



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

SDS # : 34190

AEROGEAR 823

Date of the previous version: 2017-10-31

Revision Date: 2017-11-29

Version 5.02

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name	AEROGEAR 823
Number	123
Substance/mixture	Mixture

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

Identified uses	Transmission fluid. Aviation.
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1.3. Details of the supplier of the safety data sheet

Supplier	<p style="color: red;">A - TOTAL UK LIMITED 183 Eversholt St, Kings Cross London, NW1 1BU UNITED KINGDOM Tel: +44 (0)20 7339 8000 Fax: +44 (0)20 7339 8033</p> <p style="color: red;">B - TOTAL LUBRIFIANTS 562 Avenue du Parc de L'île 92029 Nanterre Cedex FRANCE Tél: +33 (0)1 41 35 40 00 Fax: +33 (0)1 41 35 84 71***</p>
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For further information, please contact:

Contact Point	A - HSE
E-mail Address	<p style="color: red;">B - HSE***</p> <p style="color: red;">A - rm.gb-msds@total.co.uk</p> <p style="color: red;">B - rm.msds-lubs@total.com***</p>

1.4. Emergency telephone number

Emergency telephone: +44 1235 239670

UK: National Poisons Information Service (NPIS): NHS on 111 or a doctor

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

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REGULATION (EC) No 1272/2008 ****For the full text of the H-Statements mentioned in this Section, see Section 2.2. ******Classification**

The product is classified as dangerous in accordance with Regulation (EC) No. 1272/2008***

Chronic aquatic toxicity - Category 3*** - (H412)***

2.2. Label elements

Labelled according to REGULATION (EC) No 1272/2008***

Signal word

None***

Hazard Statements ***

H412 - Harmful to aquatic life with long lasting effects***

Precautionary statements

P273 - Avoid release to the environment

P501 - Dispose of contents/ container to an approved waste disposal plant***

Supplemental Hazard Statements

EUH208 - Contains Long chain alkyl dithio thiadiazole. May produce an allergic reaction***

2.3. Other hazards**Physical-Chemical Properties** Contaminated surfaces will be extremely slippery.*****Environmental properties** The product may form an oil film on the water surface that may stop the oxygen exchange.***

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixture*****Chemical nature**

Mineral oil of petroleum origin.***

Hazardous components

Chemical Name	EC-No	REACH Registration Number	CAS-No	Weight %	Classification (Reg. 1272/2008)
2,6-di-tert-butylphenol***	204-884-0	01-2119490822-33	128-39-2	0.1-<0.25	Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) Skin Irrit. 2 (H315) Acute M factor = 1
Long chain alkyl dithio thiadiazole***	-	no data available	73984-93-7	0.1-<1	Skin Sens. 1 (H317) Acute Tox. 2 (H330)***
(Z)-octadec-9-enylamine***	204-015-5	no data available	112-90-3	0.01-<0.025	Acute Tox. 4 (H302)

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					Skin Corr. 1B (H314) Eye Dam. 1 (H318) STOT SE 3 (H335) STOT RE 2 (H373) Asp. Tox. 1 (H304) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) Acute M factor = 10 Chronic M factor = 10
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Additional information Product containing mineral oil with less than 3% DMSO extract as measured by IP 346.***

For the full text of the H-Statements mentioned in this Section, see Section 16.

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

General advice	IN CASE OF SERIOUS OR PERSISTENT CONDITIONS, CALL A DOCTOR OR EMERGENCY MEDICAL CARE.
Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing.***
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. Take victim immediately to hospital.***
Inhalation	Remove casualty to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration.***
Ingestion	Clean mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or poison control centre immediately.***
Protection of first-aiders	First aider needs to protect himself. See Section 8 for more detail. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.***

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

Eye contact	Not classified based on available data.***
Skin contact	Not classified based on available data. May produce an allergic reaction. High pressure injection of the products under the skin may have very serious consequences even though no symptom or injury may be apparent.***
Inhalation	Not classified based on available data. Inhalation of vapours in high concentration may cause irritation of respiratory system.***
Ingestion	Not classified based on available data. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.***

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4.3. Indication of any immediate medical attention and special treatment needed**Notes to physician** Treat symptomatically.

Section 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media**Suitable extinguishing media** Carbon dioxide (CO₂). ABC powder. Foam. Water spray or fog.*****Unsuitable Extinguishing Media** Do not use a solid water stream as it may scatter and spread fire.***5.2. Special hazards arising from the substance or mixture**Special hazard** Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. These may be highly dangerous if inhaled in confined spaces or at high concentration. Nitrogen oxides (NO_x). Combustion products include sulphur oxides (SO₂ and SO₃) and Hydrogen sulphide H₂S. Mercaptans. Phosphorous oxides. Silicon dioxide.***5.3. Precautions for fire-fighters**Special protective equipment for fire-fighters** Wear self-contained breathing apparatus and protective suit.**Other information** Cool containers / tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedure



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6.4. Reference to other sections

Personal protective equipment See Section 8 for more detail.

