Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 27.02.2018 Version number 46 Revision: 27.02.2018

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

· **1.1 Product identifier**

· **Trade name:** Diesel Bug Treatment (DBT)
· **CAS number:**
4719-04-4
· **EC number:**
225-208-0
· **Index number:**
613-114-00-6
· **Registration number:** 01-2119529226-41

· **1.2 Relevant identified uses of the substance or mixture and uses advised against:**
· **Application of the substance/the mixture:** Biocidal product for industrial use.

· **1.3 Details of the supplier of the safety data sheet:**
· **Address and telephone number of the supplier:**

Marine 16 Ltd
Alderton 2
Priory Park
Tetbury
Glos
GL8 8HZ

· **Competent person responsible for the Material Safety Data Sheet:**
Marine16UK@outlook.com

· **1.4 Emergency telephone number:**
National Poisons Information Service (24 h service):
Phone: +44 (0) 844-892-0111 (UK only)

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SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008 respectively UN GHS**

GHS06 skull and crossbones

Acute Tox. 2 H330 Fatal if inhaled.

GHS08 health hazard

STOT RE 1 H372 Causes damage to the respiratory system through prolonged or repeated exposure. Route of exposure: Inhalation.

GHS07

Acute Tox. 4 H302 Harmful if swallowed.
Eye Irrit. 2 H319 Causes serious eye irritation.

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Skin Sens. 1 H317 May cause an allergic skin reaction.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008 respectively UN GHS**
The substance is classified and labelled according to the CLP regulation.
· **Hazard pictograms**

GHS06 GHS08

· **Signal word** Danger
· **Hazard-determining components of labelling:**
2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol
· **Hazard statements**
H302 Harmful if swallowed.
H330 Fatal if inhaled.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H372 Causes damage to the respiratory system through prolonged or repeated exposure. Route of exposure: Inhalation.
· **Precautionary statements**

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.

· **Supplemental information in terms of art. 25 CLP-Regulation:**
As, according to the CLP Regulation (Art. 25) and BPR (Art. 69), the indications on the label have to be clearly legible, it is technically mandatory to link them to the safety data sheet by a QR-code. According to Art. 35 of the REACh Regulation, the safety data sheet has to be provided to any employee.
· **a) Identity of every active substance and its concentration in metric units:** See product label
· **b) Nanomaterials contained in the product:** Does not contain any nanomaterial.
· **c) Authorisation number:**
pending
This biocidal product is subject to the transitional periods of Art. 89 BPR.
· **d) Name and address of the authorisation holder:**

· **e) Type of formulation:** SL, soluble concentrate
· **f) Intended or authorized applications:**
Product-type 6: Preservatives for products during storage
Product-type 13: Working or cutting fluid preservatives
· **g) Directions for use, frequency of application and dose rate:**
Use level: 0.5 - 3.0 g/kg
The precise dose level required by a specific formulation can be determined by the local Microbiological Technical Centre.
Use instruction: the biocide product can be added at any time during production.
Ideally the addition should occur within a closed system. If manual handling operations are necessary spraying or spilling shall be prevented. If fast rotating agitators might lead to spraying or

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even aerosol formation the agitator speed shall be reduced or the machine shall be switched off during the addition.
Blowing out of product-carrying pipes with compressed air shall be omitted.
Further information: see product information

· **h) Particulars of likely direct or indirect adverse side effects and any directions for first aid:**
Instructions on first aid see section 4.
· **i) Leaflet, if applicable warnings for vulnerable groups:**
A leaflet will not be created because all required information for the industrial user is stated in the safety data sheet.
· **j) Directions for the safe disposal of the biocidal product and its packaging:** See section 13
· **k) Formulation batch number or designation and the expiry date relevant to normal conditions of storage:**
See product label
· **l) Further information where applicable:**
Precautionary measures at use and transport: see sections 7 and 14
· **m) Categories of users to which the biocidal product is restricted:** Industrial user
· **n) Where applicable, information on any specific danger to the environment particularly concerning protection of non-target organisms and avoidance of contamination of water:**
See section 12

· **2.3 Other hazards** Other hazards have not been identified for this product.

