



Safety Data Sheet

SDS No 1427

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

Product name

Superabsorbent polymer for use in personal care products.

Supplier

AS USED BY FRIO® COOLING PRODUCTS

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterization

Cross-linked sodium polyacrylate.

3. HAZARDS IDENTIFICATION

Health effects

Skin

Non-irritant.

Eyes

Non-irritant.

Inhalation

Not an inhalation hazard under normal conditions of use.

Ingestion

Low toxicity product. It is extremely unlikely that a sufficient quantity would be accidentally swallowed to cause any harm.

Other information

Spilled product is slippery underfoot if in contact with high water or high humidity.

Physical/chemical effects

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4. FIRST AID MEASURES

Skin contact

Wash with water and soap as a precaution.

Eye contact

Irrigate the eye with water for 15 minutes. If any irritation persists obtain medical attention.

Inhalation

Clear any blocked airways.

Remove affected person to fresh air. If recovery is delayed, seek medical advice.

Ingestion

Give plenty of water to drink. Obtain medical attention.

5. FIRE-FIGHTING MEASURES

Extinguishing media

Foam, dry powder, carbon dioxide, in preference to water spray.

Extinguishing media which must not be used for safety reasons

Not applicable.

Special exposure hazards

This product does not burn readily, but as with many organic powders, flammable dust clouds may be formed in air. Avoid creating dust and keep away from sources of ignition.

Special protective equipment for firefighters As for all fires involving chemicals: chemical protection suit, suitable gloves and boots, and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions Use respiratory protection and protective clothing. Ensure adequate ventilation.

Environmental precautions Do not flush into surface water or sanitary sewer system.

Methods for cleaning up Use a suitable vacuum cleaner, to avoid the generation of airborne dust. Sweep up and shovel into suitable containers for disposal. After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

Handling precautions Do not eat, drink or smoke whilst handling the product. Remove contaminated clothing immediately and launder before re-use. Avoid formation of respirable particles.
The product swells on contact with water - Do not wear contact lenses.

Storage conditions Avoid wet and humid conditions.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters The European Disposables and Nonwovens Association (EDANA) recommended Industrial Hygiene Guideline is 0.05 mg/m³ respirable superabsorbent polymer dust (particle size less than 10 microns) based on the NOEL (No Observed Effect Level) of the 2-year inhalation study.

Engineering measures Local exhaust ventilation required if dust is created.

Personal protection equipment :

Respiratory protection Effective dust mask (e.g 3M Dust Respirator:8810).
For example, a half or full face mask with a particle filter type P3 (European Standard EN143) should be used if entering a dryer, or if the respirable dust (particle size <10 microns) exceeds 0.05 mg m⁻³.

Hand protection Rubber or plastic gloves.

Eye protection Goggles.

Skin and body protection Lightweight protective clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Colour White.

Form Granular solid.

Odour None.

pH as supplied Not applicable.

Boiling point/range Not applicable.

Melting point/range Not applicable.

Flash point Not applicable.

Flammability (solid, gas) Not applicable.

Autoignition temperature Not determined.

Explosive properties This product has no explosive properties, except in the event of dust formation.

Oxidizing properties	Not determined.
Vapour pressure	Not applicable.
Bulk density	Approximately 0.8 g cm ⁻³ .
Solubility Water solubility	Insoluble. Swells to form a gel in water.
Partition coefficient (n-octanol/water)	Not applicable.
Other data	-

10. STABILITY AND REACTIVITY

Stability	Stable at ambient temperatures.
Conditions to avoid	Avoid extremes of temperature and wet and humid conditions.
Materials to avoid	No special precautions other than good housekeeping of chemicals.
Hazardous decomposition products	No decomposition if stored normally.

11. TOXICOLOGICAL INFORMATION

Acute toxicity: LD₅₀/oral/rat (Limit test) > 5000 mg /kg.

Eye irritation: Non-irritant (rabbit).

Dermal irritation/sensitization: Non-irritant or sensitizing in human skin tests.

Mutagenicity: (Not mutagenic in AMES Test).

Chronic exposure (Inhalation):

A chronic (2-year) lifetime inhalation study with micronised superabsorbent polymer dust (to obtain completely respirable particles) performed on rats resulted in a non-specific inflammatory response in the lungs of rats, followed in the highest chronic exposure level by tumour development in some animals (see section 8 for Exposure controls/Personal protection).

In the absence of chronic inflammation, tumours are not expected.

The study found a definite NOEL (No Observed Effect Level) of 0.05 mg m⁻³ of micronised superabsorbent polymer dust.

12. ECOLOGICAL INFORMATION

96hr LC₅₀ (fish), expected to be > 100 ppm, by analogy to similar products

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with local regulations. In the UK disposal may be made to a licensed treatment/disposal site in accordance with the provisions of 'The Environmental Protection Act 1990'.

14. TRANSPORT INFORMATION

UK road/rail	Not classified as dangerous in the meaning of transport regulations
IMDG	Not classified as dangerous in the meaning of transport regulations
ICAO	Not classified as dangerous in the meaning of transport regulations
ADR	Not classified as dangerous in the meaning of transport regulations

15. REGULATORY INFORMATION

Supply classification

Hazard symbol(s)	None
Risk phrases	None

Safety phrases

None

16. OTHER INFORMATION

Recommended use

Superabsorbent polymer for use in personal care products.

Further information

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Product classified and safety data sheet produced according to EEC directives as implemented in the UK by the Chemicals (Hazards Information and Packaging) Regulations.

The information contained in this safety data sheet is given in good faith. It is accurate to the best of our knowledge and belief and represents the most up to date information. The information given in this data sheet does not constitute or replace the user's own assessment of workplace risk as required by other health and safety legislation.