



# Engine Tune Up and Flush (European Formula)

## Safety Data Sheet

according to Regulation (EC) No. 453/2010

Date of issue: 09/09/2015

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### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product name : Engine Tune Up and Flush (European Formula)  
CAS No : mixture  
Product code : 4018-E  
Product group : Blend

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

##### 1.2.1. Relevant identified uses

Main use category : Professional use  
Function or use category : Lubricants and additives

##### 1.2.2. Uses advised against

No additional information available

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

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

#### 1.4. Emergency telephone number

Emergency number : 800-424-9300

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 3 H226  
Skin Irrit. 2 H315  
Asp. Tox. 1 H304  
Aquatic Chronic 2 H411

Full text of H-phrases: see section 16

#### 2.2. Label elements

##### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



Signal word (CLP) : Danger  
Hazardous ingredients : Kerosene  
Hazard statements (CLP) : H226 - Flammable liquid and vapour  
H304 - May be fatal if swallowed and enters airways  
H315 - Causes skin irritation  
H411 - Toxic to aquatic life with long lasting effects  
Precautionary statements (CLP) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
P233 - Keep container tightly closed  
P240 - Ground/bond container and receiving equipment  
P241 - Use explosion-proof electrical, ventilating equipment  
P264 - Wash hands thoroughly after handling  
P273 - Avoid release to the environment  
P280 - Wear eye protection, protective gloves  
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER  
P302+P352 - IF ON SKIN: Wash with plenty of water  
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing.

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Rinse skin with water/shower  
P331 - Do NOT induce vomiting  
P332+P313 - If skin irritation occurs: Get medical advice/attention  
P362+P364 - Take off contaminated clothing and wash it before reuse  
P370+P378 - In case of fire: Use BC-powder, alcohol resistant foam, carbon dioxide (CO<sub>2</sub>) to extinguish  
P391 - Collect spillage  
P403+P235 - Store in a well-ventilated place. Keep cool  
P405 - Store locked up  
P501 - 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

Adverse physicochemical, human health and environmental effects : Flammable liquid and vapour. Causes skin irritation. May be fatal if swallowed and enters airways. Toxic to aquatic life with long lasting effects.

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Not applicable

### 3.2. Mixture

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Kerosene	(CAS No) 8008-20-6 (EC no) 232-366-4 (EC index no) 649-404-00-4	>= 80	Flam. Liq. 3, H226 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Aquatic Chronic 2, H411
Glycol Ether DPM substance with a Community workplace exposure limit	(CAS No) 34590-94-8 (EC no) 252-104-2	< 5	Not classified

Full text of H-phrases: 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 : Rinse skin with water/shower. Remove/Take off immediately all 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 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 : Flammable liquid and vapour.  
Hazardous decomposition products in case of fire : Toxic fumes may be released.

### 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. 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. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. 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

Technical measures : Ground/bond container and receiving equipment.

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

#### 7.3. Specific end use(s)

No additional information available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

No additional information available

#### 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.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state : Liquid

Colour : No data available

Odour : No data available

Odour threshold : No data available

pH : No data available

Relative evaporation rate (butylacetate=1) : No data available

Melting point : Not applicable

Freezing point : No data available

Boiling point : No data available

Flash point : 50 °C

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Auto-ignition temperature	: No data available
Decomposition temperature	: 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	: 0.806 g/cm <sup>3</sup>
Solubility	: No data available
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Flammable liquid and vapour.

### 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

No additional information available

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

<b>Glycol Ether DPM (34590-94-8)</b>	
LD50 oral rat	5135 mg/kg (Rat; Equivalent or similar to OECD 401; Literature study; >5000 mg/kg; Rat; Experimental value)
LD50 dermal rat	9500 mg/kg (Rat; Literature study; Equivalent or similar to OECD 402; >19020 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rabbit	9500 mg/kg (Rabbit; Literature study)

<b>Kerosene (8008-20-6)</b>	
LD50 oral rat	> 5000 mg/kg (Rat)
LD50 dermal rat	> 2000 mg/kg (Rat)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	> 5.28 mg/l/4h (Rat)

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: May be fatal if swallowed and enters airways.

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### SECTION 12: Ecological information

#### 12.1. Toxicity

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

Glycol Ether DPM (34590-94-8)	
EC50 Daphnia 1	1919 mg/l (LC50; Equivalent or similar to OECD 202; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
Threshold limit algae 1	969 mg/l (NOEC; OECD 201: Alga, Growth Inhibition Test; 72 h; Selenastrum capricornutum; Static system; Fresh water; Experimental value)
Threshold limit algae 2	> 969 mg/l (EC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Selenastrum capricornutum; Static system; Fresh water; Experimental value)

Kerosene (8008-20-6)	
LC50 fish 1	18 - 25 mg/l (96 h; Pisces)
LC50 other aquatic organisms 1	1 - 100 mg/l
EC50 Daphnia 1	1.4 - 21 mg/l (Daphnia magna)
LC50 fish 2	45 mg/l (Pimephales promelas)
TLM fish 1	2990 ppm (24 h; Lepomis macrochirus)
Threshold limit other aquatic organisms 1	1 - 100
Threshold limit algae 1	4 - 8, Algae

#### 12.2. Persistence and degradability

Glycol Ether DPM (34590-94-8)	
Persistence and degradability	Readily biodegradable in water. No (test) data on mobility of the substance available. Photolysis in the air.
Biochemical oxygen demand (BOD)	0 g O <sub>2</sub> /g substance
ThOD	2.06 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0

Kerosene (8008-20-6)	
Persistence and degradability	Biodegradable in water. Readily biodegradable in water in anaerobic conditions. Forming sediments in water. Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. Adsorbs into the soil.