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SECTION 3: Composition/information on ingredients

· **3.1 substances**
· **CAS No. Designation:**
4719-04-4 2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol
· **Identification number(s):**
· **EC number:** 225-208-0
· **Index number:** 613-114-00-6
· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information:**
Obtain special instructions from the poison information centre: Phone: +44 (0) 844-892-0111 (UK only) - see as well section 1.4.
Personal protection for the First Aider.
· **After inhalation:** Supply fresh air; consult doctor in case of symptoms.
· **After skin contact**
Remove contaminated clothing immediately.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.
· **After eye contact:**
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Consult an eye specialist.
· **After swallowing:**
IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

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IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

· **4.2 Most important symptoms and effects, both acute and delayed** Allergic skin reactions.

· **4.3 Indication of any immediate medical attention and special treatment needed**
If swallowed, gastric irrigation with activated carbon.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:** Water spray jet, extinguishing powder, CO_2, foam.
· **Unsuitable extinguishing agents for reasons of safety:** None

· **5.2 Special hazards arising from the substance or mixture**
In case of fire, toxic incineration products may be released such as:
toxic gases/fumes
Formaldehyde (HCHO)

· **5.3 Advice for firefighters**
· **Protective equipment:** Wear self-contained breathing apparatus.
· **Additional information**
Collect contaminated fire fighting water separately. It must not enter drains.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective clothing (see item 8).
Keep unprotected persons away.
When selecting the protective suit attention has to be paid to the complete and safe protection of skin and mucous membranes. Impermeable protective clothes, protective boots made of neoprene, complete face protection and nitrile-rubber-gloves with long tops should be worn.

· **6.2 Environmental precautions:**
As the product is hazardous for the aquatic environment, it must be prevented from reaching surface water.
Inform authorities in case of contamination of water or sewage system.

· **6.3 Methods and material for containment and cleaning up:**
Collect large amounts in suitable container. Cover the rest with absorbent, mix intensively and collect mechanically.
Suitable binder: multi-purpose absorbent.
Dispose of contaminated material as waste according to item 13.
Provide adequate ventilation.

· **6.4 Reference to other sections** None

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SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
Provide good room ventilation or local exhaust ventilation at the workplace.
It is preferable to handle the product in a closed system.
Avoid air contamination at the workplace by aerosol formation due to product heating, spraying etc.

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Clean contaminated work equipment immediately to avoid skin corrosion/-irritation and/or allergic skin reactions in case of unconscious skin contact.
Risks to the safety and health of workers may not only be created by work involving chemicals but, inter alia by work equipment and the fitting-out of work-places. Those risks shall be identified and evaluated.

· **Information about protection against explosion and fire:** No special measures required.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage**
· **Requirements to be met by storerooms and containers:**
Ensure sufficient ventilation.
Store only in the original container.
Keep containers tightly sealed

Information about storage in a common storage facility: Do not store together with acids.
· **Further information about storage conditions:** Store in a cool place.
· **Maximum storage temperature:** 40° C.
· **Minimum storage temperature:** -5 °C

· **7.3 Specific end use(s)** No further relevant information available.

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SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Components with critical values that require monitoring at the workplace:**	
4719-04-4 2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol	
DNEL (European Union)	Long-term value: 0.2 mg/m³ Worker, local effect, Inhalation, long term exp.

· **Additional information:** Information valid at the time of review of safety data sheet.

· **8.2 Exposure controls**
· **Technical protective equipment:**
In case of contamination devices to rinse eyes or skin immediately under running water must be available.
· **Personal protective equipment**
· **General protective and hygienic measures:**
Avoid contact with the eyes and the skin.
Wash hands during work breaks and at the end of the shift.
Do not inhale gases/fumes/aerosols.
Use skin cream for skin protection.
Provide skin protection plan.
· **Respiratory protection:**
Use respiratory equipment if the OEL is exceeded.
Filter A/P2 (DIN EN 14387)
· **Protection of hands:**

Chemical protective gloves according to DIN EN 374 with CE-labelling.

