



# Engine Flush Treatment



Signal Word	Danger	
Hazard Statements		
Precautionary Statements	H304	May be fatal if swallowed and enters airways.
	P262	Do not get in eyes, on skin, or on clothing.
	P301+P331+P315	If SWALLOWED: Do NOT induce vomiting. Get immediate medical advice/attention.
	P405	Store locked up.
	P501D	Empty containers may contain residual product and vapours. Do not cut or weld on or near empty containers. Disposal should only be by means of a licensed waste disposal contractor.
Supplemental Label Information (EU)		
	EUH066	Repeated exposure may cause skin dryness or cracking.

## 2.3. Other hazards

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2. Mixtures

distillates (petroleum), hydrotreated light	70 - 90%
CAS-No.: 64742-47-8	EC No.: 265-149-8
Classification (EC 1272/2008) EUH066 Asp. Tox. 1 - H304	Classification (67/548/EEC) Xn;R65. R66.
Butyl Glycol	10-30%
CAS-No.: 111-76-2	EC No.: 203-905-0
Classification (EC 1272/2008) Not classified.	Classification (67/548/EEC) Xn;R20/21/22,R65. Xi;R36/38.

The Full Text for all R-Phrases and Hazard Statements is Displayed in Section 16

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

#### General Information

Remove affected person from source of exposure. Provide fresh air, first-aid, warmth and rest.

Do not give victim anything to drink if they are unconscious.

#### Inhalation.

Clean nose and mouth with water. If unconscious or breathing is irregular artificial respiration may be administered by suitably qualified first-aiders.

Get medical attention if symptoms persist.

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## Ingestion

If swallowed do NOT induce vomiting. Never give anything by mouth to an unconscious person. If patient vomits keep head low to prevent vomit entering lungs. If conscious give 1 - 2 glasses of water to drink.

Rinse mouth thoroughly and seek medical attention immediately. Keep patient at rest.

## Skin Contact

Remove contaminated clothing and shoes. Wash skin thoroughly with soap and running water. Take especial care to clean folds, crevices, creases and groin.

Get medical attention if irritation persists or develops.

Launder clothing and clean shoes thoroughly before re-use.

## Eye Contact

Check for contact lenses which must be removed from the eyes before rinsing.

Promptly rinse eyes with plenty of clean water while lifting the eyelids.

Continue to rinse for at least 15 minutes. Continue until the eyes are free of all traces of contamination.

Get medical attention if any discomfort or irritation persists.

## 4.2. Most important symptoms and effects, both acute and delayed

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

## SECTION 5: FIREFIGHTING MEASURES

### 5.1. Extinguishing media

#### Extinguishing Media

Extinguish with foam, carbon dioxide, dry powder, sand, dolomite or other inert material. Do not use high pressure water jet as this may spread burning material.

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

#### Specific Hazards

Fire creates: Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

### 5.3. Advice for firefighters

#### Special Fire Fighting Procedures

Avoid breathing fire vapours. Use water SPRAY only to cool containers! Do not put water on leaked material. Keep run-off water out of sewers and water sources. Dike for water control.

#### Protective Measures In Fire

Wear self-contained breathing apparatus and full protective clothing. Keep all unnecessary people away.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions, protective equipment and emergency procedures

Wear protective clothing (see Section 8). Eliminate all sources of ignition. Do not breathe vapour. Keep unnecessary people at a safe distance.

### 6.2. Environmental precautions

Cover all drains and sewers. Avoid spreading spilt material.

### 6.3. Methods and material for containment and cleaning up

Ventilate well. Extinguish all ignition sources. Avoid sparks, flames, heat. No smoking. Keep flammable materials away from spillage. Clean-up personnel should use respirator and liquid contact protection.

Absorb in vermiculite, dry sand or earth and place into containers. Wash well after dealing with spillage. Inform authorities if large amounts are involved.

Rinse site with copious amounts of water, which should not be allowed into drains, sewers or water courses.

### 6.4. Reference to other sections

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for safe handling

Keep away from heat, sparks and open flame. Avoid prolonged or repeated contact, use suitable protective goggles, gloves and clothing. (see section 8). Static electricity and formation of sparks must be prevented.

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## 7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed original container in a dry, cool and well-ventilated place. Keep out of the reach of children.

## 7.3. Specific end use(s)

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

Name	STD	TWA - 8 Hrs	STEL - 15 Min	Notes
distillates (petroleum), hydrotreated light	WEL	800 mg/m <sup>3</sup>		

WEL = Workplace Exposure Limit.

### 8.2. Exposure controls

#### Engineering Measures

Provide adequate general and local exhaust ventilation.

#### Respiratory Equipment

If ventilation is insufficient suitable respiratory protection must be provided.

Seek recommendations and advice from equipment manufacturer or supplier.

#### Hand Protection

Wear suitable protective gloves conforming to EN 374. Seek recommendations from manufacturer or supplier. After using gloves the hands should be washed and dried thoroughly and a suitable moisturiser applied. Suitable gloves may include - Nitrile. Viton rubber (fluor rubber).

#### Eye Protection

Wear approved safety goggles.

#### Other Protection

Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact.

#### Hygiene Measures

DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift and before eating, smoking and using the toilet.

