



Foam Fire Extinguisher

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: MOBIAK Foam Fire Extinguisher
Manufacturer: **MOBIAK SA, AKROTIRI, CHANIA, P.C.: 73100**
E-Mail: info@mobiak.gr

Tel: +30 2821063222, FAX: +30 28210 66260

2. COMPOSITION / CLASSIFICATION

Chemical name	Chemical formula	CAS no	Quota %	Risk/safety phrases
Ethanol	C ₂ H ₅ OH	64-17-5	>5% , <10%	F; R11 Flam. Liq. 2; H225
Urea	CH ₄ N ₂ O	57-13-6	>0.5% , <5%	Xi; R36/37/38 Undefined. (GHS)

3. HAZARD IDENTIFICATION

Ingestion: Burning sensation. Cough. Cramps. May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.
Swallowing a small quantity of this material will result in serious health hazard.
Must not come into contact with food or be consumed.

4. FIRST AID MEASURES

Inhalation
Assure fresh air breathing
Skin contact
Flush with plenty of water
Eye contact
Seek medical attention immediately
Ingestion
Seek medical attention immediately

5. FIRE FIGHTING MEASURES

The product is a fire-extinguisher. After use remove residual fire extinguishing agent from corrosion sensitive materials.

6. ACCIDENTAL RELEASES MEASURES

General precautions: Remove ignition sources.
Personal precautions: Spill should be handled by trained cleaning personnel properly equipped with respiratory and eye protection.
Environmental precautions: Prevent entry to sewers and public waters.
Notify authorities if product enters sewers or public waters.
Clean up methods: Collect spills and put it into appropriated container.

7. HANDLING AND STORAGE

Storage temperature: +5°C - 60°C, dry and free from vibrations. Keep away from sodiumhypochlorite (bleach).

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Wear chemical glove and blinker to use it, wash hand after use.

Material Safety Data Sheet

9. PHYSICAL AND CHEMICAL PROPERTIES

PH value	8.0—10
Density(20 °C)	1.07
Flash point [°C]	47
Solubility in water	Complete
Explode	No reliable data available

10. STABILITY AND REACTIVITY

Stable under normal conditions

11. TOXICOLOGICAL PROPERTIES

Eye contact: The foam can cause discomfort or irritation.

12. ECOTOXICOLOGICAL INFORMATION

OECD 302B resp. EU C.9: The test substance can be considered as "inherently biodegradable".

13. DISPOSAL CONSIDERATION

Dispose in a safe manner in accordance with local/national regulations.
General: Hazardous waste.
Dispose in a safe manner in accordance with local/national regulations.

14. TRANSPORT INFORMATION

ADR RID	IMDG	DGR (flyg)
UN nr: 1044 Class: 2.2	UN no: 1044 Class: 2.2 EmS: F-C,S-V Marine Pollutant: No Packing group: No	Class:
Shipping Name: Fire extinguishers containing compressed or liquefied gas	Shipping Name: Fire extinguishers containing compressed or liquefied gas	

15. REGULATORY INFORMATION

The foam is not classified as hazardous according to regulations for chemicals. (Information about hazards and packaging of wares, 1994). Control rules for working environment and hazardous elements in the working environment. This material safety sheet does not replace the user's own judgement of the size of the workplace and environment in accordance with the above mentioned rules. In some cases, depending on packaging size, the rules for manual handling of the product might apply.

16. OTHER INFORMATION

The information about the fire extinguishing agent in this document is based on the manufacturer's data. The information is based on the knowledge and regulations of today. It is a guide for health and environment concerns concerning to the product and should not be considered a guarantee of function. The product should never be used for anything but fire fighting, without first contacting the supplier. The user is responsible that valid laws and regulations are being followed. Additional information exists in the health and safety documents at the manufacturers'.