Check the condition of protective gloves after each use for any damages like holes, cuts or tears.

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Do not wear protective gloves longer than necessary.
After use of gloves apply skin-cleaning agents and skin cosmetics.

· **Material of gloves** Nitrile rubber, NBR
· **Penetration time of glove material:**
Thickness: 0.4 mm; break-through time: 480 min; material: Nitrile; permeation: level 6
· **Gloves made of the following materials are not suitable:**
Gloves for mechanical protection do not provide protection against chemicals.
· **Eye protection:**

Safety glasses with side protection (EN 166).

· **Body protection:**

Protective clothing.

· **Risk management measures**
The operators shall be instructed adequately.
The workplace shall be inspected regularly by competent personnel e.g. the safety representative.

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SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**
· **General Information**
· **Appearance:**

Form:	Liquid
Colour:	Colourless to pale yellow
· **Odour:**	Amine-like
· **Odour threshold:**	Not determined.
· **pH-value (2 g/l) at 20 °C:**	9,0 - 11,0
· **Change in condition**	
Melting point/freezing point:	Not applicable
Initial boiling point and boiling range:	110,5 °C
· **Flash point:**	Not applicable
· **Flammability (solid, gas):**	Not applicable
· **Auto ignition temperature:**	Not applicable
· **Decomposition temperature:**	Not determined
· **Self-inflammability:**	Product is not self-igniting.
· **Explosive properties:**	Product is not explosive.
· **Critical values for explosion:**	
Lower:	Not applicable
Upper:	Not applicable
· **Oxidising properties**	None
· **Vapour pressure at 20 °C:**	< 0,0000005 hPa (calc.)
· **Density at 20 °C:**	1,140 - 1,170 g/cm3
· **Relative density (D^{20}_4):**	Not determined

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· **Vapour density:**	Not relevant for safety
· **Evaporation rate:**	Not relevant for safety
· **Solubility in / Miscibility with Water:**	Fully miscible
· **Partition coefficient: n-octanol/water:**	see section 12
· **Viscosity:**	
dynamic at 20 °C:	300-600 mPas (DIN EN ISO 3219)
kinematic at 20 °C:	260-520 mm²/s
· **9.2 Other information**	No further relevant information available.

SECTION 10: Stability and reactivity

· **10.1 Reactivity**
Up to now, no dangers resulting from a reactivity of the mixture have been identified.

· **10.2 Chemical stability**
· **Conditions to be avoided:** No decomposition if used and stored according to specifications.
· **Minimum shelf life:** 12 months from production date, if stored at a temperature of about 20°C.

· **10.3 Possibility of hazardous reactions** No dangerous reactions known.

· **10.4 Conditions to avoid** No further relevant information available.

· **10.5 Incompatible materials:** Acids

· **10.6 Hazardous decomposition products:**
None, if storage and handling is done according to specification.

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SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity**
Harmful if swallowed.
Fatal if inhaled.

· **Acute toxicity estimates (ATE) or LD_{50}/LC_{50} values:**		
Oral	LD_{50}	1,000 mg/kg (rat) (OECD 401) literature
Dermal	LD_{50}	>4,000 mg/kg (rat) (OECD 402) literature
Inhalation	LC_{50} / 4 h, dusts and mists	0.371 mg/l (rat) (OECD 403) literature

· **Skin corrosion/irritation:** Based on available data, the classification criteria are not met.

· **Results of studies:**		
Irritation of skin	OECD 404 (acute dermal irritation/corrosion)	(rabbit) not irritating - S 193

· **Serious eye damage/irritation:**
Causes serious eye irritation.

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· **Results of studies:**

Irritation of eyes	OECD 405 (irritation/corrosion acute eye)	(rabbit) irritating - literature

· **Sensitisation:**
May cause an allergic skin reaction.

