

## 1. Identification

<b>Product identifier</b>	<b>Gunk Engine Cleaner - Foamy</b>	
<b>Other means of identification</b>		
<b>SDS number</b>	FEB1	
<b>Part No.</b>	FEB1	
<b>Tariff code</b>	3402.20.5100	
<b>Recommended use</b>	Engine Cleaner	
<b>Recommended restrictions</b>	None known.	
<b>Manufacturer/Importer/Supplier/Distributor information</b>		
<b>Manufacturer</b>		
<b>Company name</b>	RSC Chemical Solutions	
<b>Address</b>	600 Radiator Road Indian Trail, NC 28079 United States	
<b>Telephone</b>	Customer Service:	(704) 821-7643
	Technical:	(704) 684-1811
<b>Website</b>	www.rscbrands.com	
<b>E-mail</b>	sds@rscbrands.com	
<b>Emergency phone number</b>	Emergency Telephone:	(303) 623-5716
	Emergency Contact:	RMPDC (877-740-5015)

## 2. Hazard(s) identification

<b>Physical hazards</b>	Flammable aerosols	Classification not possible
<b>Health hazards</b>	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Carcinogenicity	Category 2
	Specific target organ toxicity, repeated exposure	Category 2
	Aspiration hazard	Category 1
<b>Environmental hazards</b>	Not classified.	
<b>OSHA defined hazards</b>	Not classified.	
<b>Label elements</b>		



<b>Signal word</b>	Danger
<b>Hazard statement</b>	May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure.
<b>Precautionary statement</b>	
<b>Prevention</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist or vapor. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.
<b>Response</b>	If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. If on skin: Wash with plenty of water. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice/attention. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
<b>Storage</b>	Store locked up.

<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.
<b>Supplemental information</b>	16.37% of the mixture consists of component(s) of unknown acute oral toxicity. 17.37% of the mixture consists of component(s) of unknown acute dermal toxicity. 9.87% of the mixture consists of component(s) of unknown acute inhalation toxicity.

### 3. Composition/information on ingredients

#### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Petroleum Gases, Liquefied, Sweetened; Petroleum Gas;		68476-86-8	5 - < 10
Petroleum naphtha		64742-94-5	3 - < 5
Kerosine (petroleum)		8008-20-6	1 - < 3
Nonylphenolethoxylate		9016-45-9	1 - < 3
Tert-butylbenzene		98-06-6	1 - < 3
1,4-diethylbenzene		105-05-5	< 1
2-Butoxyethanol		111-76-2	< 1
Morpholine		110-91-8	< 1
NAPHTHALENE		91-20-3	< 0.3
1,2,3-trimethylbenzene		526-73-8	< 0.2
1,2,4-Trimethylbenzene		95-63-6	< 0.2
Triéthanolamine		102-71-6	< 0.2
2-methoxyethanol		109-86-4	< 0.1
4-ethylmorpholine		100-74-3	< 0.1
Benzene, 1,3-diethyl-		141-93-5	< 0.1
DIETHANOLAMINE		111-42-2	< 0.1
Diethylbenzene		25340-17-4	< 0.1
ETHYLENEDIAMINE		107-15-3	< 0.1
Other components below reportable levels			70 - < 80

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

### 4. First-aid measures

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
<b>Most important symptoms/effects, acute and delayed</b>	Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. Prolonged exposure may cause chronic effects.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.

<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	Containers should be cooled with water to prevent vapor pressure build up.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	Refer to attached safety data sheets and/or instructions for use. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Keep combustibles (wood, paper, oil, etc.) away from spilled material. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.  Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

<b>Precautions for safe handling</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Ground and bond containers when transferring material. Do not re-use empty containers. Do not breathe mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Should be handled in closed systems, if possible. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.
<b>Conditions for safe storage, including any incompatibilities</b>	Level 1 Aerosol.  Store locked up. Contents under pressure. Do not expose to heat or store at temperatures above 120°F/49°C as can may burst. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. Keep out of the reach of children. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