CONTACT: FACTORY: AKROTIRI, CHANIA, P.C.: 73100, TEL.: +30 2821063222, FAX: +30 28210 66260
CENTRAL EXHIBITION: 96-98 M. MPOTSARI str. P.C.: 73136, CHANIA, GREECE, TEL.: +30 28210 91561, FAX: +30 28210 91644
ATHENS DISTRIBUTION CENTER: MAGOULA - ASPROPIRGOS, P.C.: 19300, TEL.: +30 210 4614006, FAX: +30 210 5595986
N.GREECE DISTRIB. CENTER: 8 ARKADIOU str. KALOCHORI - THESSALONIKI, P.C.: 57009, TEL.: +30 2310 785668, FAX: +30 2310 574793
CENT. & EAST CRETE DISTRIB. CENTER: P' str. INDUSTRIAL ZONE OF HERAKLION - CRETE, P.C.: 71601, TEL./FAX: +30 2810 333151



FIRE EXTINGUISHER ABC MULTIPURPOSE DRY CHEMICAL
MATERIAL SAFETY DATA SHEET CONFORMS TO DIRECTIVE 2001/58/EC

I. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1. Identification of the preparation

Product Name: "Fire Extinguisher ABC Multipurpose Dry Chemical"
"Fire Extinguisher Powder ABC Multipurpose"
Chemical Name: N/A – This is a mixture/preparation.
CAS No.: N/A – This is a mixture/preparation.
Chemical Formula: N/A – This is a mixture/preparation.
EINECS Number: N/A – This is a mixture/preparation.

1.2. Use of the preparation

The intended or recommended use of this preparation is as a FIRE EXTINGUISHING AGENT.

1.3. Company identification

Manufacturer/Supplier: FLAG FIRE
Address: One Stanton Street, Marinette, WI 54143-2542
Prepared by: Safety and Health Department
Phone: 715-732-3465
Internet/Home Page: <http://www.flagfire.com>
Date of Issue: May, 2004

1.4. Emergency telephone

CHEMTREC 800-424-9300 or 703-527-3887.

2. COMPOSITION/INFORMATION ON INGREDIENTS

2.1. Ingredient Name:

Monoammonium Phosphate.

Chemical Formula: $\text{NH}_4\text{H}_2\text{PO}_4$.
CAS No.: 7722-76-1.
EINECS Number: 231-764-5.
Concentration, Wt %: 50-80 %.
Hazard Identification: See Heading 3.

Ingredient Name: Ammonium sulfate
Chemical Formula: $(\text{NH}_4)_2\text{SO}_4$.
CAS No.: 7783-20-2.
EINECS Number: 231-984-1.
Concentration, Wt %: 20-45 %.
Hazard Identification: See Heading 3.

Ingredient Name: Magnesium Aluminum Silicate (Attapulgite Clay or Fuller's Earth)
Chemical Formula: $\text{Mg}_x\text{Al}_y(\text{SiO}_4)_z$.
CAS No.: 8031-18-3.
EINECS Number: (a).
Concentration, Wt %: 1-5 %.
Hazard Identification: See Heading 3.

Ingredient Name: Tricalcium Phosphate
(Pentacalcium Hydroxide Tris(orthophosphate)).
Chemical Formula: $\text{Ca}_5(\text{OH})(\text{PO}_4)_3$.
CAS No.: 12167-74-7.
EINECS Number: 235-330-6.
Concentration, Wt %: 1-5 %.
Hazard Identification: See Heading 3.

Ingredient Name: Silica Gel.
Chemical Formula: $-\text{[OSi(O)]}_n\text{-(H}_2\text{O)}_x$.
CAS No.: 112926-00-8.
EINECS Number: (b).
Concentration, Wt %: 0-3 %.
Hazard Identification: See Heading 3.

Ingredient Name: Methyl Hydrogen Polysiloxane.
Chemical Formula: Mixture/preparation.
CAS No.: 63148-57-2.
EINECS Number: (b).
Concentration, Wt %: 0-1 %.
Hazard Identification: See Heading 3.

Ingredient Name: Yellow Pigment
Chemical Formula: $C_{34}H_{30}Cl_2N_6O_4$
CAS No.: 5468-75-7
EINECS Number: 226-789-3
Concentration, Wt %: <1 %
Hazard Identification: See Heading 3.

Fire Extinguishers contain compressed air to ensure a high velocity discharge of product.

(a) EINECS does not include most naturally occurring raw materials. See: 67/548/EEC, article 13; 79/831/EC; and 81/437/EC.

(b) EINECS does not include synthetic polymers (These are registered in EINECS under their building blocks, monomers.). See: 67/548/EEC, article 13; 79/831/EC; and 81/437/EC.

NOTE: Unless a component presents a severe hazard, it does not need to be considered in the MSDS if the concentration is less than 1%. [According to Directive 1999/45/EC.]

