

# SAFETY DATA SHEET

## DUO MAX FOGGER

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

#### 1.1. Product identifier

Product name DUO MAX FOGGER

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

Identified uses Cleaning agent.

Uses advised against Use only for intended applications.

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

Supplier REABROOK LTD  
RAWDON ROAD,  
MOIRA,  
SWADLINCOTE,  
DERBYSHIRE.  
DE12 6DA  
+44 (0) 1283 222266  
+ 44 (0) 1283 550963  
enquiries@reabrook.co.uk

#### 1.4. Emergency telephone number

Emergency telephone +44 (0) 777 8505 330 (24 hrs).

### SECTION 2: Hazards identification

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

##### Classification (EC 1272/2008)

Physical hazards Aerosol 1 - H222, H229

Health hazards Not Classified

Environmental hazards Not Classified

#### 2.2. Label elements

##### Hazard pictograms



Signal word Danger

Hazard statements H222 Extremely flammable aerosol.  
H229 Pressurised container: may burst if heated.

Precautionary statements P101 If medical advice is needed, have product container or label at hand.  
P102 Keep out of reach of children.  
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P211 Do not spray on an open flame or other ignition source.  
P251 Do not pierce or burn, even after use.  
P261 Avoid breathing vapour/ spray.  
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.  
P501 Dispose of contents/ container in accordance with national regulations.

#### 2.3. Other hazards

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This product does not contain any substances classified as PBT or vPvB.

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

<b>Dimethyl ether</b>		<b>60-100%</b>
CAS number: 115-10-6	EC number: 204-065-8	REACH registration number: 01-2119472128-37-XXXX

#### Classification

Press. Gas (Liq.) - H280

<b>ethanediol</b>		<b>&lt;1%</b>
CAS number: 107-21-1	EC number: 203-473-3	REACH registration number: 01-2119456816-28-XXXX

#### Classification

Acute Tox. 4 - H302

STOT RE 2 - H373

<b>didecyldimethylammonium chloride</b>		<b>&lt;1%</b>
CAS number: 7173-51-5	EC number: 230-525-2	REACH registration number: 01-2119945987-15-XXXX

M factor (Acute) = 10

#### Classification

Acute Tox. 3 - H301

Skin Corr. 1B - H314

Eye Dam. 1 - H318

Aquatic Acute 1 - H400

Aquatic Chronic 2 - H411

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

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

<b>General information</b>	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Show this Safety Data Sheet to the medical personnel.
<b>Inhalation</b>	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.
<b>Ingestion</b>	Rinse nose and mouth with water. Do not induce vomiting. Get medical attention if any discomfort continues.
<b>Skin contact</b>	Rinse with water. Get medical attention if any discomfort continues.
<b>Eye contact</b>	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if symptoms are severe or persist after washing.

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

<b>Inhalation</b>	Vapours may cause headache, fatigue, dizziness and nausea.
<b>Ingestion</b>	Gastrointestinal symptoms, including upset stomach.

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**Skin contact** Prolonged contact may cause dryness of the skin.

**Eye contact** May cause temporary eye irritation.

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

**Notes for the doctor** Treat symptomatically.

## **SECTION 5: Firefighting measures**

### **5.1. Extinguishing media**

**Suitable extinguishing media** Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

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

**Specific hazards** Extremely flammable aerosol. Pressurised container: may burst if heated

**Hazardous combustion products** Thermal decomposition or combustion products may include the following substances: Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

### **5.3. Advice for firefighters**

**Protective actions during firefighting** Cool containers exposed to flames with water until well after the fire is out. Evacuate area.

## **SECTION 6: Accidental release measures**

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

**Personal precautions** Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. No smoking, sparks, flames or other sources of ignition near spillage. Do not touch or walk into spilled material. Avoid contact with skin, eyes and clothing. Avoid inhalation of vapours. Do not enter storage areas or confined spaces unless adequately ventilated. Use suitable respiratory protection if ventilation is inadequate. Avoid contact with contaminated tools and objects. Do not handle broken packages without protective equipment. If aerosol cans are ruptured, care should be taken due to the rapid escape of the pressurised contents and propellant. Wash thoroughly after dealing with a spillage.

### **6.2. Environmental precautions**

**Environmental precautions** Do not discharge into drains or watercourses or onto the ground.

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

**Methods for cleaning up** Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation. Absorb small quantities with paper towels and evaporate in a safe place. Once evaporation is complete, place paper in a suitable waste disposal container and seal securely. Contain and absorb spillage with sand, earth or other non-combustible material. Collect and place in suitable waste disposal containers and seal securely. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage.