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

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	PEL	240 mg/m3 50 ppm
2-methoxyethanol (CAS 109-86-4)	PEL	80 mg/m3 25 ppm
4-ethylmorpholine (CAS 100-74-3)	PEL	94 mg/m3 20 ppm
ETHYLENEDIAMINE (CAS 107-15-3)	PEL	25 mg/m3 10 ppm
Morpholine (CAS 110-91-8)	PEL	70 mg/m3 20 ppm

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

Components	Type	Value
NAPHTHALENE (CAS 91-20-3)	PEL	50 mg/m3 10 ppm
Petroleum naphtha (CAS 64742-94-5)	PEL	400 mg/m3 100 ppm

**US. ACGIH Threshold Limit Values**

Components	Type	Value	Form
1,2,3-trimethylbenzene (CAS 526-73-8)	TWA	25 ppm	
1,2,4-Trimethylbenzene (CAS 95-63-6)	TWA	25 ppm	
2-Butoxyethanol (CAS 111-76-2)	TWA	20 ppm	
2-methoxyethanol (CAS 109-86-4)	TWA	0.1 ppm	
4-ethylmorpholine (CAS 100-74-3)	TWA	5 ppm	
DIETHANOLAMINE (CAS 111-42-2)	TWA	1 mg/m3	Inhalable fraction and vapor.
ETHYLENEDIAMINE (CAS 107-15-3)	TWA	10 ppm	
Kerosine (petroleum) (CAS 8008-20-6)	TWA	200 mg/m3	Non-aerosol.
Morpholine (CAS 110-91-8)	TWA	20 ppm	
NAPHTHALENE (CAS 91-20-3)	TWA	10 ppm	
Petroleum naphtha (CAS 64742-94-5)	TWA	200 mg/m3	Non-aerosol.
Triéthanolamine (CAS 102-71-6)	TWA	5 mg/m3	

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

Components	Type	Value
1,2,3-trimethylbenzene (CAS 526-73-8)	TWA	125 mg/m3 25 ppm
1,2,4-Trimethylbenzene (CAS 95-63-6)	TWA	125 mg/m3 25 ppm
2-Butoxyethanol (CAS 111-76-2)	TWA	24 mg/m3 5 ppm
2-methoxyethanol (CAS 109-86-4)	TWA	0.3 mg/m3 0.1 ppm
4-ethylmorpholine (CAS 100-74-3)	TWA	23 mg/m3 5 ppm
DIETHANOLAMINE (CAS 111-42-2)	TWA	15 mg/m3 3 ppm
ETHYLENEDIAMINE (CAS 107-15-3)	TWA	25 mg/m3 10 ppm
Kerosine (petroleum) (CAS 8008-20-6)	TWA	100 mg/m3
Morpholine (CAS 110-91-8)	STEL	105 mg/m3 30 ppm
	TWA	70 mg/m3 20 ppm

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

Components	Type	Value
NAPHTHALENE (CAS 91-20-3)	STEL	75 mg/m3
	TWA	15 ppm 50 mg/m3 10 ppm

**US. Workplace Environmental Exposure Level (WEEL) Guides**

Components	Type	Value
1,4-diethylbenzene (CAS 105-05-5)	TWA	5 ppm
Benzene, 1,3-diethyl- (CAS 141-93-5)	TWA	5 ppm
Diethylbenzene (CAS 25340-17-4)	TWA	5 ppm

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

Components	Value	Determinant	Specimen	Sampling Time
2-Butoxyethanol (CAS 111-76-2)	200 mg/g	Butoxyacetic acid (BAA), with hydrolysis	Creatinine in urine	*
2-methoxyethanol (CAS 109-86-4)	1 mg/g	2-Methoxyacetic acid	Creatinine in urine	*

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

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

2-Butoxyethanol (CAS 111-76-2)	Can be absorbed through the skin.
2-methoxyethanol (CAS 109-86-4)	Can be absorbed through the skin.
4-ethylmorpholine (CAS 100-74-3)	Can be absorbed through the skin.
DIETHANOLAMINE (CAS 111-42-2)	Can be absorbed through the skin.
Morpholine (CAS 110-91-8)	Can be absorbed through the skin.
NAPHTHALENE (CAS 91-20-3)	Can be absorbed through the skin.

