

MATERIAL SAFETY DATA SHEET

1.0 IDENTIFICATION

Product Name : **Forafac 1203 (AFFF)**
Use : Surfactant, Component for fire extinguishing formulations
Supplier : Britannia Fire Limited
Ashwellthorpe Industrial Estate
Ashwellthorpe
Norwich, NR16 1ER
United Kingdom
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2.0 HAZARDS IDENTIFICATION

Irritating to eyes
May cause sensitization by skin contact
Inhalation of decomposition products in high concentration may cause shortness of breath (lung oedema)

3.0 COMPOSITION/INFORMATION OF INGREDIENTS

Chemical nature of the : Aqueous surfactant solution, Fluoroadditive
Preparation

Hazardous components

Chemical Name	CAS-No.	EC-No.	Classification	Concentration %
2-(2-Butoxyethoxy)ethanol	112-34-5	203-961-6	Xi, R36	20-50
N-(2-Hydroxyethyl)-N-[2-[1-Oxooctyl]amino]ethyl]-beta-alanine	64265-45-8	264-761-2	Xi; R36/38	0-10
N-[3-(Dimethyloxidoamino)propyl]-3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluoro-1-octanesulfonamide	80475-32-7	279-481-6	R52/53	0-10
Alkyl Glucoside	68515-73-1	500-220-1	Xi, R41	0-5
2,2'-Iminodiethanol	111-42-2	203-868-0	Xn, R22 –R48/22 Xi, R38 –R41	1-5
Ethanol	64-17-5	200-578-6	F; R11	1-3

For the full text of the R-phrases mentioned in this Section, see Section 16.

4.0 FIRST AID MEASURES

Inhalation : Move to fresh air. Oxygen or artificial respiration if needed. Call a physician immediately.
Skin Contact : Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water.
Eye contact : Rinse immediately with plenty of water and seek medical advice.
Ingestion : Do not induce vomiting without medical advice. Drink 1 or 2 glasses of water.
Call a physician immediately.

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5.0 FIRE FIGHTING MEASURES

Not applicable as foam is a non-flammable, non combustible water based solution.

6.0 ACCIDENTAL RELEASE

Personal precautions : Avoid contact with skin, eyes and clothing. Ensure adequate ventilation
Evacuate personnel to safe areas. Wear personal protective equipment.

Environmental precautions : Prevent product from entering drains.

Methods for cleaning up : Dam up. Soak up with absorbent material. Sweep up or vacuum up
Spillage and collect in suitable container for disposal.

Additional advice : Dispose of in accordance with local regulations.

7.0 HANDLING AND STORERAGE

Handling

Advice on safe handling : Do not breathe vapour. Avoid contact with skin and eyes. Use only in an
area equipped with a safety shower. Use only in are provided with
appropriate exhaust ventilation. Irritating to eyes and skin.

Storage

Requirements for storage : Keep container tightly closed in a dry and well ventilated place. Store in
original container. Keep away from heat.

Areas and containers : Keep away from strong oxidizing agents.

Other data : Stable under normal conditions.

8.0 EXPOSURE CONTROL/PERSONAL PROTECTION

Components with workplace control parameters.

Components	CAS-No.	Type/Form of exposure	Control Parameters	Update	Basis
2,2'-Iminodiethanol	111-42-2	TWA	13 mg/m ³ 3 ppm	2001	EH40 OES
Ethanol	64-17-5	TWA	1920 mg/m ³ 1000ppm	205	EH40 WEL

Engineering measures

Ensure adequate ventilation in confined areas.

Personal protective equipment

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.

Hand protection : Impervious gloves

Eye protection : Safety glasses with side shields – Goggles

Skin and body protection : Protective suit

Hygiene measures : Avoid contact with skin, eyes and clothing. Wash hands before breaks and
immediately after handling the product.

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9.0 PHYSICAL AND CHEMICAL PROPERTIES

Form	:	Liquid
Colour	:	pale yellow/brown
Odour	:	characteristic
pH	:	7.5 – 9.5
Melting point/range	:	N/A
Boiling point/range	:	100°C
Flash point	:	N/A
Thermal decomposition	:	no data available
Relative density	:	1.05
Water solubility	:	soluble in water

10.0 STABILITY AND REACTIVITY

Conditions to avoid	:	To avoid thermal decomposition, do not overheat.
Materials to avoid	:	Strong oxidizing agents, metals.
Hazardous decomposition products	:	Carbon monoxide, Carbon oxides, Hydrogen fluoride.
Hazardous reactions	:	Heating can release hazardous gases. Stable under normal conditions.

11.0 TOXICOLOGICAL INFORMATION

Acute oral toxicity	:	:> 2000 mg/kg
Acute oral toxicity 2,2'-Iminodiethanol	:	LD50/ rat : 1820 mg/kg
Acute inhalation toxicity 2,2'-Iminodiethanol	:	ALC/ 1.3 h/ rat : 6.3 mg/l
Acute dermal toxicity 2,2'-Iminodiethanol	:	LD50/ rabbit : 13000 mg/kg
Skin irritation	:	No skin irritation
Eye irritation	:	Eye irritation
Sensitisation	:	Causes sensitization
Human experience		
Inhalation	:	Respiratory system: Irritation
Skin Contact	:	Irritation, Itching, Redness, Rash, Burn, Swelling of tissue
Eye contact	:	Irritation, Corrosion, Ulceration
Ingestion	:	Gastrointestinal tract: Irritation, Pain, Nausea, Vomiting, Diarrhoea.

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12.0 ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

Biodegradability : aerobic/ 28 d 84 %
Method: OECD Test Guideline 301C

Ecotoxicity effects

Toxicity to fish : No data is available on the product itself.

Toxicity to fish

•2-(2-Butoxyethoxy)ethanol : LC50 / 96 h/ Lepomis macrochirus (Bluegill sunfish) : 1300 mg/l

•2,2'-Iminodiethanol : LC50 / 96 h/ Fathead minnow : 837 mg/l

Toxicity to algae : /EC50/ 72 h/ Algae: 23 mg/l

Toxicity to daphnia : /EC50/ Daphnia: 100 mg/l

13.0 DISPOSAL

Product : Dispose of as special waste on compliance with local and national regulations

Contaminated packaging : If recycling is not practicable, dispose of in compliance with local regulations

14.0 TRANSPORT INFORMATION

Further information : Not classified as dangerous for transportation

When transported in a stored pressure or cartridge type fire extinguisher, the fire extinguisher is considered a class 2.2 hazard. The proper shipping name shall be FIRE EXTINGUISHER and the number is UN 1044

15.0 REGULATORY INFORMATION

Labelling according to EC Directives

Symbol(s) : Xi Irritant
R-phrases) : R36 Irritating to eyes
R43 May cause sensitization by skin contact
S-phrases) : S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S60 This material and its container must be disposed of as hazardous waste
S24 Avoid contact with skin
S37 Wear suitable gloves

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16.0 OTHER INFORMATION

Text of R-phrases mentioned in Section 3

R11	Highly flammable
R22	Harmful if swallowed
R36	Irritating to eyes
R36/38	Irritating to eyes and skin
R38	Irritating to skin
R41	Risk of serious damage to eyes
R48/22	Harmful: danger of serious damage to health by prolonged exposure if swallowed.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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