

# TECHNICAL DATA SHEET

## POLYALUMINIUM CHLORIDE 10 - 18% SOLUTION

Issued: 23/07/2007 Revision No: 7

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

**Product name:** POLYALUMINIUM CHLORIDE 10 - 18% SOLUTION

**CAS number:** 39290-78-3 **EINECS number:** 254-400-7

**Use of substance / preparation:** A slightly acidic solution of polyaluminium chloride in water. Total aluminium content is 10 - 18% as Al<sub>2</sub>O<sub>3</sub>.

**Company name:** JAK Water Systems Ltd, Unit 1, Scopwick Lodge, Scopwick Heath, Metheringham, Lincoln LN4 3DL

Emergency tel: 01526 322214 (24 Hours)

Email: info@jakwater.co.uk

**2. HAZARDS IDENTIFICATION Main hazards:** Causes burns.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

#### 4. FIRST AID MEASURES (SYMPTOMS)

**Skin contact:** There may be redness or whiteness of the skin in the area of exposure.

**Eye contact:** There may be irritation and redness. Corneal burns may occur.

**Ingestion:** There may be soreness and redness of the mouth and throat. Ingestion of large amounts may result in severe abdominal pain, vomiting, diarrhoea, convulsions and collapse.

**Inhalation:** May cause irritation to the respiratory system. Exposure may cause coughing or wheezing.

#### 4. FIRST AID MEASURES (ACTION)

**Skin contact:** Wash with plenty of soap and water. If irritation persists, seek medical advice.

**Eye contact:** Bathe the eye with running water for 15 minutes. Transfer to hospital for specialist examination.

**Ingestion:** Wash out mouth with water. Transfer to hospital as soon as possible.

**Inhalation:** Remove casualty from exposure ensuring one's own safety whilst doing so. Transfer to hospital as soon as possible.

### 5. FIRE-FIGHTING MEASURES

**Extinguishing media:** Use extinguishing media appropriate to the surrounding conditions. Use water spray to cool containers. [cont...]

**Exposure hazards:** May generate toxic and explosive fumes in a fire.

**Protection of fire-fighters:** Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions:** Refer to section 8 of SDS for personal protection details.

**Environmental precautions:** Do not allow material to enter surface drains or water courses. If this occurs, inform the relevant water authority at once.

**Clean-up procedures:** Small spillages should be neutralised and absorbed with soda ash. Large spillages should be contained with sand or earth and neutralised (preferably with soda ash). Transfer to a closable, labelled salvage container for disposal by an appropriate method.

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## 7. HANDLING AND STORAGE

**Handling requirements:** Wear protective clothing. Avoid direct contact with the substance.

**Storage conditions:** Store in a cool, dry area. Avoid incompatible materials and conditions - see section 10 of SDS.

**Suitable packaging:** Store in vessels suitable for solutions of low pH such as rubber lined stainless steel, plastic or glass reinforced plastic.

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Workplace exposure limits**

**WEL (8 hr TWA):** 2 mg/m<sup>3</sup>

**Hand protection:** Protective gloves.

**Eye protection:** Safety goggles.

**Skin protection:** Wear protective clothing.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

**State:** Liquid

**Colour:** Amber

**Odour:** Odourless

**Oxidising:** Non-oxidising (by EC criteria)

**Solubility in water:** Miscible in all proportions

**Viscosity value:** 4-30 cP

**Boiling point/range°C:** 100 - 120

**Melting point/range°C:** -15 to -20

**Vapour pressure:** 30 mm Hg @ 0°C

**Relative density:** 1.21 - 1.36

**pH:** 0.5 - 2.0

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## 10. STABILITY AND REACTIVITY

**Stability:** Stable under normal conditions.

**Conditions to avoid:** Heat.

**Materials to avoid:** Solution is slightly acidic and may react with metals to liberate flammable hydrogen gas. Avoid contact with metal sulphides. Oxidising agents. Reacts aggressively with some metal surfaces (e.g. galvanised metal, aluminium, copper, zinc and alloys of those metals). Incompatible with other polyaluminium salts. Special care should be taken regarding mixing with products as gel formation or precipitation can occur. **DO NOT MIX WITH ANY OTHER CHEMICALS.** Incompatible with iron salts and aluminium sulphate. Avoid contact with chlorites, hypochlorites and sulphites.

**Haz. decomp. products:** Attacks many metals with the liberation of hydrogen gas, which is highly flammable and may form an explosive mixture with air. Thermal decomposition (>200°C) may liberate HCl fumes.

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## 11. TOXICOLOGICAL INFORMATION

**Acute toxicity:** POLYALUMINIUM CHLORIDE 10 - 18% SOLUTION

ORL RAT LD50 >5000 mg/kg

**Routes of exposure:** Refer to section 4 of SDS for routes of exposure and corresponding symptoms.

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## 12. ECOLOGICAL INFORMATION

**Ecotoxicity:** POLYALUMINIUM CHLORIDE 10 - 18% SOLUTION

FISH 96H LC50 >1000 mg/l

**Mobility:** Non-volatile. Soluble in water.

**Persistence and degradability:** Not biodegradable.

**Other adverse effects:** A decrease in pH below 5 induces fatalities to aquatic life, thus large releases need prompt action. The product is an inorganic substance/preparation. During hydrolysis, a precipitate is formed of metal hydroxide in the pH range 5 to 7. Due to this reaction the pH in the water phase decreases. If phosphates are present, metal phosphate complex may form.

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## 13. DISPOSAL CONSIDERATIONS

**Disposal operations:** Dispose of through approved waste disposal operatives. The UK Environmental Protection (Duty of Care) Regulations (EP) and amendments should be noted. This product and any uncleaned containers must be disposed of as hazardous waste in accordance with the 2005 Hazardous Waste Regulations and amendments.

**Disposal of packaging:** If recycling is not practicable, dispose of in compliance with the Environmental Protection (Duty of Care) Regulations 1991.

**NB:** The user's attention is drawn to the possible existence of regional or national regulations regarding disposal. This product is subject to The Carriage of Dangerous Goods (Classification, Packaging and Labelling) and Use of Transportable Pressure Receptacles Regulations and their amendments. (United Kingdom)

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## 14. TRANSPORT INFORMATION ADR / RID

**UN no:** 1760 **ADR Class:** 8

**Packing group:** III **Classification code:** C9

**Shipping name:** CORROSIVE LIQUID, N.O.S.

**Labelling:** 8 **Hazard ID no:** 80

**IMDG / IMO**

**UN no:** 1760 **Class:** 8

**Packing group:** III **EmS:** F-A,S-B

**Marine pollutant:** .

**Labelling:** 8

**IATA / ICAO**

**UN no:** 1760 **Class:** 8

**Packing group:** III

**Packing instructions:** 818(P&CA); 820(CAO)

**Labelling:** 8

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## 15. REGULATORY INFORMATION

**Hazard symbols:** Corrosive.

**Risk phrases:** R34: Causes burns.

**Safety phrases:** S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36/37/39: Wear suitable protective clothing, gloves and eye / face protection.

S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**Note:** The regulatory information given above only indicates the principal regulations specifically applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

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## 16. OTHER INFORMATION

**Legal disclaimer:** The information contained in this SDS does not constitute a risk assessment, and should not replace the user's own assessment of risks as required by other health and safety legislation.

This advice is given by Omnichem Limited who accept no legal liability for it except otherwise provided by law. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.

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