· **Results of studies:**

Sensitisation	Open Epicutaneous Test	(Guinea pig) sensitising - literature

· **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
· **Carcinogenicity:** Based on available data, the classification criteria are not met.
· **Reproductive toxicity:** Based on available data, the classification criteria are not met.
· **STOT-single exposure:** Based on available data, the classification criteria are not met.
· **STOT-repeated exposure:**
Causes damage to the respiratory system through prolonged or repeated exposure. Route of exposure: Inhalation.
· **Aspiration hazard:** Based on available data, the classification criteria are not met.

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SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**

EC_{50} / 72 h (static)	6.7 mg/l (Desmodesmus subspicatus) (Richtlinie 92/69/EWG, C.3) literature
EC_{50} / 48 h	11.9 mg/l (Daphnia) (OECD 202) literature
LC_{50} / 96 h	16 mg/l (Brachydanio rerio) (OECD 203) literature

· **Evaluation:**
Based on the available data the classification criteria for hazard classes aquatic acute (short term) toxicity are not fulfilled.
Based on the available data the classification criteria for hazard classes aquatic, chronic (long term) toxicity are not fulfilled.

· **Toxicity on activated sludge organisms:**

EC_{20} / 0.5 h	170 mg/l (Activated Sludge) (OECD 209) literature

· **Evaluation:**
If contaminated effluent water is properly entered into the sewage system, any interference with the degrading activity of the activated sludge organisms is not expected.

· **12.2 Persistence and degradability**
· **Degree of elimination:**

· **Rapid degradability of organic substances:**

OECD 301 A DOC Die-Away-Test	>90 % (Activated Sludge) (8 d) literature

· **Evaluation:**
Substances are considered rapidly degradable in the environment if e.g. in 28-day ready biodegradation studies, at least the following levels of degradation are achieved: dissolved organic carbon: 70 % or rather oxygen depletion or carbon dioxide generation: 60 %. These levels of

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biodegradation must be achieved within 10 days of the start of degradation (see CLP-Regulation Annex I section 4.1.2.9 and CLP Guidance version 4.1 Annex II.2).
· **Behaviour in sewage treatment plants:**
· **Evaluation:** The substance is biodegradable in activated sludge units.

· **12.3 Bioaccumulative potential**

· **BCF / LogKow:**	
4719-04-4 2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol	
OECD 117 Log Kow Partition Coefficient	≤2 (n-octanol/water)

· **Evaluation:** Not worth-mentioning accumulating in organisms

· **12.4 Mobility in soil** No further relevant information available.

· **12.5 Results of PBT and vPvB assessment**
· **PBT:** This mixture does not contain substances that meet the PBT-criteria of REACH, annex XIII.
· **vPvB:** This mixture does not contain substances that meet the vPvB-criteria of REACH, annex XIII.

· **12.6 Other adverse effects** Any other adverse effects on the environment are not expected.

· **12.7 Additional information**
· **Chemical Oxygen Demand (COD-value):** 1120 mg O_2/g product
· **Biological oxygen demand (BOD_5-value):** 800 mg O2/g product (EN 1899-1/ISO 5815)
· **Metals and their compounds according Directive 2006/11/EC:** None
· **European Water Framework Directive 2000/60/EC (WFD) dated 23.10.2000:**
The product does not contain any priority substances according WFD that require a water monitoring.
· **Absorbable organic halogen compounds (AOX - DIN EN ISO 9562):**
The product does not contain substances, which can influence the AOX of waste water.

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SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Must be specially treated as hazardous waste under adherence to official regulations.
Appropriate disposal operations according to Directive 2008/98/EC on waste: D 10 Incineration on land

· **European waste catalogue**	
16 00 00	WASTES NOT OTHERWISE SPECIFIED IN THE LIST
16 03 00	off-specification batches and unused products
16 03 05*	organic wastes containing hazardous substances

· **Contaminated packaging:**
· **Recommendation:** Packaging can be reused or recycled after cleaning.
· **Recommended cleaning agent:** Water, if necessary with cleaning agent.

