

SECTION 1 – PRODUCT & COMPANY IDENTIFICATION

Product Identification	ETI FIRE FIGHTING AGENT CONCENTRATE 6 %				
Application & Use	ETI FIRE FIGHTING AGENT CONCENTRATE 6 % is mixed with water to provide an effective fire fighting agent for ETI FIRE SUPPESSION SYSTEMS				
Manufacturer Address	PT ETI FIRE SYSTEMS Jl. Magelang – Kopeng Km 11 Tegalrejo Magelang – Central Java 56192 Indonesia Phone : +62 293 314 8990 FAX : +62 293 314 8991 Email : info@etifiresystems.com Website : www.etifiresystems.com				
Product Description	Mixture of Hydrocarbon surfactants, fluoro surfactants, poly saccharides & solvents				
Applicable Part Numbers	CAGENT0.8	CAGENT1.0	CAGENT1.5	CAGENT2.2	CAGENT2.5
	CAGENT3.0	CAGENT5.1	CAGENT20	CAGENT200	
	Note : Numeric value indicates volume supplied in litres.				

SECTION 2 – COMPOSITION

INGREDIENT	CONCENTRATION %	CAS NO.	ACGIH T Health Class
Diethylene Glycol Butyl Ether	4 – 12	112-34-5	NDA
Hydrocarbon Surfactants	2 – 10		Xi,R36,38
Water	72 – 88		
Poly Fluoro Alkyl Betaine	< 4	64-17-5	Xi,R36,37,38
Magnesium Sulphate	< 2	7487-88-9	

SECTION 3 – HAZARD IDENTIFIACION

Human Health Hazards	Not classified under CHIP III
Ingestion	May cause nausea, vomiting & diarrhea

SECTION 4 – FIRST AID MEASURES

	Remove patient from hazard area, keep patient calm & warm. Provide fresh air. Refer this Material Safety Data Sheet while giving medical treatment.
Skin	Remove contaminated clothing. Wash immediately with plenty of clean water. If irritation persists, call for medical treatment.
Eye	Wash immediately with clean flowing water for at least 10 minutes, contact doctor if irritation/pain persists.
Ingestion	May cause nausea. Do not induce vomiting. Send immediately for medical attention.
Inhalation	If patient is conscious, it is anticipated to be a minor problem. If there is breathing difficulty or cough, keep patient at rest, seated in maximum comfortable position. Call for medical attention if symptoms do not go away quickly or patient is unconscious.

SECTION 5 – FIRE FIGHTING MEASURES

Fire fighting measures are not applicable as this material is a fire fighting agent. If product containers are involved in fire, then a suitable extinguishing agent should be applied. Evacuate all persons from area involved in fire, use PPE.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal Precautions	Avoid contact with skin, eyes and clothing. Do not breathe mist, aerosols.
Personal Protection	Wear protective clothing specified for normal operations.
Environmental precautions:	
Spillage	If this agent is spilled, clean up may be undertaken using procedures acceptable to the local authority having jurisdiction. Check with this authority before using sewers for disposal which may or may not be acceptable. Do not rinse spilled agent into the environment or storm water drains as this will have a contaminating effect on the environment.
Clean up method	Small spills can be absorbed with sand or contained with earth or spill control material. Shovel up spillage and place in labeled, sealable container for subsequent safe disposal as per local laws.

SECTION 7 – HANDLING AND STORAGE

Handling	Use of approved safe work practices is necessary to avoid accidents that may cause injury or container danger causing spills. Do not drag, drop, slide or roll containers or drum.
Storage	Recommended storage environment is 0 ^o to 65 ^o C in a clean dry environment. Store the product in original shipping container or tanks designed for product storage, away from direct Sunlight and heat. Do not put into contact with material which reacts violently with water. The product should be stored in sealed, original containers above 0 ^o C and below 65 ^o C for the best results. Protect from frost.

