

MATERIAL SAFETY DATA SHEET

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REVISION DATE:	30/07/2002
PRINT DATE:	02/02/2006
DATASHEET ID	BIMC0201

1. IDENTIFICATION OF THE PRODUCT AND THE COMPANY

Product name : FLOPAM™ FO 4140 SEP

Supplier: SNF (UK) LIMITED
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Castleford, WF 10 5NP

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ZAC de Milieux
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24-hour emergency telephone number : International: +33.477.36.87.25 **France: 04.77.36.87.25**

Product Use : Process aid for industrial applications.

2. COMPOSITION/INFORMATION ON INGREDIENTS

Identification of the preparation : Cationic water-soluble polymer.

3. HAZARDS IDENTIFICATION

Aqueous solutions or powders that become wet render surfaces extremely slippery.

4. FIRST AID MEASURES

Inhalation : No hazards which require special first aid measures.

Skin contact : No hazards which require special first aid measures. Wash with water and soap as a precaution. In case of persistent skin irritation, consult a physician.

Eye contact : Rinse thoroughly with plenty of water, also under the eyelids. In case of persistent eye irritation, consult a physician.

Ingestion : No hazards which require special first aid measures. The product is not considered toxic based on studies on laboratory animals.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : water, water spray, foam, carbon dioxide (CO₂), dry powder.

Special fire-fighting precautions : Aqueous solutions or powders that become wet render surfaces extremely slippery.

Special protective equipment for firefighters : No special protective equipment required.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions :** No special precautions required.
- Environmental precautions :** Take the usual safety measures which are applicable during the use of chemicals: do not flush into surface water.
- Methods for cleaning up :** Do not flush with water. Clean up promptly by scoop or vacuum. Keep in suitable and closed containers for disposal. After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

- Handling :** Avoid contact with skin and eyes. Avoid dust formation. Do not breathe dust. Wash hands before breaks and at the end of workday.
- Storage :** Keep in a dry, cool place (0 - 35°C).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- Engineering measures to reduce exposure:** Use local exhaust if dusting occurs. Natural ventilation is adequate in absence of dusts.
- Personal protection equipment**
- **Respiratory protection :** Dust safety masks are recommended where concentration of total dust is more than 10 mg/m³.
 - **Hand protection :** Rubber gloves.
 - **Eye protection :** Safety glasses with side-shields. Do not wear contact lenses.
 - **Skin and body protection :** Chemical resistant apron or protective suit if splashing or repeated contact with solution is likely.
- Hygiene measures :** Wash hands before breaks and at the end of workday. Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

- Form :** granular solid
- Colour :** white
- Odour :** none
- pH :** 2.5 - 4.5 @ 5g/l for product series. See Technical Bulletin for specific value.
- Melting point (°C) :** Not applicable.
- Flash point (°C) :** Not applicable.
- Autoignition temperature (°C) :** Not applicable.

Vapour pressure (mm Hg) :	Not applicable.
Bulk density :	See Technical Bulletin.
Water solubility :	See Technical Bulletin.
Viscosity (mPa.s) :	See Technical Bulletin.

10. STABILITY AND REACTIVITY

Stability :	Product is stable, no hazardous polymerization will occur.
Materials to avoid :	Oxidizing agents may cause exothermic reactions.
Hazardous decomposition products :	Thermal decomposition may produce : hydrogen chloride gas, nitrogen oxides (NOx), carbon oxides.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

- Oral :	LD50/oral/rat > 5000 mg/kg
- Dermal :	The results of testing on rabbits showed this material to be non-toxic even at high dose levels.
- Inhalation :	The product is not expected to be toxic by inhalation.

Irritation

- Skin :	The results of testing on rabbits showed this material to be non-irritating to the skin.
- Eyes :	Testing conducted according to the Draize technique showed the material produces no corneal or iridial effects and only slight transitory conjunctival effects similar to those which all granular materials have on conjunctivae.

Sensitization : The results of testing on guinea pigs showed this material to be non-sensitizing.

Chronic toxicity : A two-year feeding study on rats did not reveal adverse health effects. A one-year feeding study on dogs did not reveal adverse health effects

12. ECOLOGICAL INFORMATION

Acute aquatic toxicity

- Fish :	LC50/ <i>Danio rerio</i> /96 hours = 10 - 100 mg/L (OECD 203)
- Daphnids :	EC50/ <i>Daphnia magna</i> /48 hours > 50 mg/L (OECD 202)
- Algae :	Algal inhibition tests are not appropriate. The flocculating characteristics of the product interfere directly in the test medium preventing homogenous distribution which invalidates the test.
- Hydrolysis:	At natural pHs (>6) the product degrades due to hydrolysis to more than 70% in 28 days. The hydrolysis products are not harmful to aquatic organisms.

- LogP_{OW} : 0
- **Bioaccumulation** : Does not bioaccumulate.

Other ecological information

The effects of this product on aquatic organisms are rapidly and significantly mitigated through hydrolysis and by the presence of dissolved organic carbon in the aquatic environment.

13. DISPOSAL CONSIDERATIONS

- Waste from residues / unused products :** In accordance with local and national regulations.
- Contaminated packaging :** Rinse empty containers with water and use the rinse water to prepare the working solution. Can be landfilled or incinerated, when in compliance with local regulations.

14. TRANSPORT INFORMATION

- Remarks :** Not classified as dangerous in the meaning of transport regulations.

15. REGULATORY INFORMATION

This product is not classified as dangerous and need not to be labelled according to the EC-Directives as amended.

Inventory status :

- EINECS (Europe) :** Existing polymer according to the definition in the 7th Amendment to Directive 67/548/EEC. All starting materials and additives are listed in EINECS.
- TSCA (USA) :** Complies with all applicable rules and orders under TSCA.
- DSL (Canada) :** All components listed on inventory.
- AICS (Australia) :** All components listed on inventory.
- ENCS (Japan) :** All components listed on inventory.
- ECL (Korea) :** All components listed on inventory.
- PICCS (Philippines) :** All components listed on inventory.

16. OTHER INFORMATION

Further information :

This MSDS was prepared in accordance with the following:

Council Directive 92/32/EEC of 30 April 1992 amending for the seventh time Directive 67/548/EEC on the approximation of the laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances and all subsequent adaptations to technical progress

Directive 1999/45/EC of the European Parliament and of the Council of 31 May 1999 concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations

Commission Directive 2001/58/EC of 27 July 2001 amending for the second time Directive 91/155/EEC defining and laying down the detailed arrangements for the system of specific information relating to dangerous preparations in implementation of Article 14 of European Parliament and Council Directive 1999/45/EC and relating to dangerous substances in implementation of Article 27 of Council Directive 67/548/EEC (safety data sheets)

ISO 11014-1: Material Safety Data Sheet for Chemical Products.

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