SECTION 14: Transport information

· **14.1 UN-Number**
· **ADR, IMDG, IATA** UN2810

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· **14.2 UN proper shipping name**
· **ADR, IMDG, IATA** TOXIC LIQUID, ORGANIC, N.O.S. (2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol)

· **14.3 Transport hazard class(es)**

· **ADR**

· **Class** 6.1 (T1) Toxic substances.
· **Label** 6.1

· **IMDG, IATA**

· **Class** 6.1 Toxic substances.
· **Label** 6.1

· **14.4 Packing group**
· **ADR, IMDG, IATA** II

· **14.5 Environmental hazards:**
· **Marine pollutant:** No

· **14.6 Special precautions for user** Warning: Toxic substances.
· **Kemler Number:** 60
· **EMS Number:** F-A,S-A
· **Segregation groups** Alkalis
· **Stowage Category** B
· **Stowage Code** SW2 Clear of living quarters.

· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** Not applicable.

· **Transport/Additional information:**

· **ADR**
· **Limited quantities (LQ)** 100 ml
· **Excepted quantities (EQ)** Code: E4
Maximum net quantity per inner packaging: 1 ml
Maximum net quantity per outer packaging: 500 ml
· **Transport category** 2
· **Tunnel restriction code** D/E

· **IMDG**
· **Limited quantities (LQ)** 100 ml
· **Excepted quantities (EQ)** Code: E4
Maximum net quantity per inner packaging: 1 ml
Maximum net quantity per outer packaging: 500 ml

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· **IATA**

· **Remarks:**	Packing Instructions / Max. net weight Passenger aircraft: 654 / 5 L Cargo aircraft: 662 / 60 L
· **UN "Model Regulation":**	UN 2810 TOXIC LIQUID, ORGANIC, N.O.S. (2,2',2"-(HEXAHYDRO-1,3,5-TRIAZINE-1,3,5-TRIYL)TRIETHANOL), 6.1, II

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SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Directive 2012/18/EU**
· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 50 t
· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
· **National regulations:**

· **Information about limitation of use:**
Take note of Directive 94/33/EC on the protection of young people at work.
Take note of Directive 92/85/EC on the safety and health of pregnant women at work.

· **Regulations which may apply in event of accident: Control of Major Accident Hazards (COMAH)**
Critical quantity values according to the regulations on accidents (Seveso Directive) should be adhered to.
· **PCS-no. (IRL):** 93931
· **Indication of VOC:**
· **VOC according to Directive 2010/75/EC:** VOC-value: 3 % (calculated)
· **VOC according to Decopaint Directive (2004/42/EC):** Max. VOC-content: 35 g/L.
· **SVOC according to EU-Ecolabel for interior and exterior paints (2014/312/EU):**
This product does not contain any Semi Volatile Organic Compounds.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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SECTION 16: Other information

This data is based on our current knowledge. However, it does not constitute a guarantee for any specific product features and does not establish a legally valid contractual relationship.

· **Training hints**
Further information regarding the directions for use can be found in the Product Data Sheet.
· **Classification according to Regulation (EC) No 1272/2008**
The classification includes the relevant available information about the mixture or the substances contained therein.
The evaluation of the available information within the scope of classification refers to the forms and aggregate states in which the mixture has been placed on the market and will be used most likely.
· **Contact for technical information** Biocides: info@thor.uk.com
· **Abbreviations and acronyms:**
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 2: Acute toxicity – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Skin Sens. 1: Skin sensitisation – Category 1

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STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

· **Key literature references and sources for data:**
Further information regarding physical-chemical, toxicological and ecotoxicological properties of the substances contained, can be taken from the data set for the substance (http://echa.europa.eu/en/).
Data source(s): Biocidal product dossier(s)
Own studies (reference to S-number).

· *** Data altered since the previous version.**