### **6.4. Reference to other sections**

**Reference to other sections** Wear protective clothing as described in Section 8 of this safety data sheet.

## **SECTION 7: Handling and storage**

### **7.1. Precautions for safe handling**

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**Usage precautions** Keep out of the reach of children. Do not eat, drink or smoke when using this product. Eliminate all sources of ignition. Do not spray on an open flame or other ignition source. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid contact with eyes. Avoid inhalation of vapours. Do not expose to temperatures exceeding 50°C/122°F. Take precautionary measures against static discharges. Ground/bond container and receiving equipment. Use explosion-proof electrical, ventilating and lighting equipment. Use only non-sparking tools. Do not pierce or burn, even after use.

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

**Storage precautions** Store at temperatures between 4°C and 40°C. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not expose to temperatures exceeding 50°C/122°F.

**Storage class** Flammable compressed gas storage.

### 7.3. Specific end use(s)

**Specific end use(s)** The identified uses for this product are detailed in Section 1.2.

## SECTION 8: Exposure controls/Personal protection

### 8.1. Control parameters

#### Occupational exposure limits

##### **Dimethyl ether**

Long-term exposure limit (8-hour TWA): WEL 400 ppm 766 mg/m<sup>3</sup>

Short-term exposure limit (15-minute): WEL 500 ppm 958 mg/m<sup>3</sup>

##### **ethanediol**

Long-term exposure limit (8-hour TWA): WEL 10 mg/m<sup>3</sup> particulate

Sk

Long-term exposure limit (8-hour TWA): WEL 20 ppm 52 mg/m<sup>3</sup> vapour

Short-term exposure limit (15-minute): WEL 40 ppm 104 mg/m<sup>3</sup> vapour

Sk

WEL = Workplace Exposure Limit.

Sk = Can be absorbed through the skin.

#### Dimethyl ether (CAS: 115-10-6)

**DNEL** Workers - Inhalation; Long term systemic effects: 1894 mg/m<sup>3</sup>  
Consumer - Inhalation; Long term systemic effects: 471 mg/m<sup>3</sup>

**PNEC**

- Fresh water; 0.155 mg/l
- marine water; 0.016 mg/l
- Intermittent release; 1549 mg/l
- STP; 160 mg/l
- Sediment (Freshwater); 0.681 mg/l
- Sediment (Marinewater); 0.069 mg/l
- Soil; 0.045 mg/l

#### ethanediol (CAS: 107-21-1)

**DNEL** Industry - Inhalation; Long term local effects: 35 mg/m<sup>3</sup>  
Industry - Dermal; Long term systemic effects: 106 mg/kg/day  
Consumer - Inhalation; Long term local effects: 7 mg/m<sup>3</sup>  
Consumer - Dermal; Long term systemic effects: 53 mg/kg/day

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### PNEC

- Fresh water; 10 mg/l
- marine water; 1 mg/l
- Intermittent release; 10 mg/l
- STP; 199.5 mg/l
- Sediment (Freshwater); 20.9 mg/kg
- Sediment (Marinewater); 3.7 mg/kg
- Soil; 1.53 mg/kg

### 8.2. Exposure controls

#### Protective equipment



#### Appropriate engineering controls

Provide adequate ventilation.

#### Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Tight-fitting safety glasses. Personal protective equipment for eye and face protection should comply with European Standard EN166.

#### Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with European Standard EN374. The selected gloves should have a breakthrough time of at least 4 hours. The breakthrough time for any glove material may be different for different glove manufacturers. When used with mixtures, the protection time of gloves cannot be accurately estimated. Protective gloves should have a minimum thickness of 0.15 mm. Glove thickness is not necessarily a good measure of glove resistance as the permeation rate will depend on the exact glove composition. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Specific work environments and material handling practices may vary, therefore safety procedures should be developed for each intended application. The choice of protective gloves depends upon the chemicals being handled, and the conditions of work and use. Repeated exposure to chemicals will degrade the ability of the glove to provide resistance to chemicals. Gloves made from the following material may provide suitable chemical protection: Neoprene. Nitrile rubber.

#### Respiratory protection

No specific requirements are anticipated under normal conditions of use. Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Respirator selection must be based on exposure levels, the hazards of the product and the safe working limits of the selected respirator. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit. Wear a respirator fitted with the following cartridge: Combination filter, type A2/P2. Organic vapour + dust and mist filter. Particulate filters should comply with European Standard EN143. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140. Gas and combination filter cartridges should comply with European Standard EN14387. Disposable filtering half mask respirators should comply with European Standard EN149 or EN405. Check that the respirator fits tightly and the filter is changed regularly.