Promptly remove any clothing that becomes contaminated. Wash promptly with soap & water if skin becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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

Appearance	Liquid
Colour	Colourless
Odour	Hydrocarbon solvent.
Solubility	Immiscible with water
Initial Boiling Point and Boiling Range:	200 - 250 °C. @ 760mm Hg.
Relative Density	0.80 @ 15°C
Vapour Density (Air=1)	>1
Vapour Pressure	<10 mbar @ 37.8°C
Viscosity	1.5 cSt 40°C
Flash Point (°C)	>=75°C PM Closed cup.
Auto Ignition Temperature (°C)	225°C
Flammability Limit - Lower(%)	0.5
Flammability Limit - Upper(%)	8.0

### 9.2. Other information

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

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## 10.2. Chemical stability

Stable under normal conditions of storage and use. See section 7.

## 10.3. Possibility of hazardous reactions

Hazardous Polymerisation

Will not polymerise.

## 10.4. Conditions to avoid

Avoid heat, flames and other sources of ignition.

## 10.5. Incompatible materials

Materials To Avoid

Strong acids. Strong oxidising substances.

## 10.6. Hazardous decomposition products

Decomposition can lead to the formation of toxic gases or fumes, including carbon monoxide (CO) and carbon dioxide (CO<sub>2</sub>)

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

Toxic Dose 1 - LD 50 >5, 000 mg/kg (oral rat)

Toxic Dose 2 - LD 50 >5, 000 mg/kg (dermal-rbt)

Toxic Conc. - LC 50 >5, 000 ppm/8hr (inh-rat)

Germ Cell Mutagenicity (In Vitro)

Bacteria reverse mutation assay (eg Ames test)  
Negative.

Inhalation

Prolonged inhalation of high concentrations may damage respiratory system.

Ingestion.

Harmful: may cause lung damage if swallowed. Ingestion may cause severe irritation of the mouth, the oesophagus and the gastrointestinal tract. Pneumonia may be the result if vomited material containing solvents reaches the lungs.

Skin Contact

Acts as a defatting agent on skin. May cause cracking of skin, and eczema. Prolonged or repeated exposure may cause severe irritation. Not a skin sensitiser.

Eye Contact

May cause severe irritation to eyes.

Health Warnings

Pre-existing skin conditions may be aggravated by contact with this product.

## SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity:

The product components are 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.

### 12.1. Toxicity

LC 50, 96 Hrs, Fish mg/l >1000

Acute Toxicity - Fish LC50 96 hours > 1000 mg/l *Onchorhynchus mykiss* (Rainbow trout)

EC 50, 48 Hrs, Daphnia, mg/l >1000

Acute Toxicity - Aquatic EC50 48 hours > 1000 mg/l *Daphnia magna*

Invertebrates

IC 50, 72 Hrs, Algae, mg/l >1000

Acute Toxicity - Aquatic Plants EC50 72 hours > 1000 mg/l *Scenedesmus subspicatus*

### 12.2. Persistence and degradability

Degradability:

Readily biodegradable.

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Biodegradation

Degradation (%):

Water 69 28 days

## 12.3. Bioaccumulative potential

Bioaccumulative Potential:

Measured experimental data are not meaningful on substances of unknown or variable composition, complex reaction products and biological materials (UVCBs).

Partition Coefficient

Not applicable.

## 12.4. Mobility in soil

Mobility:

Floats on water. Contamination will evaporate from the surface of water and soils.

## 12.5. Results of PBT and vPvB assessment

Not Classified as PBT/vPvB by current EU criteria.

## 12.6. Other adverse effects

## SECTION 13: DISPOSAL CONSIDERATIONS

General Information

Product is hazardous waste. Do not allow into drains, sewers or water courses. Dispose of this material and its container at a waste collection point. Empty containers may contain residual flammable vapours and product residue. Keep away from sparks, heat and sources of ignition. Labels should not be removed.

### 13.1. Waste treatment methods

Dispose of waste and residues in accordance with local authority requirements.

## SECTION 14: TRANSPORT INFORMATION

General

This product is not Classified as Dangerous under international carriage regulations. (ADR, IATA, IMDG, RID)

### 14.1. UN number

### 14.2 UN Proper shipping name

### 14.3 Transport hazard class(es)

### 14.4. Packing group

### 14.5. Environmental hazards

### 14.6. Special precautions for user

### 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

## SECTION 15: REGULATORY INFORMATION

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

Statutory Instruments

Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 SI No 716. (CHIP4).

Control of Substances Hazardous to Health Regulations (as amended). (COSHH)

Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2007. (CDG 2009)

Management of Health & Safety at Work Regulations 1999.

Approved Code Of Practice

The Control of Substances Hazardous to Health Regulations 2002 (as amended). Approved code of practice and guidance.

Fifth Edition 2005. HSE Books, or download at: <http://www.hse.gov.uk/pubns/priced/l15.pdf>

Guidance Notes

Assessing and managing the risks at work from skin exposures to chemical agents. HSG 205.

S101: Selecting protective gloves. HSE 04/06

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EU Legislation

Dangerous Substances Directive 67/548/EEC.

Dangerous Preparations Directive 1999/45/EC.

EC Regulation 1272/2008: CLP (Classification, labelling and packaging of substances and mixtures).

## 15.2. Chemical Safety Assessment

### SECTION 16: OTHER INFORMATION

#### Revision Comments

NB: Significant changes are indicated by lines in the left-hand margin.

Revision Date 30-6-15 - Rev 02: 06

Revision 02 replaces 01:06 dated 30-NOV-10

Supersedes Date 30-NOV-10

#### Risk Phrases In Full

R10 Flammable.

R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

R65 Harmful: may cause lung damage if swallowed.

R66 Repeated exposure may cause skin dryness or cracking.

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

#### Hazard Statements In Full

H304 May be fatal if swallowed and enters airways.

EUH066 Repeated exposure may cause skin dryness or cracking.

#### Disclaimer

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.