

*SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006*

**Polyaluminium chloride hydroxide sulphate (PAC)**

Version 5.0  
Revision Date 2010/12/03

Print Date 2010/12/03  
MSDS code: MPAC100

**1. Identification of the substance/mixture and of the company/undertaking**

**1.1. Product identifier**

Trade name : Polyaluminium chloride hydroxide sulphate (PAC)  
CAS-No. : 39290-78-3  
EC-No. : 254-400-7

**1.2. Relevant identified uses of the substance or mixture and uses advised against**

Use of the Substance/Mixture : At this time we do not yet have information on identified uses. They will be included in this safety data sheet when available.

Recommended restrictions on use : At that time we do not yet have information on use restrictions. They will be included in this safety data sheet when available.

**1.3. Details of the supplier of the safety data sheet**

Company : Brenntag UK & Ireland  
Albion House, Rawdon Park  
GB LS19 7XX Leeds Yeadon  
Telephone : 0113 3879 200  
Telefax : 0113 3879 280  
E-mail address : msds@brenntag.co.uk

**1.4. Emergency telephone number**

Emergency telephone number : Emergency only telephone number (open 24 hours):  
01865 407333 (N.C.E.C. Culham)

**2. Hazards identification**

**2.1. Classification of the substance or mixture**

**Classification according to Regulation (EC) No 1272/2008**

| REGULATION (EC) No 1272/2008 |                 |               |                   |
|------------------------------|-----------------|---------------|-------------------|
| Hazard class                 | Hazard category | Target Organs | Hazard statements |
|                              |                 |               |                   |

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| Hazard class                             | Hazard category   | Target Organs | Hazard statements |
|--|-------------------|---------------|-------------------|
| Skin corrosion/irritation                | Category 2        |               | H315              |
| <b>Serious eye damage/eye irritation</b> | <b>Category 2</b> |               | <b>H319</b>       |

For the full text of the H-Statements mentioned in this Section, see Section 16.

**Classification according to EU Directives 67/548/EEC or 1999/45/EC**

| Directive 67/548/EEC or 1999/45/EC |              |
|------------------------------------|--------------|
| Hazard symbol / Category of danger | Risk phrases |
| Irritant (Xi)                      | R36/38       |

For the full text of the R-phrases mentioned in this Section, see Section 16.

**Most important adverse effects**

- Human Health : See section 11 for toxicological information.  
No further information available.
- Physical and chemical hazards : See section 9 for physicochemical information.  
No further information available.
- Potential environmental effects : See section 12 for environmental information.  
No further information available.

**2.2. Label elements****Labelling according to Regulation (EC) No 1272/2008**

Hazard symbols :



Signal word : Warning

Hazard statements : H315 Causes skin irritation.  
H319 Causes serious eye irritation.

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## Precautionary statements

|         |   |                    |   |
|---------|---|--------------------|---|
| General | : | P264<br>P280       | Wash hands thoroughly after handling.<br>Wear protective gloves/ protective clothing/<br>eye protection/ face protection.                 |
|         |   | P302 + P352        | IF ON SKIN: Wash with plenty of soap and<br>water.  |
|         |   | P332 + P313        | If skin irritation occurs: Get medical advice/<br>attention.  |
|         |   | P305 + P351 + P338 | IF IN EYES: Rinse cautiously with<br>water for several minutes. Remove contact<br>lenses, if present and easy to do. Continue<br>rinsing. |
|         |   | P337 + P313        | If eye irritation persists: Get medical advice/<br>attention.   |

**Additional Labelling:**

EUH210 Safety data sheet available on request.

**Hazardous components which must be listed on the label:**

|| • Aluminum chloride hydroxide sulfate

**2.3. Other hazards**

No other information is available.

**3. Composition/information on ingredients****3.1. Substances**

Chemical nature : Aqueous solution

| Chemical Name                       | Identification Number | Amount [%] |
|-------------------------------------|-----------------------|------------|
| Aluminum chloride hydroxide sulfate | CAS-No. : 39290-78-3  | < 100      |
|                                     | EC-No. : 254-400-7    |            |

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### **4. First aid measures**

#### **4.1 Description of first aid measures**

- General advice : Take off all contaminated clothing immediately.
- In case of skin contact : Wash off immediately with soap and plenty of water. If skin irritation persists, call a physician.
- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.
- If swallowed : Clean mouth with water and drink afterwards plenty of water.

