-2	No significant toxicity observed in animal studies at concentration requiring classification.
Diethylene glycol monobutyl ether	112-34-5	No significant toxicity observed in animal studies at concentration requiring classification.

Substances	CAS Number	Aspiration hazard
Fatty acid, tall-oil, reaction product with diethylenetriamine, maleic anhydride, tetraethylenepentamine, and triethylenetetramine	68990-47-6	Not applicable
Diesel fuel	68334-30-5	Aspiration into the lungs may cause chemical pneumonitis including coughing, difficulty breathing, wheezing, coughing up blood and pneumonia, which can be fatal.
Ethylene glycol monobutyl ether	111-76-2	Not applicable
Diethylene glycol monobutyl ether	112-34-5	Not applicable

## 12. Ecological Information

### 12.1 Toxicity Ecotoxicity Effects

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates

Fatty acid, tall-oil, reaction product with diethylenetriamine, maleic anhydride, tetraethylenepentamine, and triethylenetetramine	68990-47-6	EC50(72h): > 100 mg/L (growth rate) (Pseudokirchnerella subcapitata)	LC50(96h): > 100 mg/L (Danio rerio)	EC50(3h): > 100 mg/L (respiration rate) (Activated sludge)	IC50(48h): > 100 mg/L (Daphnia magna)
Diesel fuel	68334-30-5	EL50(72h): 10 mg/L (Pseudokirchnerella subcapitata) NOEL(72h): 3 mg/L (Pseudokirchnerella subcapitata)	LL50(96h): 21 mg/L (Oncorhynchus mykiss)	No information available	EL50(48h): 210 mg/L (Daphnia magna)
Ethylene glycol monobutyl ether	111-76-2	EC50: 839.56 mg/l (Skeletonema costatum) EC50(72h): 911 mg/L (biomass) EC50: > 500 mg/l (Scenedesmus subspicatus) NOEC(72h): 88 mg/L (biomass)(Pseudokirchnerella subcapitata)	LC50: > 1000 mg/l (Scophthalmus maximus juvenile) LC50(96h): 1474 mg/L (Oncorhynchus mykiss) NOEC(21d): > 100mg/L (Danio rerio)	TT/EC3(48h): 463 mg/L (Uronema parduzci) TT/EC3(72h): 73 mg/L (Entosiphon sulcatum) TT/EC3(16h): 700 mg/L (Pseudomonas putida)	EC50: >1000 mg/L (Daphnia magna) EC50 (48h): 1800 mg/L (Daphnia magna) EC50: 1875 mg/l (Daphnia magna) NOEC(21d)(reproduction ): 100 mg/L (Daphnia magna)
Diethylene glycol monobutyl ether	112-34-5	EC50: > 100 mg/L (Desmodesmus subspicatus)	LC50: 1300 mg/L (Lepomis macrochirus)	EC10: >1995 mg/L (Activated sludge, industrial)	EC50: > 100 mg/L (Daphnia magna)

## 12.2 Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Fatty acid, tall-oil, reaction product with diethylenetriamine, maleic anhydride, tetraethylenepentamine, and triethylenetetramine	68990-47-6	Readily biodegradable (71% @ 28d)
Diesel fuel	68334-30-5	Biodegradable. (57.5 - 60% @ 28d)
Ethylene glycol monobutyl ether	111-76-2	Readily biodegradable (75-88% @ 28d)
Diethylene glycol monobutyl ether	112-34-5	Readily biodegradable (71% @ 28d)

## 12.3 Bioaccumulative potential

Substances	CAS Number	Log Pow
Fatty acid, tall-oil, reaction product with diethylenetriamine, maleic anhydride, tetraethylenepentamine, and triethylenetetramine	68990-47-6	2.4
Diesel fuel	68334-30-5	No information available
Ethylene glycol monobutyl ether	111-76-2	0.81
Diethylene glycol monobutyl ether	112-34-5	1.0

## 12.4 Mobility in soil

No information available

## 12.5 Results of PBT and vPvB assessment

No information available.

## 12.6 Other adverse effects

### Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

## 13. Disposal Considerations

### 13.1 Waste treatment methods

**Disposal Method**  
**Contaminated Packaging**

Disposal should be made in accordance with federal, state, and local regulations. Follow all applicable national or local regulations.

## 14. Transport Information

### IMDG/IMO

<b>UN Number:</b>	Not restricted.
<b>UN Proper Shipping Name:</b>	Not restricted
<b>Transport Hazard Class(es):</b>	Not applicable
<b>Packing Group:</b>	Not applicable
<b>Environmental Hazards:</b>	Not applicable

**RID**

<b>UN Number:</b>	Not restricted.
<b>UN Proper Shipping Name:</b>	Not restricted
<b>Transport Hazard Class(es):</b>	Not applicable
<b>Packing Group:</b>	Not applicable
<b>Environmental hazard:</b>	Not applicable

**ADR**

<b>UN Number:</b>	Not restricted.
<b>UN Proper Shipping Name:</b>	Not restricted
<b>Transport Hazard Class(es):</b>	Not applicable
<b>Packing Group:</b>	Not applicable
<b>Environmental hazard:</b>	Not applicable

**IATA/ICAO**

<b>UN Number:</b>	Not restricted.
<b>UN Proper Shipping Name:</b>	Not restricted
<b>Transport Hazard Class(es):</b>	Not applicable
<b>Packing Group:</b>	Not applicable
<b>Environmental hazard:</b>	Not applicable

**Special Precautions for User** None**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable

**15. Regulatory Information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****International Inventories**

**All of the components in the product are on the following Inventory lists:** All of the components in the product are on the following Inventory lists.:

<b>EINECS Inventory</b>	This product, and all its components, complies with EINECS
<b>US TSCA Inventory</b>	All components listed on inventory or are exempt.
<b>Canadian DSL Inventory</b>	All components listed on inventory or are exempt.

**Legend**

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

**Germany, Water Endangering Classes (WGK)** Not determined.

**15.2 Chemical Safety Assessment**

No information available

**16. Other Information****Full text of R-phrases referred to under Sections 2 and 3**

R20 Harmful by inhalation.  
R20/21/22 Harmful by inhalation, by contact with skin and if swallowed.  
R36 Irritating to eyes.  
R36/38 Irritating to eyes and skin.  
R38 Irritating to skin.  
R40 Limited evidence of a carcinogenic effect.  
R43 May cause sensitization by skin contact.  
R65 Harmful: may cause lung damage if swallowed.

**Key literature references and sources for data**

[www.ChemADVISOR.com/](http://www.ChemADVISOR.com/)

**Revision Date:** 08-Apr-2014

**Revision Note**

Not applicable

**This safety data sheet complies with the requirements of Regulation (EC) No. 453/2010**

**Disclaimer Statement**

This information is furnished without warranty, expressed or implied, as to accuracy or completeness. The information is obtained from various sources including the manufacturer and other third party sources. The information may not be valid under all conditions nor if this material is used in combination with other materials or in any process. Final determination of suitability of any material is the sole responsibility of the user.

**End of Safety Data Sheet**