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

2-Butoxyethanol (CAS 111-76-2)	Skin designation applies.
2-methoxyethanol (CAS 109-86-4)	Skin designation applies.
4-ethylmorpholine (CAS 100-74-3)	Skin designation applies.
Morpholine (CAS 110-91-8)	Skin designation applies.

**US - Tennessee OELs: Skin designation**

2-Butoxyethanol (CAS 111-76-2)	Can be absorbed through the skin.
2-methoxyethanol (CAS 109-86-4)	Can be absorbed through the skin.
4-ethylmorpholine (CAS 100-74-3)	Can be absorbed through the skin.
Morpholine (CAS 110-91-8)	Can be absorbed through the skin.

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

2-methoxyethanol (CAS 109-86-4)	Can be absorbed through the skin.
4-ethylmorpholine (CAS 100-74-3)	Can be absorbed through the skin.
DIETHANOLAMINE (CAS 111-42-2)	Can be absorbed through the skin.
ETHYLENEDIAMINE (CAS 107-15-3)	Can be absorbed through the skin.
Kerosine (petroleum) (CAS 8008-20-6)	Can be absorbed through the skin.
Morpholine (CAS 110-91-8)	Can be absorbed through the skin.
NAPHTHALENE (CAS 91-20-3)	Can be absorbed through the skin.
Petroleum naphtha (CAS 64742-94-5)	Can be absorbed through the skin.

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

2-Butoxyethanol (CAS 111-76-2)	Can be absorbed through the skin.
2-methoxyethanol (CAS 109-86-4)	Can be absorbed through the skin.
4-ethylmorpholine (CAS 100-74-3)	Can be absorbed through the skin.
Morpholine (CAS 110-91-8)	Can be absorbed through the skin.

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

2-Butoxyethanol (CAS 111-76-2)	Can be absorbed through the skin.
2-methoxyethanol (CAS 109-86-4)	Can be absorbed through the skin.
4-ethylmorpholine (CAS 100-74-3)	Can be absorbed through the skin.

<b>Appropriate engineering controls</b>	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. Provide eyewash station. Eye wash fountain and emergency showers are recommended.
<b>Individual protection measures, such as personal protective equipment</b>	
<b>Eye/face protection</b>	Chemical respirator with organic vapor cartridge and full facepiece.
<b>Skin protection</b>	
<b>Hand protection</b>	Wear appropriate chemical resistant gloves.
<b>Other</b>	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
<b>Respiratory protection</b>	Chemical respirator with organic vapor cartridge and full facepiece. Chemical respirator with organic vapor cartridge and full facepiece if threshold limits are exceeded.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>General hygiene considerations</b>	Observe any medical surveillance requirements. When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

<b>Appearance</b>	Liquid Hazy
<b>Physical state</b>	Liquid.
<b>Form</b>	Aerosol.
<b>Color</b>	Cream
<b>Odor</b>	Sweet. Aromatic.
<b>Odor threshold</b>	Not available.
<b>pH</b>	9 - 10
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	Not available.
<b>Flash point</b>	> 201.0 °F (> 93.9 °C) Tag Closed Cup
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	0.00001 hPa estimated
<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Density</b>	8.17 lbs/gal
<b>Explosive properties</b>	Not explosive.

