Safety Data Sheet

according to 1907/2006/EG annex II (REACH-regulation)

KOMET EXTRAKT AFFF 3% F DIN EN 1586

TOTAL Sicherheit und Feuerschutz

1. Identification of the Substance/Preparation and of the Company/Undertaking

Identification of the preparation : **KOMET EXTRAKT AFFF 3% F DIN EN 1586**

Use of the preparation : Fire Extinguishing Agent

Company/undertaking identification : TOTAL Feuerschutz GmbH
Industriestraße 13
D-68526 Ladenburg
Tel.: +49 6203 75-0 Fax : +49 6203 75-252
E-Mail: hbach@tycoint.com Internet: www.total-feuerschutz.de

Emergency telephone : Technical Support

2. Hazards Identification

Particular Hazards for Men and Environment :

Irritiating to eyes

Can harm the aquatic fauna when entering surface waters.
Can harm the bacteria population in waste water treatment plants when entering the sewerage system.
Breathing is not possible whilst submerged in the foam. Take care when spraying people!

3. Composition/Information on Ingredients

Chemical Characterisation : Fire extinguishing foam concentrate based on fluorinated and non-fluorinated surfactants

Contains :

Chemical Designation	CAS-No.	Content	Classification	R-Phrases
1,2-Ethandiol	107-21-1	< 25%	Xn	22
2-(2-Butoxyethoxy)ethanol	112-34-5	< 10%	Xi	36
Synthetic Surfactant	Trade Secret	< 5%	Xi	41
Synthetic Surfactant	Trade Secret	< 5%	Xi	38-41
Fluorosurfactant Composition	Trade Secret	< 10%	Xi	36-52/53

For the wording of the R-phrases see Paragraph 16

4. First Aid Measures

Eye Contact : Rinse thoroughly with running water. Seek medical advice if symptoms persist. Show this material safety data sheet.

Skin Contact : Rinse with water.

Ingestion : Seek medical advice. Do not induce vomiting (possible risk of suffocation due to formation of foam). Show this material safety data sheet.

Inhalation : Move away from radius of action. Seek medical advice if symptoms occur.

5. Fire-Fighting Measures

Not inflammable. The product is used as a fire extinguishing agent.

6. Accidental Release Measures

Personal precautions : Supply ventilation in enclosed spaces. Avoid eye and skin contact. See also heading 8 of this MSDS.

Environmental precautions : Avoid if possible penetration of aqueous systems and ground.

Methods for cleaning up : Absorb with liquid-binding material (sand, sawdust or universal binder). See also heading 13 of this MSDS.

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7. Handling and Storage

Information for
- safe handling : Keep container closed
- explosion and fire protection : Not applicable.

Requirements to be met by store rooms and containers : The national regulations for products classified as water hazard class 1 have to be obeyed. Tanks made from high-grade steel, glass fibre reinforced polyester or polyethylene are suitable for the storage.

Information on combined storage : Storage class (LGK): 12 (non-burning liquid)

Further information on storage conditions : Do not store above +50ºC for longer periods.

8. Exposure Controls/Personal Protection

Exposure limit values :

CAS No.	Chemical Designation	Type	Value	Unit
107-21-1	1,2-Ethandiol	MAK	10	ppm
112-34-5	2-(2-Butoxyethoxy)ethanol	MAK	100	mg/m³

Exposure controls

Occupational exposure controls
Respiratory Protection : Not required upon appropriate use.

Hand Protection : Suitable protection may be provided by using chemical resistant gloves made from the following materials: nitrile or butyl rubber with at least 0.4 mm thickness (according to EN 374, Part 3: Level 6 => 480 min.). Always seek advice from glove suppliers. The durability of the recommended protective gloves can be shorter than the permeation times found in the EN 374 due to different influences (e.g. temperature).

Eye Protection : Use safety goggles.

Skin Protection : Not required upon appropriate use.

General protective and hygienic measures : Remove contaminated clothing. Keep away from food and beverages. Wash hands before breaks and after work.

Environmental exposure controls : Store concentrate according to national regulations (VAwS).
Do not let the concentrate get into the environment.
If possible, hold back the used premixed solution and dispose of according to national regulations.

