Fuel Conditioner plus Octane Booster

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
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SECTION 1: Identification

1.1. Identification

Product form : Mixture
Trade name : Fuel Conditioner plus Octane Booster
Product code : 92025

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Gasoline additive

1.3. Supplier

Bardahl Pro
1400 NW 52nd Street
Seattle, 98107
USA
T 206-783-4851 - F 206-784-3219
www.bardahl.com
Contact: Jackie Leung

1.4. Emergency telephone number

Emergency number : 800-424-9300

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Flammable liquids, Category 4	Combustible liquid
Skin corrosion/irritation, Category 2	Causes skin irritation.
Germ cell mutagenicity, Category 1B	May cause genetic defects.
Carcinogenicity, Category 1B	May cause cancer.
Aspiration hazard, Category 1	May be fatal if swallowed and enters airways.
Hazardous to the aquatic environment – Acute Hazard, Category 2	Toxic to aquatic life
Hazardous to the aquatic environment – Chronic Hazard, Category 2	Toxic to aquatic life with long lasting effects.

2.2. GHS Label elements, including precautionary statements

GHS US labelling

Hazard pictograms (GHS US) :

Signal word (GHS US) : Danger
Hazard statements (GHS US) : Combustible liquid
May be fatal if swallowed and enters airways.
Causes skin irritation.
May cause genetic defects.
May cause cancer.
Toxic to aquatic life
Toxic to aquatic life with long lasting effects.
Precautionary statements (GHS US) : Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Wash hands thoroughly after handling.
Avoid release to the environment.
Wear eye protection, protective gloves.
If swallowed: Immediately call a poison center or doctor.
If on skin: Wash with plenty of water.
If exposed or concerned: Get medical advice/attention.
Specific treatment (see supplemental first aid instruction on this label).
Do NOT induce vomiting.
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
In case of fire: Use alcohol resistant foam, BC-powder, carbon dioxide (CO2) to extinguish.
Collect spillage.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS-US classification
Petroleum distillates (Diesel fuel no. 2)	CAS-No.: 68476-34-6	≥ 80	Flam. Liq. 4, H227 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Solvent naphtha (light aromatic)	CAS-No.: 64742-95-6	1 – 5	Flam. Liq. 2, H225 Muta. 1B, H340 Carc. 1B, H350 Asp. Tox. 1, H304 Aquatic Acute 3, H402
tricarbonyl(methylcyclopentadienyl)manganese	CAS-No.: 12108-13-3	1.8865 – 2.2295	Acute Tox. 3 (Oral), H301 Acute Tox. 2 (Dermal), H310 Acute Tox. 1 (Inhalation), H330 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Dipropylene glycol monomethyl ether	CAS-No.: 34590-94-8	1 – 5	Flam. Liq. 4, H227 STOT SE 3, H335
Polyolefin alkyl phenol alkyl amine	CAS-No.: Confidential	1 – 5	Skin Irrit. 2, H315
Solvent naphtha (petroleum), heavy arom.	CAS-No.: 64742-94-5	1 – 5	Asp. Tox. 1, H304

Name	Product identifier	%	GHS-US classification
1,2,4-Trimethyl benzene	CAS-No.: 95-63-6	0.1 – 5	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
Cumene	CAS-No.: 98-82-8	0.01 – 1	Flam. Liq. 3, H226 Carc. 2, H351 STOT SE 3, H335 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Naphthalene	CAS-No.: 91-20-3	0.1 – 1	Flam. Liq. 4, H227 Flam. Sol. 2, H228 Acute Tox. 4 (Oral), H302 Carc. 2, H351 Aquatic Acute 1, H400

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : Call a physician immediately.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact : Rinse eyes with water as a precaution.

First-aid measures after ingestion : Do not induce vomiting. Call a physician immediately.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after skin contact : Irritation.

Symptoms/effects after ingestion : Risk of lung oedema.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Specific hazards arising from the chemical

Fire hazard : Combustible liquid.

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : No open flames, no sparks, and no smoking. Only qualified personnel equipped with suitable protective equipment may intervene.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wear personal protective equipment. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Limit quantities of product at the minimum necessary for handling and limit the number of exposed workers. Provide local exhaust or general room ventilation. Floors, walls and other surfaces in the hazard area must be cleaned regularly. Avoid contact with skin and eyes.

Hygiene measures : Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool. Store locked up.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Dipropylene glycol monomethyl ether (34590-94-8)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	50 ppm
USA - OSHA - Occupational Exposure Limits	
Local name	Dipropylene glycol methyl ether

Dipropylene glycol monomethyl ether (34590-94-8)	
OSHA PEL TWA	600 mg/m³
	100 ppm

1,2,4-Trimethyl benzene (95-63-6)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	10 ppm

Cumene (98-82-8)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	5 ppm

tricarbonyl(methylcyclopentadienyl)manganese (12108-13-3)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	0.2 mg/m³

Naphthalene (91-20-3)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	10 ppm

Petroleum distillates (Diesel fuel no. 2) (68476-34-6)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Diesel fuel as total
ACGIH OEL TWA	100 mg/m³

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection.

Personal protective equipment symbol(s):

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Colour	:	amber
Odour	:	characteristic
Odour threshold	:	No data available
pH	:	No data available
Melting point	:	Not applicable
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	63.3 °C PMCC typical
Relative evaporation rate (butylacetate=1)	:	No data available
Flammability (solid, gas)	:	Not applicable.
Vapour pressure	:	No data available
Relative vapour density at 20°C	:	No data available
Relative density	:	No data available
Density	:	0.85 g/cm³ typical
Solubility	:	No data available
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	3.1 mm²/s @ 40 C typical
Viscosity, dynamic	:	No data available
Explosive limits	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Dipropylene glycol monomethyl ether (34590-94-8)	
LD50 oral rat	> 5000 mg/kg (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	9510 mg/kg bodyweight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male, Experimental value, Dermal, 14 day(s))
ATE US (dermal)	9510 mg/kg bodyweight

Solvent naphtha (light aromatic) (64742-95-6)	
LD50 oral rat	> 2000 mg/kg (Rat, Oral)
LD50 dermal rabbit	> 3160 mg/kg (Rabbit, Dermal)

1,2,4-Trimethyl benzene (95-63-6)	
LD50 oral rat	6000 mg/kg bodyweight (Equivalent or similar to EU Method B.1, Rat, Male, Experimental value, Oral, 014 day(s))
LD50 dermal rat	3440 mg/kg (24 h, Rat, Male / female, Read-across, Dermal)
LC50 Inhalation - Rat	> 10.2 mg/l air (4 h, Rat, Male / female, Read-across, Inhalation (vapours), 14 day(s))
ATE US (oral)	6000 mg/kg bodyweight
ATE US (dermal)	3440 mg/kg bodyweight
ATE US (gases)	4500 ppmv/4h
ATE US (vapours)	11 mg/l/4h
ATE US (dust,mist)	1.5 mg/l/4h

Cumene (98-82-8)	
LD50 oral rat	2700 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 014 day(s))
LD50 dermal rabbit	> 3160 mg/kg bodyweight (24 h, Rabbit, Male / female, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	39 mg/l (4 h, Rat, Male, Experimental value, Inhalation (vapours), 14 day(s))
ATE US (oral)	2700 mg/kg bodyweight
ATE US (vapours)	39 mg/l/4h
ATE US (dust,mist)	39 mg/l/4h

tricarbonyl(methylcyclopentadienyl)manganese (12108-13-3)	
LD50 oral rat	51.8 mg/kg (Rat)
LD50 dermal rabbit	140 mg/kg (Equivalent or similar to OECD 402, Rabbit, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	0.08 mg/l (Equivalent or similar to OECD 403, 4 h, Rat, Male, Experimental value, Inhalation (vapours), 14 day(s))
ATE US (oral)	51.8 mg/kg bodyweight
ATE US (dermal)	140 mg/kg bodyweight

tricarbonyl(methylcyclopentadienyl)manganese (12108-13-3)	
ATE US (gases)	10 ppmv/4h
ATE US (vapours)	0.08 mg/l/4h
ATE US (dust,mist)	0.08 mg/l/4h

Naphthalene (91-20-3)	
LD50 oral	533 mg/kg bodyweight (Equivalent or similar to OECD 401, Mouse, Male, Experimental value, Oral, 14 day(s))
LD50 dermal rat	> 16000 mg/kg bodyweight (Equivalent or similar to OECD 402, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	> 0.4 mg/l (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value, (maximum achievable concentration), Inhalation (vapours), 14 day(s))
ATE US (oral)	533 mg/kg bodyweight

Petroleum distillates (Diesel fuel no. 2) (68476-34-6)	
LD50 oral rat	> 5000 mg/kg (Rat, Oral)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit, Dermal)
LC50 Inhalation - Rat	> 5 mg/l (4 h, Rat, Inhalation)
ATE US (gases)	4500 ppmv/4h
ATE US (vapours)	11 mg/l/4h
ATE US (dust,mist)	1.5 mg/l/4h

Skin corrosion/irritation : Causes skin irritation.

Dipropylene glycol monomethyl ether (34590-94-8)	
pH	7 (100 %)

1,2,4-Trimethyl benzene (95-63-6)	
pH	No data available in the literature

Cumene (98-82-8)	
pH	No data available in the literature

Naphthalene (91-20-3)	
pH	No data available in the literature

Serious eye damage/irritation : Not classified

Dipropylene glycol monomethyl ether (34590-94-8)	
pH	7 (100 %)

1,2,4-Trimethyl benzene (95-63-6)	
pH	No data available in the literature

Cumene (98-82-8)	
pH	No data available in the literature

Naphthalene (91-20-3)	
pH	No data available in the literature

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : May cause genetic defects.

Carcinogenicity : May cause cancer.

Cumene (98-82-8)	
IARC group	2B - Possibly carcinogenic to humans

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

Dipropylene glycol monomethyl ether (34590-94-8)	
STOT-single exposure	May cause respiratory irritation.

1,2,4-Trimethyl benzene (95-63-6)	
STOT-single exposure	May cause respiratory irritation.

Cumene (98-82-8)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Not classified

Aspiration hazard : May be fatal if swallowed and enters airways.

Viscosity, kinematic : 3.1 mm²/s @ 40 C typical

Dipropylene glycol monomethyl ether (34590-94-8)	
Viscosity, kinematic	4.55 mm²/s (20 °C, OECD 114: Viscosity of Liquids)

Solvent naphtha (petroleum), heavy arom. (64742-94-5)	
Viscosity, kinematic	2.235 mm²/s

Solvent naphtha (light aromatic) (64742-95-6)	
Viscosity, kinematic	0.785 mm²/s

1,2,4-Trimethyl benzene (95-63-6)	
Viscosity, kinematic	0.843 mm²/s (20 °C)

Cumene (98-82-8)	
Viscosity, kinematic	0.74 mm²/s (38 °C)

tricarbonyl(methylcyclopentadienyl)manganese (12108-13-3)	
Viscosity, kinematic	3.65 mm²/s

Naphthalene (91-20-3)	
Viscosity, kinematic	1 mm²/s (80 °C, OECD 114: Viscosity of Liquids)

Petroleum distillates (Diesel fuel no. 2) (68476-34-6)	
Viscosity, kinematic	3.3 (1.7 – 4.1) mm²/s @ 40 C

Symptoms/effects after skin contact : Irritation.

Symptoms/effects after ingestion : Risk of lung oedema.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Toxic to aquatic life with long lasting effects.

Dipropylene glycol monomethyl ether (34590-94-8)	
LC50 - Fish [1]	> 1000 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Poecilia reticulata, Static system, Fresh water, Experimental value, GLP)

Dipropylene glycol monomethyl ether (34590-94-8)	
ErC50 algae	> 969 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)

Solvent naphtha (light aromatic) (64742-95-6)	
LC50 - Fish [1]	18 mg/l (Pisces)
EC50 - Crustacea [1]	21 mg/l (Daphnia sp.)