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**Environmental exposure controls** Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. Store in a demarcated bunded area to prevent release to drains and/or watercourses. Residues and empty containers should be taken care of as hazardous waste according to local and national provisions.

### SECTION 9: Physical and chemical properties

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

<b>Appearance</b>	Clear liquid.
<b>Colour</b>	Colourless.
<b>Odour</b>	Mild.
<b>Odour threshold</b>	Not determined.
<b>pH</b>	Not applicable.
<b>Melting point</b>	Not determined.
<b>Initial boiling point and range</b>	Not determined.
<b>Flash point</b>	Not determined.
<b>Evaporation rate</b>	Not determined.
<b>Evaporation factor</b>	Not determined.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	Not determined.
<b>Other flammability</b>	Not determined.
<b>Vapour pressure</b>	Not determined.
<b>Vapour density</b>	Not determined.
<b>Relative density</b>	~ 1.0 @ 25°C
<b>Solubility(ies)</b>	Soluble in water.
<b>Partition coefficient</b>	Not determined.
<b>Auto-ignition temperature</b>	Not determined.
<b>Decomposition Temperature</b>	Not determined.
<b>Viscosity</b>	Not determined.
<b>Explosive properties</b>	There are no chemical groups present in the product that are associated with explosive properties.
<b>Oxidising properties</b>	There are no chemical groups present in the product that are associated with oxidising properties.
<b>Comments</b>	Information declared as "Not available" or "Not applicable" is not considered to be relevant to the implementation of the proper control measures.

#### 9.2. Other information

**Other information** Not determined.

### SECTION 10: Stability and reactivity

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### 10.1. Reactivity

**Reactivity** There are no known reactivity hazards associated with this product.

### 10.2. Chemical stability

**Stability** Stable at normal ambient temperatures and when used as recommended.

### 10.3. Possibility of hazardous reactions

**Possibility of hazardous reactions** Not determined.

### 10.4. Conditions to avoid

**Conditions to avoid** Keep away from heat, sparks and open flame.

### 10.5. Incompatible materials

**Materials to avoid** No specific material or group of materials is likely to react with the product to produce a hazardous situation.

### 10.6. Hazardous decomposition products

**Hazardous decomposition products** Thermal decomposition or combustion products may include the following substances: Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Acute toxicity - oral

**Notes (oral LD<sub>50</sub>)** Based on available data the classification criteria are not met.

**ATE oral (mg/kg)** 66,111.11

#### Acute toxicity - dermal

**Notes (dermal LD<sub>50</sub>)** Based on available data the classification criteria are not met.

#### Acute toxicity - inhalation

**Notes (inhalation LC<sub>50</sub>)** Based on available data the classification criteria are not met.

#### Skin corrosion/irritation

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

#### Serious eye damage/irritation

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

#### Respiratory sensitisation

**Respiratory sensitisation** Based on available data the classification criteria are not met.

#### Skin sensitisation

**Skin sensitisation** Based on available data the classification criteria are not met.

#### Germ cell mutagenicity

**Genotoxicity - in vitro** Does not contain any substances known to be mutagenic.

#### Carcinogenicity

**Carcinogenicity** Does not contain any substances known to be carcinogenic.

#### Reproductive toxicity

**Reproductive toxicity - fertility** Does not contain any substances known to be toxic to reproduction.

#### Specific target organ toxicity - repeated exposure

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<b>STOT - repeated exposure</b>	Based on available data the classification criteria are not met.
<b><u>Aspiration hazard</u></b>	
<b>Aspiration hazard</b>	Not anticipated to present an aspiration hazard, based on chemical structure.
<b>Inhalation</b>	Vapours may cause headache, fatigue, dizziness and nausea.
<b>Ingestion</b>	Gastrointestinal symptoms, including upset stomach.
<b>Skin contact</b>	Prolonged contact may cause dryness of the skin.
<b>Eye contact</b>	May cause discomfort.
<b>Acute and chronic health hazards</b>	No specific health hazards known.
<b>Route of exposure</b>	Skin and/or eye contact Not specific
<b>Target organs</b>	No specific target organs known.
<b>Medical symptoms</b>	Irritation of eyes and mucous membranes. No specific symptoms known.