9. Physical and Chemical Properties

General Information

Appearance : Liquid
Colour : yellow to brown
Odour : specific

Important health, safety and environmental information

			Value	Unit	Method
pH-Value	**at**	**20°C**	6,5 - 8,5		DIN EN 1262:1996
Density	**at**	**20°C**	appr. 1,045 - 1,055	g/cm³	DIN EN ISO 3675
Viscosity	**at**	**20°C**	max. 10	mm²/sec	DIN 51562
Viscosity	**at**	**-15°C**	max. 30	mm²/sec	DIN 51562
Pour Point			appr. -15 (5)	°C (°F)	DIN ISO 3016
Boiling Point/Range			appr. 100 (212)	°C (°F)	
Flashpoint			> 100 (212)	°C (°F)	DIN EN 22719

Flammability : None
Explosive properties : The product has no explosive properties
Oxidising properies : None
Water Solubility : Unlimited

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10. Stability and Reactivity

Conditions to avoid	:	No decomposition upon apropriate use.
Materials to avoid	:	Strong oxidizers
Hazardous decomposition products	:	None known

11. Toxicological Informations

Acute effects

Skin contact	:	Classified as non-irritant according to the Dangerous Preparations Directive 1999/45/EU
Eye contact	:	Classified as irritant according to the Dangerous Preparations Directive 1999/45/EU
Rat toxicity LD_{50} oral	:	> 2000 mg/kg (according to Limittest)
Sensitisation	:	None of the used ingredients shows sensitization potential.
Repeated dose toxicity	:	None of the used ingredients shows repeated dose toxicity.
CMR effects	:	None of the used ingredients shows CMR effects.

12. Ecological Information

Ecotoxicity

Influence on sewage systems		:	Influence unlikely if induced at concentrations lower than the following (TTC Test, DIN 38412 – L3):
			Concentrate : < 3.000 mg/l (> 330 times diluted)
			Solution 3% : < 100.000 mg/l (> 10 times diluted)
Fish Toxicity	**LC_{50}**	:	appr. 1.780 mg/litre (48 h, DIN 38412-15)
Algae Toxicity	**E_rC_{50}**	:	appr. > 10 < 100 mg/litre (72 h, OECD 201) *
Daphnia Toxicity	**EC_{50}**	:	appr. > 100 < 1.000 mg/litre (48h, OECD 202) *

Persistence and degradability

Information on elimination	:	The product is very well bio-degradable. **Approximately 99% in 19 days** (OECD 301 c).
COD	:	appr. 550.000 mg O_2/litre (concentrate; DIN EN 38409-H41-1) appr. 16.500 mg O_2/litre (3% solution; DIN EN 38409-H41-1)
BOD_5	:	appr. 325.000 mg O_2/litre (concentrate; DIN EN 1899-1) appr. 9.750 mg O_2/litre (3% solution; DIN EN 1899-1)
	* =	Values derived from products of comparable composition
Bio-accumulative potential	:	None of the used ingredients shows bio-accumulative potential
Other adverse effects	:	Breathing is not possible whilst submerged in the foam. Take care when spraying people!

13. Disposal Considerations

Product	:	Not to be disposed of with household garbage. Dispose of according to local regulations by incineration. Upon appropriate dilution disposal by biological sewage system possible (consult authorities and plant management).
Uncleaned packaging	:	Disposal according to official regulations.
European Waste Code	:	16 Wastes not otherwise specified in the list 1603 Off-specification batches and unused products 160305* organic wastes containing dangerous substances

14. Transport Informations

No hazardous good according to transport regulations (IMDG/GGVSee, ADR/RID and GGVSE, ICAO-TI and IATA-DGR).

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15. Regulatory Information

Designation according to EU directives

Hazard designation :

Irritant

Hazardous components : 2-(2-Butoxyethoxy)ethanol and synthetic surfactants

R-Phrases : 36 Irritiating to eyes

S-Phrases : 24/25 Avoid contact with skin and eyes

National regulations
Water hazard class (WGK) : 1 (VwVwS supplement 4/4: self classification)

16. Other Information

Use the described product only for the specified purpose. These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

22	Harmful if swallowed
36	Irritating to eyes
38	Irritating to skin
41	Risk of serious damage to the eyes
52/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment