



# CRDI Diesel Injector Cleaner + Cetane 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  
Product name : CRDI Diesel Injector Cleaner + Cetane Booster  
Product code : 3342  
Other means of identification : 3342, 3343

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

Recommended use : Fuels

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

Bardahl Manufacturing Corporation  
1400 NW 52nd Street  
Seattle, WA 98107  
T 206-783-4851 - F 206-784-3219  
[jackie.leung@bardahl.com](mailto:jackie.leung@bardahl.com) - [www.bardahl.com](http://www.bardahl.com)

#### 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
Carcinogenicity, Category 2	Suspected of causing cancer
Specific target organ toxicity — Repeated exposure, Category 2	May cause damage to organs through prolonged or repeated exposure
Aspiration hazard, Category 1	May be fatal if swallowed and enters airways
Hazardous to the aquatic environment — Chronic Hazard, Category 2	Toxic to aquatic life with long lasting effects

#### 2.2. Label elements

##### 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  
Suspected of causing cancer  
May cause damage to organs through prolonged or repeated exposure  
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 open flames, sparks. - No smoking  
Do not breathe mist, vapours  
Wash hands thoroughly after handling  
Avoid release to the environment  
Wear eye protection, protective gloves  
If swallowed: Immediately call a POISON CENTER  
If on skin: Wash with plenty of water  
If exposed or concerned: Get medical advice/attention  
Get medical advice/attention if you feel unwell  
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

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In case of fire: Use alcohol resistant foam, an extinguishing blanket, carbon dioxide (CO<sub>2</sub>) 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

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Not applicable

### 3.2. Mixture

Name	Product identifier	%	GHS-US classification
Petroleum distillate	(CAS No) 68476-34-6	50 - 80	Flam. Liq. 4, H227 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Carc. 2, H351 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
2-ethylhexyl nitrate	(CAS No) 27247-96-7	10 - 20	Acute Tox. 4 (Inhalation), H332 Aquatic Chronic 2, H411
Petroleum naphtha	(CAS No) 64742-47-8	5 - 10	Asp. Tox. 1, H304
2-Ethylhexanol	(CAS No) 104-76-7	1 - 10	Flam. Liq. 4, H227 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 STOT SE 3, H335
Polyolefin acid	(CAS No) Confidential	1 - 10	Eye Irrit. 2A, H319

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, both acute and delayed

Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.  
Symptoms/injuries after skin contact : Irritation.  
Symptoms/injuries after ingestion : Risk of lung oedema.

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

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

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

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

Fire hazard : Combustible liquid.  
Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

### 5.3. Advice for firefighters

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

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### 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. Do not breathe mist, vapours. Avoid contact with skin and eyes.

##### 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 : 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. Do not breathe 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

##### Petroleum distillate (68476-34-6)

Not applicable

##### 2-Ethylhexanol (104-76-7)

Not applicable

##### Petroleum naphtha (64742-47-8)

Not applicable

##### Polyolefin acid (Confidential)

Not applicable

##### 2-ethylhexyl nitrate (27247-96-7)

Not applicable

#### 8.2. Exposure controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Hand protection : Protective gloves.

Eye protection : Safety glasses.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.

Environmental exposure controls : Avoid release to the environment.

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### 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	: 64.4 °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	: 0.872 g/cm <sup>3</sup> typical
Solubility	: No data available
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: 9.4 cSt @ 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

Acute toxicity : Not classified

Petroleum distillate (68476-34-6)	
LD50 oral rat	> 5000 mg/kg (Rat)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	> 5 mg/l/4h (Rat)

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<b>Petroleum distillate (68476-34-6)</b>	
ATE US (gases)	4500.000 ppmv/4h
ATE US (vapours)	11.000 mg/l/4h
ATE US (dust,mist)	1.500 mg/l/4h

<b>2-Ethylhexanol (104-76-7)</b>	
LD50 oral rat	3290 mg/kg bodyweight (Rat; Equivalent or similar to OECD 401; Experimental value)
LD50 dermal rat	> 3000 mg/kg bodyweight (Rat; Experimental value; OECD 402: Acute Dermal Toxicity)
LD50 dermal rabbit	> 2600 mg/kg bodyweight (Rabbit; Experimental value; Equivalent or similar to OECD 402)
ATE US (oral)	3290.000 mg/kg bodyweight
ATE US (gases)	4500.000 ppmv/4h
ATE US (vapours)	11.000 mg/l/4h
ATE US (dust,mist)	1.500 mg/l/4h