### SECTION 12: Ecological information

<b>Ecotoxicity</b>	Not regarded as dangerous for the environment.
<b><u>12.1. Toxicity</u></b>	
<b><u>Acute aquatic toxicity</u></b>	
<b>Acute toxicity - fish</b>	Not determined.
<b><u>Chronic aquatic toxicity</u></b>	
<b>Chronic toxicity - fish early life stage</b>	Not determined.
<b><u>12.2. Persistence and degradability</u></b>	
<b>Persistence and degradability</b>	The product is expected to be biodegradable.
<b><u>12.3. Bioaccumulative potential</u></b>	
<b>Bioaccumulative potential</b>	The product does not contain any substances expected to be bioaccumulating.
<b>Partition coefficient</b>	Not determined.
<b><u>12.4. Mobility in soil</u></b>	
<b>Mobility</b>	Soluble in water.
<b><u>12.5. Results of PBT and vPvB assessment</u></b>	
<b>Results of PBT and vPvB assessment</b>	This product does not contain any substances classified as PBT or vPvB.
<b><u>12.6. Other adverse effects</u></b>	
<b>Other adverse effects</b>	Not determined.

### SECTION 13: Disposal considerations

#### **13.1. Waste treatment methods**

<b>Disposal methods</b>	Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements.
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## DUO MAX FOGGER

### SECTION 14: Transport information

**General** For limited quantity packaging/limited load information, consult the relevant modal documentation using the data shown in this section.

#### Special Provisions note

##### 14.1. UN number

UN No. (ADR/RID)	1950
UN No. (IMDG)	1950
UN No. (ICAO)	1950
UN No. (ADN)	1950

##### 14.2. UN proper shipping name

Proper shipping name (ADR/RID)	AEROSOLS
Proper shipping name (IMDG)	AEROSOLS
Proper shipping name (ICAO)	AEROSOLS
Proper shipping name (ADN)	AEROSOLS

##### 14.3. Transport hazard class(es)

ADR/RID class	2.1
ADR/RID classification code	5F
ADR/RID label	2.1
IMDG class	2.1
ICAO class/division	2.1
ADN class	2.1

#### Transport labels



##### 14.4. Packing group

##### 14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant  
No.

##### 14.6. Special precautions for user

EmS	F-D, S-U
ADR transport category	2
Tunnel restriction code	(D)

##### 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

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### SECTION 15: Regulatory information

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

<b>National regulations</b>	Control of Substances Hazardous to Health Regulations 2002 (as amended).
<b>EU legislation</b>	Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). Council Directive of 20 May 1975 on the approximation of the laws of the Member States relating to aerosol dispensers (75/324/EEC) (as amended). Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
<b>Guidance</b>	Workplace Exposure Limits EH40.

#### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

### SECTION 16: Other information

<b>Abbreviations and acronyms used in the safety data sheet</b>	ATE: Acute Toxicity Estimate. ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road. CAS: Chemical Abstracts Service. DNEL: Derived No Effect Level. ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air. IMDG: International Maritime Dangerous Goods. LC <sub>50</sub> : Lethal Concentration to 50 % of a test population. LD <sub>50</sub> : Lethal Dose to 50% of a test population (Median Lethal Dose). PBT: Persistent, Bioaccumulative and Toxic substance. PNEC: Predicted No Effect Concentration. REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006. RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail. vPvB: Very Persistent and Very Bioaccumulative. EC <sub>50</sub> : 50% of maximal Effective Concentration. NOAEL: No Observed Adverse Effect Level.
<b>Classification abbreviations and acronyms</b>	Eye Irrit. = Eye irritation Press. Gas (Liq.) = Gas under pressure: Liquefied gas Flam. Gas = Flammable gas
<b>Classification procedures according to Regulation (EC) 1272/2008</b>	Aerosol 1 - H222, H229, Eye Irrit. 2 - H319: Calculation method.
<b>Revision comments</b>	This is the first issue.
<b>Revision date</b>	13/04/2021
<b>Revision</b>	1.0
<b>SDS number</b>	30792

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### Hazard statements in full

H220 Extremely flammable gas.  
H222 Extremely flammable aerosol.  
H229 Pressurised container: may burst if heated.  
H280 Contains gas under pressure; may explode if heated.  
H301 Toxic if swallowed.  
H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.  
H318 Causes serious eye damage.  
H373 May cause damage to organs (Kidneys) through prolonged or repeated exposure.  
H400 Very toxic to aquatic life.  
H411 Toxic to aquatic life with long lasting effects.

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.