Waste treatment See section 13.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling For personal protection see section 8. Use only in well-ventilated areas. Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing.***

Prevention of fire and explosion Take precautionary measures against static discharges.***

Hygiene measures Ensure the application of strict rules of hygiene by the personnel exposed to the risk of contact with the product. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product. Provide regular cleaning of equipment, work area and clothing. Do not use abrasives, solvents or fuels. Do not dry hands with rags that have been contaminated with product. Do not put product contaminated rags into workwear pockets.***

7.2. Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions Keep away from food, drink and animal feedingstuffs. Keep in a bunded area. Keep container tightly closed. Preferably keep in the original container. Otherwise, reproduce all the statutory information from the labels onto the new container. Do not remove the hazard labels of the containers (even if they are empty). Design the installations in order to avoid accidental emissions of product (due to seal breakage, for example) onto hot casings or electrical contacts. Store at room temperature. Protect from moisture.***

Materials to avoid Strong oxidising agents.***

7.3. Specific use(s)

Specific use(s) Please refer to Technical Data Sheet for further information.***

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parametres

Exposure limits Mineral oil mist:
USA: OSHA (PEL) TWA 5 mg/m³, NIOSH (REL) TWA 5 mg/m³, STEL 10 mg/m³, ACGIH (TLV) TWA 5 mg/m³ (highly refined)

Legend See section 16

Derived No Effect Level (DNEL) ***

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DNEL Worker (Industrial/Professional)***

Chemical Name	Short term, systemic effects	Short term, local effects	Long term, systemic effects	Long term, local effects
2,6-di-tert-butylphenol*** 128-39-2			2.77 mg/kg bw/day Dermal 19.6 mg/m ³ Inhalation	

DNEL Consumer***

Chemical Name	Short term, systemic effects	Short term, local effects	Long term, systemic effects	Long term, local effects
2,6-di-tert-butylphenol*** 128-39-2			1.67 mg/kg bw/day Oral 5.8 mg/m ³ Inhalation	

Predicted No Effect Concentration (PNEC) ***

Chemical Name	Water	Sediment	Soil	Air	STP	Oral
2,6-di-tert-butylphenol*** 128-39-2	0.00045 mg/l fw 0.000045 mg/l mw 0.0045 mg/l or	0.196 mg/kg dw fw 0.0196 mg/kg dw mw	0.0389 mg/kg dw		10 mg/l	

8.2. Exposure controls

Occupational Exposure Controls

Engineering measures

Apply technical measures to comply with the occupational exposure limits. Ensure adequate ventilation, especially in confined areas. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.***

Personal protective equipment
General Information

Protective engineering solutions should be implemented and in use before personal protective equipment is considered. The personal protective equipment (PPE) recommendations apply to the product AS DELIVERED. In case of mixtures or formulations, it is suggested that you contact the relevant PPE suppliers.***

Respiratory protection

In case of vapours and aerosol formation: When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Respirator with combination filter for vapour/particulate (EN 14387). Type A/P1. Warning ! filters have a limited use duration. The use of breathing apparatus must comply strictly with the manufacturer's instructions and the regulations governing their choices and uses.***

Eye protection

If splashes are likely to occur, wear: Safety glasses with side-shields. EN 166.***

Skin and body protection

Wear suitable protective clothing. Protective shoes or boots. Long sleeved clothing. Type 4/6.***

Hand protection

Hydrocarbon-proof gloves. Fluorinated rubber. Nitrile rubber. In case of prolonged contact with the product, it is recommended to wear gloves complying with EN 420 and EN 374 standards, protecting at least for 480 minutes and having a thickness of 0,38 mm at least. These values are indicative only. The level of protection is provided by the material of the glove, its technical characteristics, its resistance to the chemicals to be handled, the appropriateness of its use and its replacement frequency. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the

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gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.**