1,2,4-Trimethyl benzene (95-63-6)	
LC50 - Fish [1]	7.72 mg/l (96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value, Lethal)
EC50 96h - Algae [1]	2.356 mg/l (ECOSAR, Algae, Fresh water, QSAR)

Cumene (98-82-8)	
LC50 - Fish [1]	4.8 mg/l (EPA OTS 797.1400, 96 h, Oncorhynchus mykiss, Flow-through system, Fresh water, Experimental value, GLP)
EC50 - Crustacea [1]	2.14 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
ErC50 algae	2.01 mg/l (EU Method C.3, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, GLP)

tricarbonyl(methylcyclopentadienyl)manganese (12108-13-3)	
LC50 - Fish [1]	0.21 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Cyprinus carpio, Semi-static system, Fresh water, Experimental value, Lethal)
EC50 - Crustacea [1]	0.83 mg/l (EPA OTS 797.1300, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)

Naphthalene (91-20-3)	
LC50 - Fish [1]	0.96 ppm (Oncorhynchus gorbuscha, Flow-through system, Salt water, Experimental value, Lethal)
EC50 - Crustacea [1]	2.16 mg/l (Equivalent or similar to OECD 202, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
EC50 72h - Algae [1]	0.4 mg/l (Skeletonema costatum, Literature study, Growth rate)

12.2. Persistence and degradability

Fuel Conditioner plus Octane Booster	
Persistence and degradability	Rapidly degradable

Dipropylene glycol monomethyl ether (34590-94-8)	
Persistence and degradability	Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0 g O_2/g substance
ThOD	2.06 g O_2/g substance

Solvent naphtha (petroleum), heavy arom. (64742-94-5)	
Persistence and degradability	Not readily biodegradable in water.

Solvent naphtha (light aromatic) (64742-95-6)	
Persistence and degradability	Readily biodegradable in water.

1,2,4-Trimethyl benzene (95-63-6)	
Persistence and degradability	Not readily biodegradable in water.
Chemical oxygen demand (COD)	0.44 g O_2/g substance

Cumene (98-82-8)	
Persistence and degradability	Readily biodegradable in water, Not easily biodegradable in water in anaerobic conditions.
Biochemical oxygen demand (BOD)	1.28 g O_2/g substance
Chemical oxygen demand (COD)	2.42 g O_2/g substance
ThOD	3.2 g O_2/g substance

Polyolefin alkyl phenol alkyl amine (Confidential)	
Persistence and degradability	Rapidly degradable

tricarbonyl(methylcyclopentadienyl)manganese (12108-13-3)	
Persistence and degradability	Not readily biodegradable in water.

Naphthalene (91-20-3)	
Persistence and degradability	Readily biodegradable in the soil, Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0 g O_2/g substance
Chemical oxygen demand (COD)	0.22 g O_2/g substance
ThOD	2.99 g O_2/g substance

Petroleum distillates (Diesel fuel no. 2) (68476-34-6)	
Persistence and degradability	Inherently biodegradable.

12.3. Bioaccumulative potential

Dipropylene glycol monomethyl ether (34590-94-8)	
Partition coefficient n-octanol/water (Log Pow)	0.004 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

Solvent naphtha (petroleum), heavy arom. (64742-94-5)	
Partition coefficient n-octanol/water (Log Pow)	2.9 – 6.1
Bioaccumulative potential	Bioaccumable.

Solvent naphtha (light aromatic) (64742-95-6)	
Partition coefficient n-octanol/water (Log Pow)	2.1 – 6

1,2,4-Trimethyl benzene (95-63-6)	
BCF - Fish [1]	243 (Pimephales promelas, QSAR)
Partition coefficient n-octanol/water (Log Pow)	3.63 (Experimental value, KOWWIN)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

Cumene (98-82-8)	
BCF - Fish [1]	94.69 l/kg (BCFBAF v3.00, Pisces, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	3.55 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 23 °C)

Cumene (98-82-8)	
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

tricarbonyl(methylcyclopentadienyl)manganese (12108-13-3)	
BCF - Fish [1]	400 (24 h, Static system, Fresh water, Experimental value)
Partition coefficient n-octanol/water (Log Pow)	3.4 (Practical experience/observation, 26 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

Naphthalene (91-20-3)	
BCF - Fish [1]	23 – 168 (OECD 305: Bioconcentration: Flow-Through Fish Test, 8 week(s), Cyprinus carpio, Flow-through system, Fresh water, Experimental value)
Partition coefficient n-octanol/water (Log Pow)	3.4 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

Petroleum distillates (Diesel fuel no. 2) (68476-34-6)	
Partition coefficient n-octanol/water (Log Pow)	3.9 – 6

12.4. Mobility in soil

Dipropylene glycol monomethyl ether (34590-94-8)	
Surface tension	68.7 mN/m (20 °C, 1 g/l, OECD 115: Surface Tension of Aqueous Solutions)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Highly mobile in soil. Not toxic to plants.