<b>Flame extension</b>	0 in
<b>Flammability (flash back)</b>	No
<b>Flammability class</b>	Combustible IIIB estimated
<b>Heat of combustion (NFPA 30B)</b>	2.35 kJ/g estimated
<b>Oxidizing properties</b>	Not oxidizing.
<b>Percent volatile</b>	82.26 % estimated
<b>Specific gravity</b>	0.85
<b>VOC</b>	17.06 %

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	May cause damage to organs through prolonged or repeated exposure by inhalation.
<b>Skin contact</b>	Causes skin irritation.
<b>Eye contact</b>	Causes serious eye irritation.
<b>Ingestion</b>	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

**Symptoms related to the physical, chemical and toxicological characteristics**      Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

### Information on toxicological effects

**Acute toxicity**      May be fatal if swallowed and enters airways.

Components	Species	Test Results
1,2,4-Trimethylbenzene (CAS 95-63-6)		
<u>Acute</u>		
<b>Dermal</b>		
LD50	Rabbit	> 3160 mg/kg
2-Butoxyethanol (CAS 111-76-2)		
<u>Acute</u>		
<b>Oral</b>		
LD50	Rat	560 mg/kg
2-methoxyethanol (CAS 109-86-4)		
<u>Acute</u>		
<b>Dermal</b>		
LD50	Rabbit	1280 mg/kg
4-ethylmorpholine (CAS 100-74-3)		
<u>Acute</u>		
<b>Oral</b>		
LD50	Rat	1490 - 2120 mg/kg
DIETHANOLAMINE (CAS 111-42-2)		
<u>Acute</u>		
<b>Oral</b>		
LD50	Rat	710 mg/kg

Components	Species	Test Results
ETHYLENEDIAMINE (CAS 107-15-3)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	730 mg/kg
<b>Oral</b>		
LD50	Rat	500 mg/kg
Morpholine (CAS 110-91-8)		
<b>Acute</b>		
<b>Oral</b>		
LD50	Rat	1.05 g/kg
NAPHTHALENE (CAS 91-20-3)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	> 2 g/kg
<b>Oral</b>		
LD50	Rat	490 mg/kg

\* Estimates for product may be based on additional component data not shown.

<b>Skin corrosion/irritation</b>	Causes skin irritation.
<b>Serious eye damage/eye irritation</b>	Causes serious eye irritation.
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	Not a respiratory sensitizer.
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Carcinogenicity</b>	Suspected of causing cancer.

#### IARC Monographs. Overall Evaluation of Carcinogenicity

2-Butoxyethanol (CAS 111-76-2)	3 Not classifiable as to carcinogenicity to humans.
DIETHANOLAMINE (CAS 111-42-2)	2B Possibly carcinogenic to humans.
Morpholine (CAS 110-91-8)	3 Not classifiable as to carcinogenicity to humans.
NAPHTHALENE (CAS 91-20-3)	2B Possibly carcinogenic to humans.
Triéthanolamine (CAS 102-71-6)	3 Not classifiable as to carcinogenicity to humans.

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

Not regulated.

#### US. National Toxicology Program (NTP) Report on Carcinogens

NAPHTHALENE (CAS 91-20-3)	Reasonably Anticipated to be a Human Carcinogen.
---------------------------	--

<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.
<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	May cause damage to organs through prolonged or repeated exposure.
<b>Aspiration hazard</b>	May be fatal if swallowed and enters airways.
<b>Chronic effects</b>	May cause damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

## 12. Ecological information

<b>Ecotoxicity</b>	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
--------------------	--

Components	Species	Test Results
1,2,4-Trimethylbenzene (CAS 95-63-6)		
<b>Aquatic</b>		
Fish	LC50	Fathead minnow (Pimephales promelas) 7.19 - 8.28 mg/l, 96 hours