Environmental exposure controls

General Information The product should not be allowed to enter drains, water courses or the soil.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance		Clear***	
Colour		yellow***	
Physical state @20°C		liquid***	
Odour		characteristic***	
Odour Threshold		No information available	
Property	Values	Remarks	Method
pH		Not applicable***	
Melting point/range		No information available***	
Boiling point/boiling range		No information available***	
Flash point ***	242*** °C*** 467.6*** °F***		Cleveland Open Cup (COC)*** Cleveland Open Cup (COC)***
Evaporation rate		No information available***	
Flammability Limits in Air		No information available***	
Upper ***	***	No information available***	***
Lower ***	***	No information available***	***
Vapour pressure		No information available***	
Vapour density		No information available***	
Relative density	*** 0.888***	@ 15 °C***	ISO 12185***
Density	887.5*** kg/m ³ ***	@ 15 °C***	ISO 12185***
Water solubility		Insoluble***	
Solubility in other solvents		No information available***	
logPow		No information available***	***
Autoignition temperature		No information available***	
Decomposition temperature		No information available	
Viscosity, kinematic ***	*** 63*** mm ² /s***	@ 40 °C ***	ISO 3104***
Explosive properties	Not explosive***		
Oxidising properties	Not applicable***		
Possibility of hazardous reactions	None under normal processing***		

9.2. Other information

Freezing point No information available

Section 10: STABILITY AND REACTIVITY

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10.1. Reactivity**General Information** None under normal processing.***10.2. Chemical stability**Stability** Stable under recommended storage conditions.10.3. Possibility of hazardous reactions**Hazardous reactions** No dangerous reaction known under conditions of normal use.***10.4. Conditions to avoid**Conditions to avoid** Keep away from open flames, hot surfaces and sources of ignition. Keep away from heat and sparks.***10.5. Incompatible materials**Materials to avoid** Strong oxidising agents.***10.6. Hazardous Decomposition Products**Hazardous Decomposition Products** Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. Phosphorous oxides. Nitrogen oxides (NOx). Mercaptans. Combustion products include sulphur oxides (SO2 and SO3) and Hydrogen sulphide H2S. Silicon dioxide.*****Section 11: TOXICOLOGICAL INFORMATION**11.1. Information on toxicological effects**Acute toxicity Local effects Product Information****Skin contact** . Not classified based on available data. May produce an allergic reaction. High pressure injection of the products under the skin may have very serious consequences even though no symptom or injury may be apparent.*****Eye contact** . Not classified based on available data.*****Inhalation** . Not classified based on available data. Inhalation of vapours in high concentration may cause irritation of respiratory system.*****Ingestion** . Not classified based on available data. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.*****ATEmix (inhalation-vapour)** 630.00*** mg/l*****Acute toxicity - Component Information**

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Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
2,6-di-tert-butylphenol***	> 5000 mg/kg (Rat)	LD50 > 2000 mg/kg (Rabbit)	
Long chain alkyl dithio thiazazole***	LD50 6176 mg/kg (rat-female)***	LD50 >2000 mg/kg (rabbit)***	
(Z)-octadec-9-enylamine***	LD50 1689 mg/kg bw (Rat)		

Sensitisation**Sensitisation**

Not classified based on available data. Contains sensitizer(s). May produce an allergic reaction.***

Specific effects**Carcinogenicity**

Not classified based on available data.***

Mutagenicity

Not classified based on available data.***

Germ cell mutagenicity

Not classified based on available data.***

Reproductive toxicity

Not classified based on available data.***

Repeated dose toxicity**Subchronic Toxicity**

Not classified based on available data.***

Target Organ Effects (STOT)**Target Organ Effects (STOT)**

Not classified based on available data.***

Specific target organ systemic toxicity (single exposure)

Not classified based on available data.***

Specific target organ toxicity - repeated exposure

Not classified based on available data.***

Aspiration toxicity

Not classified based on available data.***

Other information**Other adverse effects**

Characteristic skin lesions (oil blisters) may develop following prolonged and repeated exposures (contact with contaminated clothing).***

Section 12: ECOLOGICAL INFORMATION**12.1. Toxicity**

Harmful to aquatic life with long lasting effects.***

Acute aquatic toxicity - Product Information***

No information available.***

Acute aquatic toxicity - Component Information

Chemical Name	Toxicity to algae	Toxicity to daphnia and	Toxicity to fish	Toxicity to
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		other aquatic invertebrates.		microorganisms
2,6-di-tert-butylphenol*** 128-39-2	EC50 (72h) 1.2 mg/l	EC50 (48h) = 0.45 mg/L Daphnia magna	LC50(96h) 1 mg/l (fish)	
(Z)-octadec-9-enylamine*** 112-90-3	ERC50 (72h) 0.46 mg/l (Desmodesmus subspicatus - OECD 201) EBC50 (72h) 0.38 mg/l (Desmodesmus subspicatus - OECD 201)	EC50 (48h) 0.011mg/l (Daphnia magna - OECD 202)	LC50 (96h) 0.11 mg/l (Pimephales promelas - OECD 203)	

Chronic aquatic toxicity - Product Information

No information available.***

Chronic aquatic toxicity - Component Information

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates.	Toxicity to fish	Toxicity to microorganisms
2,6-di-tert-butylphenol*** 128-39-2			NOEC (28d) 0.3 mg/l (fish)	
(Z)-octadec-9-enylamine*** 112-90-3	NOEC(72h) 0.15 mg/l (Desmodesmus subspicatus - OECD 201) NOEC(96h) 0.01 mg/l (Selenastrum capricornutum - OECD 201)	NOEC(21d) 0.013 mg/l (Daphnia magna - OECD 211)		

Effects on terrestrial organisms

No information available.***

12.2. Persistence and Degradability**General Information**

No information available.