#### **4.2 Most important symptoms and effects, both acute and delayed**

- Symptoms : No further information available.
- Effects : No further information available.

#### **4.3 Indication of immediate medical attention and special treatment needed**

- Treatment : Treat symptomatically.  
No further information available.

### **5. Fire-fighting measures**

#### **5.1. Extinguishing media**

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media : No information available.

#### **5.2. Special hazards arising from the substance or mixture**

- Specific hazards during fire : The product itself does not burn.



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Advice on safe handling : Avoid contact with skin, eyes and clothing. Handle in accordance with good industrial hygiene and safety practice.  
Hygiene measures : Wash hands before breaks and immediately after handling the product. Keep away from food, drink and animal feedingstuffs. When using do not eat or drink.

### **7.2 Conditions for safe storage, including any incompatibilities**

Requirements for storage areas and containers : Keep in an area equipped with acid resistant flooring. Use acid resistant materials only. Use chloride resistant materials only. Keep container tightly closed.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Advice on common storage : Store separate from acidic- and chloride sensitive materials.

German storage class : 8B: Non-combustible substances, corrosive

Storage temperature : 0 - 30 °C

### **7.3 Specific end uses**

Specific use(s) : No information available.

## **8. Exposure controls/personal protection**

### **8.1. Control parameters**

**Component: Aluminum chloride hydroxide sulfate**

**CAS-No.  
39290-78-3**

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### Other OELs

|                  |   |   |
|------------------|---|---|
| Regulatory Basis | : | UK, EH40 Workplace Exposure Limits (WELs) |
| Regulatory List  | : | EH40 WEL                                  |
| Value type       | : | Time Weighted Average (TWA):              |
| Value            | : | 2 mg/m <sup>3</sup>                       |

## 8.2. Exposure controls

### Engineering measures

Refer to protective measures listed in sections 7 and 8.

### Personal protective equipment

#### *Respiratory protection*

Advice : Breathing apparatus needed only when aerosol or mist is formed.

#### *Hand protection*

Advice : Neoprene gloves  
Protective gloves should be replaced at first signs of wear.

Glove thickness : 0.75 mm

#### *Eye protection*

Advice : Tightly fitting safety goggles

#### *Skin and body protection*

Advice : Protective suit

### Environmental exposure controls

General advice : No special precautions required.

## 9. Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

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|  |  |
|--|--|
| Form                                   | : liquid   |
| Colour                                 | : clear<br>to<br>slight<br>cloudy  |
| Odour                                  | : odourless  |
| Odour Threshold                        | : Currently we do not have any Information from our supplier about this. |
| pH                                     | : 2 - 3<br>20 °C   |
| Freezing point                         | : -12 °C   |
| Boiling point                          | : > 100 °C   |
| Flash point                            | : not applicable   |
| Evaporation rate                       | : Currently we do not have any Information from our supplier about this. |
| Flammability (solid, gas)              | : Currently we do not have any Information from our supplier about this. |
| Upper explosion limit                  | : Currently we do not have any Information from our supplier about this. |
| Lower explosion limit                  | : Currently we do not have any Information from our supplier about this. |
| Vapour pressure                        | : Currently we do not have any Information from our supplier about this. |
| Relative vapour density                | : Currently we do not have any Information from our supplier about this. |
| Density                                | : ca. 1.192 - 1.3 g/cm <sup>3</sup><br>20 °C                             |
| Water solubility                       | :<br>completely soluble  |
| Partition coefficient: n-octanol/water | : Currently we do not have any Information from our supplier about this. |
| Ignition temperature                   | : Currently we do not have any Information from our supplier about this. |
| Thermal decomposition                  | : Currently we do not have any Information from our supplier about this. |



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Viscosity, kinematic : Currently we do not have any Information from our supplier about this.  
Explosive properties : Currently we do not have any Information from our supplier about this.  
Oxidizing properties : Currently we do not have any Information from our supplier about this.