3. HAZARDS IDENTIFICATION

FOR HUMANS:

Product:

EU Classification:		Harmful.
R Phrases:	22	Harmful if swallowed.
	36/37/38	Irritating to eyes, respiratory system, and skin.
S Phrases:	26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	36	Wear suitable protective clothing.

Components:

Monoammonium Phosphate:

EU Classification:		Harmful.
R Phrases:	22	Harmful if swallowed.
	36/37/38	Irritating to eyes, respiratory system, and skin.
S Phrases:	26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	36	Wear suitable protective clothing.

Ammonium sulfate:

EU Classification:		Irritant.
R Phrases:	36/37/38	Irritating to eyes, respiratory system, and skin.
S Phrases:	26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	36	Wear suitable protective clothing.

Limit Values for Exposure:

Nuisance dust limit:	
OSHA TWA:	15 mg/m ³
ACGIH TLV-TWA	10 mg/m ³

Neither this preparation nor the substances contained in it have been listed as carcinogenic by National Toxicology Program, I.A.R.C., or OSHA.

Silica Gel is a Synthetic Amorphous Silica which is considered a nuisance dust and no medical conditions are abnormally aggravated by this product.

AS PART OF GOOD INDUSTRIAL AND PERSONAL HYGIENE AND SAFETY PROCEDURE, avoid all unnecessary exposure to the chemical substance and ensure prompt removal from skin, eyes, and clothing.

SIGNS AND SYMPTOMS:

Acute Exposure:

Eye Contact:	Mildly irritating for short periods of time.
Skin Contact:	May be mildly irritating.
Inhalation:	Treat as a mineral dust. Irritant to the respiratory tract. Transient cough, and shortness of breath may occur.
Ingestion:	Not an expected route of entry.

Chronic Overexposure:

Inhalation:	Chronic fibrosis of the lung, pneumoconiosis.
-------------	---

Medical Conditions Generally Aggravated by Exposure: None known.

FOR ENVIRONMENT:

No data available.

4. FIRST AID MEASURES

Eye Contact:	Wash with water for a minimum of 15 minutes. If irritation persists seek medical attention.
Skin Contact:	Wash affected area with soap and water. If irritation persists seek medical attention.
Inhalation:	Remove from exposure. If irritation persists seek medical attention.
Ingestion:	If patient is conscious, give large amounts of water and induce vomiting. Seek medical help.

5. FIRE-FIGHTING MEASURES

This preparation is an extinguishing media.
 There are NO extinguishing media which must not be used for safety reasons.
 NO special protective equipment is needed for fire-fighters.

6. ACCIDENTAL RELEASE MEASURES

For personal protection: Prevent skin and eye contact, see Heading 8.
 Clean up: Sweep up and recover for use or place in closed container for disposal, see Heading 13.
 NO harm to the environment is expected from an accidental release of this preparation.

7. HANDLING AND STORAGE**7.1. Handling**

Care should be taken in handling all chemical substances and preparations.
 See incompatibility information in Heading 10.

7.2. Storage

NO special conditions are needed for safe storage.
 See incompatibility information in Heading 10.
 Store in original container or Flag Fire fire extinguisher. Keep tightly closed until used.
 There is minimal danger to the environment from a storage release.

7.3. Specific use

The intended or recommended use of this preparation is as a FIRE EXTINGUISHING AGENT.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1. Exposure limit values**

Nuisance dust limit:	
OSHA TWA:	15 mg/m ³
ACGIH TLV-TWA:	10 mg/m ³

8.2. Exposure controls**8.2.1. Occupational exposure controls****8.2.1.1. Respiratory protection**

Dust mask where dustiness is prevalent, or TLV is exceeded. Use mechanical filter respirator if exposure is prolonged.

8.2.1.2. Hand protection

None normally needed. Use chemical resistant gloves when handling the preparation.

8.2.1.3. Eye protection

Use safety glasses with side shields or safety goggles as mechanical barrier for prolonged exposure.

8.2.1.4. Skin protection

No special equipment is needed.

8.2.2. Environmental exposure controls

No special controls are needed.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. General information

Appearance:	Yellow Crystal.
Odor:	None.