<b>2-ethylhexyl nitrate (27247-96-7)</b>	
LD50 oral rat	> 9640 mg/kg (Rat)
LD50 dermal rabbit	> 4820 mg/kg (Rabbit)
ATE US (gases)	4500.000 ppmv/4h
ATE US (vapours)	11.000 mg/l/4h
ATE US (dust,mist)	1.500 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  
Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : May cause damage to organs through prolonged or repeated exposure.

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

Symptoms/injuries after skin contact : Irritation.  
Symptoms/injuries after ingestion : Risk of lung oedema.

## SECTION 12: Ecological information

### 12.1. Toxicity

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

<b>2-Ethylhexanol (104-76-7)</b>	
EC50 Daphnia 1	39 mg/l (EC50; EU Method C.2; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
LC50 fish 2	17.1 mg/l (LC50; EU Method C.1; 96 h; Leuciscus idus; Flow-through system; Fresh water; Experimental value)

<b>2-ethylhexyl nitrate (27247-96-7)</b>	
Threshold limit algae 1	3.22 mg/l (EC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Pseudokirchneriella subcapitata; Static system; Fresh water; Experimental value)

### 12.2. Persistence and degradability

<b>Petroleum distillate (68476-34-6)</b>	
Persistence and degradability	Inherently biodegradable. No (test)data on mobility of the components available.

<b>2-Ethylhexanol (104-76-7)</b>	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Highly mobile in soil.

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2-ethylhexyl nitrate (27247-96-7)	
Persistence and degradability	Not readily biodegradable in water.

### 12.3. Bioaccumulative potential

Petroleum distillate (68476-34-6)	
Log Pow	3.9 - 6

2-Ethylhexanol (104-76-7)	
BCF other aquatic organisms 1	25.33 (BCF; BCFWIN)
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).

2-ethylhexyl nitrate (27247-96-7)	
Log Pow	5.24 (Test data; OECD 117: Partition Coefficient (n-octanol/water), HPLC method)
Bioaccumulative potential	High potential for bioaccumulation (Log Kow > 5).

### 12.4. Mobility in soil

Petroleum distillate (68476-34-6)	
Surface tension	0.025 N/m

2-Ethylhexanol (104-76-7)	
Surface tension	0.000047 N/m (20 °C; 0.81 g/l)
Log Koc	Koc,PCKOCWIN v1.66; 26.01; Calculated value

2-ethylhexyl nitrate (27247-96-7)	
Log Koc	Koc,OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC); 3.75; Experimental value

### 12.5. Other adverse effects

Effect on the global warming : No known effects from this product.  
GWPmix comment : No known effects from this product.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment 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

### TDG

Not applicable

### Transport by sea

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  
Marine pollutant : Yes (IMDG only)



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### Air transport

Not applicable

## 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

#### Petroleum distillate (68476-34-6)

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

#### 2-Ethylhexanol (104-76-7)

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

#### Petroleum naphtha (64742-47-8)

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

#### 2-ethylhexyl nitrate (27247-96-7)

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

### 15.2. International regulations

#### CANADA

No additional information available

#### EU-Regulations

No additional information available

#### National regulations

No additional information available

### 15.3. US State regulations

No additional information available

## SECTION 16: Other information

Revision date : 11/03/2016

Full text of H-statements:

H227	Combustible liquid
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H319	Causes serious eye irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation
H351	Suspected of causing cancer
H373	May cause damage to organs through prolonged or repeated exposure
H411	Toxic to aquatic life with long lasting effects

NFPA health hazard

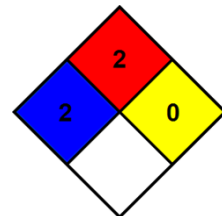
: 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA fire hazard

: 2 - Must be moderately heated or exposed to relatively high temperature before ignition can occur.

NFPA reactivity

: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



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### HMIS III 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*