Components	Species	Test Results
2-Butoxyethanol (CAS 111-76-2)		
<b>Aquatic</b>		
Fish LC50	Inland silverside ( <i>Menidia beryllina</i> )	1250 mg/l, 96 hours
2-methoxyethanol (CAS 109-86-4)		
<b>Aquatic</b>		
Fish LC50	Bluegill ( <i>Lepomis macrochirus</i> )	> 10000 mg/l, 96 hours
Benzene, 1,3-diethyl- (CAS 141-93-5)		
<b>Aquatic</b>		
Fish LC50	Fathead minnow ( <i>Pimephales promelas</i> )	4.05 - 4.25 mg/l, 96 hours
DIETHANOLAMINE (CAS 111-42-2)		
<b>Aquatic</b>		
Crustacea EC50	Water flea ( <i>Ceriodaphnia dubia</i> )	61.8 - 86.04 mg/l, 48 hours
Fish LC50	Fathead minnow ( <i>Pimephales promelas</i> )	100 mg/l, 96 hours
ETHYLENEDIAMINE (CAS 107-15-3)		
<b>Aquatic</b>		
Fish LC50	Fathead minnow ( <i>Pimephales promelas</i> )	98.6 - 131.6 mg/l, 96 hours
Morpholine (CAS 110-91-8)		
<b>Aquatic</b>		
Fish LC50	Zebra danio ( <i>Danio rerio</i> )	> 1 mg/l, 96 hours
NAPHTHALENE (CAS 91-20-3)		
<b>Aquatic</b>		
Crustacea EC50	Water flea ( <i>Daphnia magna</i> )	1.09 - 3.4 mg/l, 48 hours
Fish LC50	Pink salmon ( <i>Oncorhynchus gorbuscha</i> )	1.11 - 1.68 mg/l, 96 hours
Nonylphenoethoxylate (CAS 9016-45-9)		
<b>Aquatic</b>		
Crustacea EC50	Water flea ( <i>Daphnia magna</i> )	12.2 mg/l, 48 hours
Fish LC50	Bluegill ( <i>Lepomis macrochirus</i> )	1 - 1.8 mg/l, 96 hours
Petroleum naphtha (CAS 64742-94-5)		
<b>Aquatic</b>		
Crustacea EC50	Water flea ( <i>Daphnia pulex</i> )	2.7 - 5.1 mg/l, 48 hours
Fish LC50	Rainbow trout, donaldson trout ( <i>Oncorhynchus mykiss</i> )	8.8 mg/l, 96 hours
		8.8 mg/l, 96 hours
Triéthanolamine (CAS 102-71-6)		
<b>Aquatic</b>		
Crustacea EC50	Water flea ( <i>Ceriodaphnia dubia</i> )	565.2 - 658.3 mg/l, 48 hours
Fish LC50	Fathead minnow ( <i>Pimephales promelas</i> )	10610 - 13010 mg/l, 96 hours

\* Estimates for product may be based on additional component data not shown.

#### Persistence and degradability

#### Bioaccumulative potential

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

1,4-diethylbenzene	4.45
2-Butoxyethanol	0.83
2-methoxyethanol	-0.77
Benzene, 1,3-diethyl-	4.44
DIETHANOLAMINE	-1.43
ETHYLENEDIAMINE	-2.04
Morpholine	-0.86
NAPHTHALENE	3.3
Tert-butylbenzene	4.11
Triéthanolamine	-1

<b>Mobility in soil</b>	No data available.
<b>Other adverse effects</b>	The product contains volatile organic compounds which have a photochemical ozone creation potential.

### 13. Disposal considerations

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

### 14. Transport information

#### DOT

<b>UN number</b>	Not available.
<b>UN proper shipping name</b>	Consumer commodity
<b>Transport hazard class(es)</b>	
<b>Class</b>	ORM-D
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	None
<b>Packing group</b>	Not applicable.
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Packaging exceptions</b>	156, 306
<b>Packaging non bulk</b>	156, 306
<b>Packaging bulk</b>	None

#### IATA

<b>UN number</b>	ID8000
<b>UN proper shipping name</b>	Consumer commodity
<b>Transport hazard class(es)</b>	
<b>Class</b>	9
<b>Subsidiary risk</b>	-
<b>Packing group</b>	Not applicable.
<b>Environmental hazards</b>	No.
<b>ERG Code</b>	9L
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Other information</b>	
<b>Passenger and cargo aircraft</b>	Allowed with restrictions.
<b>Cargo aircraft only</b>	Allowed with restrictions.