#### 12.3. Bioaccumulative potential

Glycol Ether DPM (34590-94-8)	
Log Pow	0.0043 (Experimental value; OECD 102: Melting Point/Melting Range; 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

Kerosene (8008-20-6)	
Log Pow	3.3 - 6 (Calculated)
Bioaccumulative potential	Bioaccumable.

#### 12.4. Mobility in soil

Kerosene (8008-20-6)	
Surface tension	0.02 - 0.03 N/m

#### 12.5. Results of PBT and vPvB assessment

No additional information available

#### 12.6. Other adverse effects

No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Additional information : Flammable vapours may accumulate in the container.

### SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

#### 14.1. UN number

UN-No. (ADR)	: Not applicable
UN-No. (IMDG)	: 1223
UN-No.(IATA)	: Not applicable
UN-No.(ADN)	: Not applicable
UN-No. (RID)	: Not applicable

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### 14.2. UN proper shipping name

Proper Shipping Name (ADR)	: KEROSENE SOLUTION
Proper Shipping Name (IMDG)	: KEROSENE SOLUTION
Proper Shipping Name (IATA)	: Not applicable
Proper Shipping Name (ADN)	: Not applicable
Proper Shipping Name (RID)	: Not applicable
Transport document description (IMDG)	: UN 1223 KEROSENE SOLUTION (LTD QTY, FP 50 C), 3, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS

### 14.3. Transport hazard class(es)

#### ADR

Transport hazard class(es) (ADR)	: 3
Danger labels (ADR)	: 3



#### IMDG

Transport hazard class(es) (IMDG)	: 3
Danger labels (IMDG)	: 3



#### IATA

Transport hazard class(es) (IATA)	: 3
Hazard labels (IATA)	: 3



#### ADN

Transport hazard class(es) (ADN)	: 3
Danger labels (ADN)	: 3



#### RID

Transport hazard class(es) (RID)	: 3
Danger labels (RID)	: 3



### 14.4. Packing group

Packing group (ADR)	: III
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Packing group (IMDG)	: III
Packing group (IATA)	: III
Packing group (ADN)	: III
Packing group (RID)	: III

### 14.5. Environmental hazards

Dangerous for the environment	: Yes
Marine pollutant	: Yes
Other information	: No supplementary information available

### 14.6. Special precautions for user

#### - Overland transport

Classification code (ADR)	: F1
Special provisions (ADR)	: 363
Limited quantities (ADR)	: 5I
Excepted quantities (ADR)	: E1
Packing instructions (ADR)	: P001, IBC03, LP01, R001
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T2
Portable tank and bulk container special provisions (ADR)	: TP2
Tank code (ADR)	: LGBF
Vehicle for tank carriage	: FL
Transport category (ADR)	: 3
Special provisions for carriage - Packages (ADR)	: V12
Special provisions for carriage - Operation (ADR)	: S2
Hazard identification number (Kemler No.)	: 30
Tunnel restriction code (ADR)	: D/E

#### - Transport by sea

Special provisions (IMDG)	: 363
Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: P001, LP01
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T2
Tank special provisions (IMDG)	: TP2
EmS-No. (Fire)	: F-E
EmS-No. (Spillage)	: S-E
Stowage category (IMDG)	: A
MFAG-No	: 128

#### - Air transport

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y344
PCA limited quantity max net quantity (IATA)	: 10L
PCA packing instructions (IATA)	: 355
PCA max net quantity (IATA)	: 60L
CAO packing instructions (IATA)	: 366
CAO max net quantity (IATA)	: 220L
Special provisions (IATA)	: A324
ERG code (IATA)	: 3L

#### - Inland waterway transport

Classification code (ADN)	: F1
Special provisions (ADN)	: 363
Limited quantities (ADN)	: 5 L

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Excepted quantities (ADN)	: E1
Carriage permitted (ADN)	: T
Equipment required (ADN)	: PP, EX, A
Ventilation (ADN)	: VE01
Number of blue cones/lights (ADN)	: 0
Not subject to ADN	: No

### - Rail transport

Classification code (RID)	: F1
Special provisions (RID)	: 363
Limited quantities (RID)	: 5L
Excepted quantities (RID)	: E1
Packing instructions (RID)	: P001, IBC03, LP01, R001
Mixed packing provisions (RID)	: MP19
Portable tank and bulk container instructions (RID)	: T2
Portable tank and bulk container special provisions (RID)	: TP2
Tank codes for RID tanks (RID)	: LGBF
Transport category (RID)	: 3
Special provisions for carriage – Packages (RID)	: W12
Colis express (express parcels) (RID)	: CE4
Hazard identification number (RID)	: 30
Carriage prohibited (RID)	: No

### 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. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 15.1.1. EU-Regulations

Contains no substances with Annex XVII restrictions  
Contains no substance on the REACH candidate list  
Contains no REACH Annex XIV substances

#### 15.1.2. National regulations

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

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

Full text of H- and EUH-phrases:

Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Asp. Tox. 1	Aspiration hazard, Category 1
Flam. Liq. 3	Flammable liquids, Category 3
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H226	Flammable liquid and vapour
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H411	Toxic to aquatic life with long lasting effects

SDS EU (REACH Annex II)

*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*