12.3. Bioaccumulative potential**Product Information**

No information available.***

logPow

No information available***

Component Information

Chemical Name	log Pow
2,6-di-tert-butylphenol*** - 128-39-2	4.48

12.4. Mobility in soil**Soil**

Given its physical and chemical characteristics, the product generally shows low soil mobility.***

Air

Loss by evaporation is limited.***

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Water The product is insoluble and floats on water.***

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment No information available.***

12.6. Other adverse effects

General Information No information available.***

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from residues / unused products Should not be released into the environment. Do not empty into drains. Dispose of in accordance with the European Directives on waste and hazardous waste. Where possible recycling is preferred to disposal or incineration. After use, this oil must be sent to a licensed waste oil facility. Incorrect disposal of used oil poses a risk to the environment. Mixture with other waste types such as solvents, brake- and cooling liquids is forbidden.***

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal.***

EWC Waste Disposal No According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used. The following Waste Codes are only suggestions: 13 02 05.***

Other information Refer to section 8 for safety and protective measures for disposal personnel.***

Section 14: TRANSPORT INFORMATION

ADR/RID not regulated

IMDG/IMO not regulated

ICAO/IATA not regulated

ADN ***

UN/ID No ID9006***

Hazard Class 9***
Hazard Labels none***
Description ID9006, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9
 (2,6-di-tert-butylphenol, (Z)-octadec-9-enylamine)***

Equipment Requirements PP***

Section 15: REGULATORY INFORMATION

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

European Union

Further information

No information available***

15.2. Chemical Safety Assessment**Chemical Safety Assessment** No information available***15.3. National regulatory information**The United Kingdom**

- Avoid exceeding occupational exposure limits (see section 8).

Ireland

- Avoid exceeding occupational exposure limits (see section 8).

Section 16: OTHER INFORMATION**Full text of H-Statements referred to under sections 2 and 3**

H302 - Harmful if swallowed

H304 - May be fatal if swallowed and enters airways

H314 - Causes severe skin burns and eye damage

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H318 - Causes serious eye damage

H330 - Fatal if inhaled

H335 - May cause respiratory irritation

H373 - May cause damage to organs through prolonged or repeated exposure

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects***

Abbreviations, acronyms

ACGIH = American Conference of Governmental Industrial Hygienists

bw = body weight

bw/day = body weight/day

EC x = Effect Concentration associated with x% response

GLP = Good Laboratory Practice

IARC = International Agency for Research of Cancer

LC50 = 50% Lethal concentration - Concentration of a chemical in air or a chemical in water which causes the death of 50% (one half) of a group of test animals

LD50 = 50% Lethal Dose - Chemical amount, given at once, which causes the death of 50% (one half) of a group of test animals

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LL = Lethal Loading
 NIOSH = National Institute of Occupational Safety and Health
 NOAEL = No Observed Adverse Effect Level
 NOEC = No Observed Effect Concentration
 NOEL = No Observed Effect Level
 OECD = Organization for Economic Co-operation and Development
 OSHA = Occupational Safety and Health Administration
 UVCB = Substance of unknown or Variable composition, Complex reaction products or Biological material
 DNEL = Derived No Effect Level
 PNEC = Predicted No Effect Concentration
 dw = dry weight
 fw = fresh water
 mw = marine water
 or = occasional release

Legend Section 8

TWA: Time Weight Average
 STEL: Short Time Exposure Limit

+	Sensitiser	*	Skin designation
**	Hazard Designation	C:	Carcinogen
M:	Mutagen	R:	Toxic to reproduction

Revision Date: 2017-11-29

Revision Note *** Indicates updated section.

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

This safety data sheet serves to complete but not to replace the technical product sheets. The information contained herein is given in good faith and is accurate to the best of knowledge at the date indicated above. It is understood by the user that any use of the product for purposes other than those for which it was designed entails potential risk. The information given herein in no way dispenses the user from knowing and applying all provisions regulating his activity. The user bears sole liability for the precautions required when using the product. The regulatory texts indicated herein are intended to aid the user to fulfil his obligations. This list is not to be considered complete and exhaustive. It is the user's responsibility to ensure that he is subject to no other obligations than those mentioned.

End of Safety Data Sheet

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