9.2. Important health, safety, and environmental information

pH:	4.5 as 1% solution in water.
Boiling point/boiling range:	Not applicable.
Flash point:	None.
Flammability (solid/gas):	Not flammable.
Explosive properties:	Not explosive.
Oxidizing properties:	Not an oxidizer.
Vapor Pressure:	Not applicable.
Relative Density:	Not applicable.
Solubility:	
– Water solubility:	38 g/ 100 mL.
– Tricalcium Phosphate:	<1 g/L at 25 °C.
– Fat solubility:	Not soluble.
Partition coefficient, n-octanol/water:	Not determined.
Viscosity:	Not applicable.
Vapor density (Air = 1):	Not applicable.
Evaporation rate:	Not applicable.

9.3. Other information

Auto-ignition temperature:	Does not ignite.
----------------------------	------------------

10. STABILITY AND REACTIVITY

10.1. Conditions to avoid

There are NO known conditions such as temperature, pressure, light, shock, etc., which may cause a dangerous reaction.

10.2. Materials to avoid

Strong alkalis, magnesium.

10.3. Hazardous decomposition products

Normally stable.
Hazardous polymerization will NOT occur.
Ammonia and/or phosphorous oxides can be evolved at very high temperatures.

11. TOXICOLOGICAL INFORMATION

This product has not been tested for toxicological effects. Product is treated as a nuisance dust.

Components:

Monoammonium Phosphate:

Material is irritating.
Harmful if swallowed.

Ammonium sulfate:

Toxicity Data:	Oral (rat) LD 50	2840 mg/kg.
Target Organs:	Lungs and gastrointestinal.	

Tricalcium Phosphate:

Eye irritation: Not irritating.
Skin irritation: Not irritating.

Silica Gel:

Toxicity Data:	Oral (rat) LD 50	>4500 mg/kg.
Toxicity Data:	Inhalation (rat) LC 50	>2 mg/hr.

12. ECOLOGICAL INFORMATION**12.1. Ecotoxicity**

Not determined.

12.2. Mobility

Not determined.

12.3. Persistence and degradability

Not relevant.

12.4. Bioaccumulative potential

Not determined.

12.5. Other adverse effects

Ozone depletion potential: None.

Photochemical ozone creation potential: None

Global warming potential: None

13. DISPOSAL CONSIDERATIONS

No harm to the environment is expected from this preparation.

Dispose of in compliance with national, regional, and local provisions that may be in force.

14. TRANSPORT INFORMATION

Hazard Class or Division: Fire Extinguisher,

Class 2.2.

UN No. 1044.

For additional transport information, contact Flag Fire.

No harm to the environment is expected from this preparation.

15. REGULATORY INFORMATION**Product:**

EU Classification:

R Phrases:

22

36/37/38

S Phrases:

26

36

Harmful.

Harmful if swallowed.

Irritating to eyes, respiratory system, and skin.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Wear suitable protective clothing.

Limit Values for Exposure:

Nuisance dust limit:

OSHA TWA: 15 mg/m³ACGIH TLV-TWA: 10 mg/m³.

EINECS Status: All components are included in EINECS inventories or are exempt from listing.

EPA TSCA Status: All components are included in TSCA inventories or are exempt from listing.

Canadian DSL (Domestic Substances List): All components are included in the DSL or are exempt from listing.

Environmental restrictions: None are known.

Restrictions on Marketing and Use: None are known.

Refer to any other national measures that may be relevant.

16. OTHER INFORMATION**(HMIS) HAZARDOUS MATERIAL IDENTIFICATION SYSTEM RATINGS:**

HEALTH:	<u>1</u>	4. Severe Hazard
FLAMMABILITY:	<u>0</u>	3. Serious Hazard
REACTIVITY:	<u>0</u>	2. Moderate Hazard
		1. Slight Hazard
		0. Minimal Hazard

(WHMIS) CANADIAN WORKPLACE HAZARDOUS MATERIAL IDENTIFICATION SYSTEM RATINGS:

This product is rated **D2B Harmful if swallowed. Irritating to eyes and skin.**
A Fire Extinguisher charged with Air is rated **A Compressed Gas.**

Format is from directive 2001/58/EC.

EINECS data is from <http://exb.jrc.it/existing-chemicals/>

Toxicological information added from the EINECS ESIS (Existing Substances Information System). A rating under WHMIS has been added, following the Canadian guidelines.

17. DISCLAIMER

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT, BUT DOES NOT PURPORT TO BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. FLAG FIRE SHALL NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING OR FROM CONTACT WITH THE ABOVE PRODUCT.

N/A = Not Applicable

NDA = No Data Available