1,2,4-Trimethyl benzene (95-63-6)	
Surface tension	No data available in the literature
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	3.04 (log Koc, Calculated value)
Ecology - soil	Low potential for mobility in soil. May be harmful to plant growth, blooming and fruit formation.

Cumene (98-82-8)	
Surface tension	28.2 mN/m (20 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.9 (log Koc, Calculated value)
Ecology - soil	Low potential for adsorption in soil.

tricarbonyl(methylcyclopentadienyl)manganese (12108-13-3)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	3.4 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value)
Ecology - soil	Low potential for mobility in soil.

Naphthalene (91-20-3)	
Surface tension	No data available in the literature
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.864 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Low potential for adsorption in soil.

Petroleum distillates (Diesel fuel no. 2) (68476-34-6)	
Surface tension	25 mN/m
Ecology - soil	No (test)data on mobility of the component(s) available.

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

14.1. UN number

UN-No.(DOT) : Not regulated
UN-No. (TDG) : Not applicable
UN-No. (IMDG) : Not applicable
UN-No. (IATA) : Not applicable

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Not regulated
Proper Shipping Name (TDG) : Not applicable
Proper Shipping Name (IMDG) : Not applicable
Proper Shipping Name (IATA) : Not applicable

14.3. Transport hazard class(es)

DOT
Transport hazard class(es) (DOT) : Not regulated

TDG
Transport hazard class(es) (TDG) : Not applicable

IMDG
Transport hazard class(es) (IMDG) : Not applicable

IATA
Transport hazard class(es) (IATA) : Not applicable

14.4. Packing group

Packing group (DOT) : Not regulated
Packing group (TDG) : Not applicable
Packing group (IMDG) : Not applicable
Packing group (IATA) : Not applicable

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

DOT
Not regulated

TDG
Not applicable

IMDG
Not applicable

IATA
Not applicable

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

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
Dipropylene glycol monomethyl ether	34590-94-8	Present	Active	
Solvent naphtha (petroleum), heavy arom.	64742-94-5	Present	Active	
Solvent naphtha (light aromatic)	64742-95-6	Present	Active	
1,2,4-Trimethyl benzene	95-63-6	Present	Active	
Cumene	98-82-8	Present	Active	
Polyolefin alkyl phenol alkyl amine	Confidential	Not present	-	
tricarbonyl(methylcyclopentadienyl)manganese	12108-13-3	Present	Active	
Naphthalene	91-20-3	Not present	-	
Petroleum distillates (Diesel fuel no. 2)	68476-34-6	Present	Active	

1,2,4-Trimethyl benzene (95-63-6)
Subject to reporting requirements of United States SARA Section 313

Cumene (98-82-8)	
Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	5000 lb

tricarbonyl(methylcyclopentadienyl)manganese (12108-13-3)	
Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	100 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	100 lb

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

National regulations

Cumene (98-82-8)
Listed on IARC (International Agency for Research on Cancer)

15.3. US State regulations

Cumene (98-82-8)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No		

Component	State or local regulations
Dipropylene glycol monomethyl ether(34590-94-8)	U.S. - New Jersey - Right to Know Hazardous Substance List
1,2,4-Trimethyl benzene(95-63-6)	U.S. - New Jersey - Right to Know Hazardous Substance List
Cumene(98-82-8)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
tricarbonyl(methylcyclopentadienyl)manganese(12108-13-3)	U.S. - New Jersey - Right to Know Hazardous Substance List

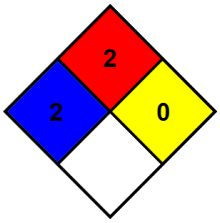
SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard : 2 - Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 2 Moderate Hazard - Materials which must be moderately heated or exposed to high ambient temperatures before ignition will occur. Includes liquids having a flash point at or above 100 F but below 200 F. (Classes II IIIA)

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal protection : B - Safety glasses, Gloves

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.