#### IMDG

<b>UN number</b>	UN1950
<b>UN proper shipping name</b>	Aerosols
<b>Transport hazard class(es)</b>	
<b>Class</b>	2.2
<b>Subsidiary risk</b>	-
<b>Packing group</b>	Not applicable.
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	No.
<b>EmS</b>	F-D, S-U
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not established.



## 15. Regulatory information

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

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

2-methoxyethanol (CAS 109-86-4) 1.0 % One-Time Export Notification only.  
 Nonylphenoethoxylate (CAS 9016-45-9) 1.0 % One-Time Export Notification only.

### TSCA Chemical Action Plans, Chemicals of Concern

Nonylphenoethoxylate (CAS 9016-45-9) Nonylphenol (NP) and Nonylphenol Ethoxylates (NPEs) Action Plan

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

2-Butoxyethanol (CAS 111-76-2) Listed.  
 2-methoxyethanol (CAS 109-86-4) Listed.  
 4-ethylmorpholine (CAS 100-74-3) Listed.  
 DIETHANOLAMINE (CAS 111-42-2) Listed.  
 ETHYLENEDIAMINE (CAS 107-15-3) Listed.  
 Morpholine (CAS 110-91-8) Listed.  
 NAPHTHALENE (CAS 91-20-3) Listed.  
 Nonylphenoethoxylate (CAS 9016-45-9) Listed.

### SARA 304 Emergency release notification

ETHYLENEDIAMINE (CAS 107-15-3) 5000 LBS

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

Not regulated.

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

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

### SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity (pounds)	Threshold planning quantity (pounds)	Threshold planning quantity, lower value (pounds)	Threshold planning quantity, upper value (pounds)
ETHYLENEDIAMINE	107-15-3	5000	10000		

**SARA 311/312 Hazardous chemical** No

### SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
2-Butoxyethanol	111-76-2	< 1
NAPHTHALENE	91-20-3	< 0.3
Nonylphenoethoxylate	9016-45-9	1 - < 3

### Other federal regulations

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

2-methoxyethanol (CAS 109-86-4)  
 DIETHANOLAMINE (CAS 111-42-2)  
 NAPHTHALENE (CAS 91-20-3)  
 Nonylphenoethoxylate (CAS 9016-45-9)

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

ETHYLENEDIAMINE (CAS 107-15-3)

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

**US state regulations** WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

**US - California Proposition 65 - CRT: Listed date/Carcinogenic substance**

DIETHANOLAMINE (CAS 111-42-2) Listed: June 22, 2012  
NAPHTHALENE (CAS 91-20-3) Listed: April 19, 2002

**US - California Proposition 65 - CRT: Listed date/Developmental toxin**

2-methoxyethanol (CAS 109-86-4) Listed: January 1, 1989

**US - California Proposition 65 - CRT: Listed date/Male reproductive toxin**

2-methoxyethanol (CAS 109-86-4) Listed: January 1, 1989

**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

1,2,4-Trimethylbenzene (CAS 95-63-6)  
2-Butoxyethanol (CAS 111-76-2)  
2-methoxyethanol (CAS 109-86-4)  
DIETHANOLAMINE (CAS 111-42-2)  
ETHYLENEDIAMINE (CAS 107-15-3)  
Kerosine (petroleum) (CAS 8008-20-6)  
NAPHTHALENE (CAS 91-20-3)  
Nonylphenoethoxylate (CAS 9016-45-9)  
Petroleum Gases, Liquefied, Sweetened; Petroleum Gas; (CAS 68476-86-8)  
Tert-butylbenzene (CAS 98-06-6)

**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

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

**Issue date** 05-29-2015  
**Revision date** 11-16-2016  
**Version #** 03  
**HMIS® ratings** Health: 3\*  
Flammability: 0  
Physical hazard: 0  
**NFPA ratings** Health: 2  
Flammability: 0  
Instability: 0

**NFPA ratings**



**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**Revision information**

This document has undergone significant changes and should be reviewed in its entirety.