SECTION 8 – EXPOSURE CONTROL & PERSONAL PROTECTION

Occupational Exposure limit	Not determined
Ventilation & engineering control measures	Use only in well ventilated areas, avoid prolong, extensive or repeated inhalation or contact with eye and skin.
Personal protective & Handling equipment	Body covering clothing recommended
Hand protection	Wear impervious gloves of approved type (e.g. Neoprene)
Eye protection	Wear safety goggles of an approved type
Respiratory protection	Not required

SECTION 9 – PHYSICAL & CHEMICAL PROPERTIES

APPEARANCE	Clear, orange coloured liquid, mild sweet odor
pH at 20 ^o C	6.6 – 8.4
Boiling Point	100 ^o C at 760 mm Hg
Odour	Organic
Flash Point	N/A
Flammability	Non flammable
Solubility	Miscible with water in all proportions
Viscosity at 20 ^o C	< 3000 cSt
Specific gravity	1.01

SECTION 10 – REACTIVITY & STABILITY

Stability	Generally stable. As with all aqueous solutions, prevent from contact with any materials which have violent reaction with water.
Incompatible Materials	Exposure to metal may cause corrosion consistent with exposure to water. Avoid electricity energized equipment.
Hazardous decomposition product	Do not expose containers to heat or flame since the containers are made from high density polyethylene and will burn. Thermal decomposition of containers and/or product may generate acid smoke, fumes and traces of Na ₂ O, Cl ⁻ , Sox, NO _x & HF.

SECTION 11 – TOXICOLOGICAL INFORMATION & HEALTH EFFECT

Inhalation	Inhalation of hazardous amount is unlikely, when used as intended. May cause irritation to respiratory tract when inhaled.
Ingestion	Low oral risk when used as intended. May cause nausea, vomiting and diarrhea if ingested. Irritating to mucous membranes, a large ingestion could produce narcosis.
Contact to eye or skin	Low risk if appropriate precautionary measures are taken (see section 6). May cause skin and eye irritation when comes in contact with them.
Aqua toxicity	Guppi fish. No toxic effect till concentration of 1500 ppm for 96 hrs.

SECTION 12 – ECOLOGICAL INFORMATION

Persistence/degradability	Biodegradable
Bioaccumulation	Bioaccumulation is unlikely to occur due to metabolism and excretion
Biodegradation	Biodegradable COD 0.34 gg ⁻¹ BOD (5 days) 0.20 gg ⁻¹
Sewage treatment	Data not available

SECTION 13 – DISPOSAL CONSIDERATION

Disposal	The product can be successfully treated in biological waste water system with proper dilution. Check with the local authority having jurisdiction before using sewers for disposal which may or may not be acceptable. Do not rinse spilled agent into the environment or storm water drains as this will have a contaminating effect on the environment.
Handling for disposal	Avoid contact with skin & eyes. Do not inhale excessively. Do not ingest. Wash thoroughly with clean water in case of contact.

SECTION 14 – TRANSPORT INFORMATION

Not classified as dangerous or hazardous for transport according to RID/ADR, GGVS/GGVE, ADNR, IMDG, ICAO-TI/IATA DGR.

SECTION 15 – REGULATORY INFORMATION

None known

SECTION 16 – OTHER INFORMATION

Information	First issue in document format to Australian National Occupation Health and Safety Commission Code of practice – 2 nd Edition NOHSC 2010 (2003), 25 May 2010.
Revision & Re-Issued	Jun 2011 Rev. B Mar 2015 Re-Issued C Sept 2017 Rev. D

Disclaimer

This document has been compiled by ETI Fire Systems to serve as the manufacturer's material Safety Data Sheet (MSDS). It is based on information concerning the product which has been provided to ETI by other manufacturer or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. While ETI has taken all due care to include accurate and up-to-date information in this MSDS, ETI in no manner whatsoever, expressly or implied, warrants this information to be accurate and disclaims all liability for its use. Any person utilizing this document should seek competent professional advice to verify and assume responsibility for the suitability of this information to their particular situation.