

Diesel Common Rail Direct Injection Cleaner

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
Product name : Diesel Common Rail Direct Injection Cleaner
Product code : 94382

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Diesel 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
Acute toxicity (inhalation:dust,mist) Category 4	Harmful if inhaled.
Skin corrosion/irritation, Category 2	Causes skin irritation.
Carcinogenicity, Category 2	Suspected of causing cancer.
Hazardous to the aquatic environment — Chronic	Toxic to aquatic life with long lasting effects.
Hazard, Category 2	

2.2. GHS Label elements, including precautionary statements

GHS US labelling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Warning

Hazard statements (GHS US) :

Combustible liquid
Causes skin irritation.
Harmful if inhaled.
Suspected of causing cancer.
Toxic to aquatic life with long lasting effects.

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.
Avoid breathing mist, vapours.
Wash hands thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Avoid release to the environment.
Wear eye protection, protective gloves.
If on skin: Wash with plenty of water.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
Call a doctor if you feel unwell.
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.

Precautionary statements (GHS US) :

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2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

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	50 – 80	Flam. Liq. 4, H227 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Carc. 2, H351 Aquatic Chronic 2, H411
Naptha (petroleum), hydrotreated heavy	(CAS-No.) 64742-48-9	5 – 10	Asp. Tox. 1, H304
2-Ethylhexan-1-ol	(CAS-No.) 104-76-7	1 – 10	Flam. Liq. 4, H227 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 3, H402

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. Call a poison center or a doctor if you feel unwell.
- 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 : Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid breathing mist, vapours. Avoid contact with skin and eyes.

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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.

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 : 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. Use only outdoors or in a well-ventilated area. Avoid breathing mist, vapours. Avoid contact with skin and eyes.
Hygiene measures : 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

Diesel Common Rail Direct Injection Cleaner	
No additional information available	
2-Ethylhexan-1-ol (104-76-7)	
No additional information available	
Naptha (petroleum), hydrotreated heavy (64742-48-9)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH TWA (mg/m ³)	1200 mg/m ³
ACGIH TWA (ppm)	184 ppm
Petroleum distillates (Diesel fuel no. 2) (68476-34-6)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH TWA (mg/m ³)	100 mg/m ³ 8 hrs

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.

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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 Dark
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/cm ³ 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	: 9 mm ² /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

Oxidizing agent.

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

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Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Harmful if inhaled.

ATE US (dust,mist)	4.825 mg/l/4h
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2-Ethylhexan-1-ol (104-76-7)

LD50 oral rat	2047 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male, Experimental value, Oral, 14 day(s))
LD50 dermal rat	> 3000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))
LC50 inhalation rat (mg/l)	0.89 – 5.3 mg/l air (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (mixture of vapour and aerosol), 7 day(s))
ATE US (oral)	2047 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

Naptha (petroleum), hydrotreated heavy (64742-48-9)

LD50 oral rat	> 5000 mg/kg
LD50 dermal rat	> 5000 mg/kg
LC50 inhalation rat (mg/l)	> 4.9 g/m ³ (4 hr)

Petroleum distillates (Diesel fuel no. 2) (68476-34-6)

LD50 oral rat	7600 mg/kg
LD50 dermal rabbit	> 4300 mg/kg
LC50 inhalation rat (mg/l)	4.1 mg/l/4h
ATE US (oral)	7600 mg/kg bodyweight
ATE US (vapours)	4.1 mg/l/4h
ATE US (dust,mist)	4.1 mg/l/4h

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Suspected of causing cancer.

Reproductive toxicity	: Not classified
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STOT-single exposure	: Not classified
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2-Ethylhexan-1-ol (104-76-7)

STOT-single exposure	May cause respiratory irritation.
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STOT-repeated exposure	: Not classified
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Aspiration hazard	: Not classified
Viscosity, kinematic	: 9 mm ² /s @ 40 C typical
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.
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2-Ethylhexan-1-ol (104-76-7)

LC50 fish 1	17.1 mg/l (EU Method C.1, 96 h, Leuciscus idus, Flow-through system, Fresh water, Experimental value, GLP)
EC50 Daphnia 1	39 mg/l (EU Method C.2, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)

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Naptha (petroleum), hydrotreated heavy (64742-48-9)

LC50 fish 2	> 100 mg/l (LC50)
EC50 Daphnia 2	> 100 mg/l (EC50)
Threshold limit algae 2	> 100 mg/l (EC50)

12.2. Persistence and degradability

2-Ethylhexan-1-ol (104-76-7)

Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
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Naptha (petroleum), hydrotreated heavy (64742-48-9)

Persistence and degradability	Readily biodegradable in water. Biodegradability in soil: no data available. Adsorbs into the soil. Low potential for mobility in soil. Photooxidation in the air.
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12.3. Bioaccumulative potential

2-Ethylhexan-1-ol (104-76-7)

Partition coefficient n-octanol/water (Log Pow)	2.9 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

Naptha (petroleum), hydrotreated heavy (64742-48-9)

Bioaccumulative potential	Bioaccumable.
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12.4. Mobility in soil

2-Ethylhexan-1-ol (104-76-7)

Surface tension	47 mN/m (20 °C, 0.81 g/l)
Ecology - soil	Highly mobile in soil.

Naptha (petroleum), hydrotreated heavy (64742-48-9)

Surface tension	0.026 N/m (20 °C)
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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

Department of Transportation (DOT)

In accordance with DOT

Not applicable

Transportation of Dangerous Goods

Transport by sea

Transport document description (IMDG)	: UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III, MARINE POLLUTANT
UN-No. (IMDG)	: 3082
Proper Shipping Name (IMDG)	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Class (IMDG)	: 9 - Miscellaneous dangerous substances and articles
Packing group (IMDG)	: III - substances presenting low danger
Limited quantities (IMDG)	: 5 L

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Marine pollutant

: Yes



Air transport

SECTION 15: Regulatory information

15.1. US Federal regulations

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Not listed on the United States TSCA (Toxic Substances Control Act) inventory

2-Ethylhexan-1-ol (104-76-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Naptha (petroleum), hydrotreated heavy (64742-48-9)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

EU-Regulations

National regulations

No additional information available

15.3. US State regulations

SECTION 16: Other information

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NFPA health hazard

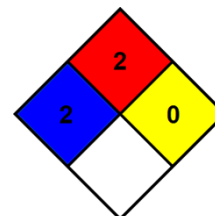
: 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

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

B - Safety glasses, Gloves

SDS US (GHS HazCom 2012)

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.