**9.2 Other information**

No further information available.

**10. Stability and reactivity****10.1. Reactivity**

Advice : No information available.

**10.2. Chemical stability**

Advice : No decomposition if stored and applied as directed.  
No further information available.

**10.3. Possibility of hazardous reactions**

Hazardous reactions : No information available.

**10.4. Conditions to avoid**

Conditions to avoid : Extremes of temperature and direct sunlight.

**10.5. Incompatible materials**

Materials to avoid : Oxidizing agents  
Bases

**10.6. Hazardous decomposition products**

Hazardous decomposition products : Oxygen  
hydrogen chloride

**11. Toxicological information****11.1. Information on toxicological effects**

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|                       |                                |
|-----------------------|--------------------------------|
| <b>Product:</b>       | <b>CAS-No.</b><br>39290-78-3   |
| <b>Acute toxicity</b> |                                |
| <b>Oral</b>           |                                |
| Value type            | : LD50                         |
| Value                 | : > 5,000 mg/kg                |
| Species               | : rat                          |
| <b>Irritation</b>     |                                |
| <b>Skin</b>           |                                |
| Remarks               | : Irritating to skin.          |
| <b>Eyes</b>           |                                |
| Remarks               | : Irritating to eyes.          |
| <b>Sensitisation</b>  |                                |
| Remarks               | : No sensitizing effect known. |

## **12. Ecological information**

### **12.1. Toxicity**

|   |                                |
|---|--------------------------------|
| <b>Component: Aluminum chloride hydroxide sulfate</b> | <b>CAS-No.</b><br>39290-78-3   |
| <b>Acute toxicity</b>                                 |                                |
| <b>Fish</b>   |                                |
| Species   | : Leuciscus idus (Golden orfe) |
| Exposure Time   | : 48 h                         |
| Value type  | : LC50                         |

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||Value : ca. 1,500 mg/l

### 12.2. Persistence and degradability

### 12.3. Bioaccumulative potential

### 12.4. Mobility in soil

### 12.5. Results of PBT and vPvB assessment

### 12.6. Other adverse effects

|  |                              |
|--|------------------------------|
| <b>Product:</b>                          | <b>CAS-No.</b><br>39290-78-3 |
| <b>Additional ecological information</b> |                              |

Remarks : Solutions with low pH-value must be neutralized before discharge.  
Ecological injuries are not known or expected under normal use.

## 13. Disposal considerations

### 13.1. Waste treatment methods

Product : Can be disposed as waste water, when in compliance with local regulations.

Contaminated packaging : Empty remaining contents. Rinse with plenty of water. Store containers and offer for recycling of material when in accordance with the local regulations.

European Waste Catalogue Number : No waste code according to the European Waste Catalogue can be assigned for this product, as the intended use dictates the assignment. The waste code is established in consultation with the regional waste disposer.

## 14. Transport information

### 14.1. UN number

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### **14.2. UN proper shipping name**

ADR : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.  
(Aluminum chloride hydroxide sulfate)

RID : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.  
(Aluminum chloride hydroxide sulfate)

IMDG : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.  
(Aluminum chloride hydroxide sulfate)

### **14.3. Transport hazard class(es)**

ADR-Class : 8  
(Labels; Classification Code; Hazard  
identification No; Tunnel restriction code) 8; C1; 80; (E)

RID-Class : 8  
(Labels; Classification Code; Hazard  
identification No) 8; C1; 80

IMDG-Class : 8  
(Labels; EmS) 8; F-A, S-B

### **14.4. Packaging group**

ADR : III

RID : III

IMDG : III

### **14.5. Environmental hazards**

Labeling according to 5.2.1.8 ADR : no

Labeling according to 5.2.1.8 RID : no

Labeling according to 5.2.1.6.3 IMDG : no

Classification as environmentally  
hazardous according to 2.9.3 IMDG : no

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#### **14.6. Special precautions for user**

Not applicable.

#### **14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

IMDG : Not applicable.

### **15. Regulatory information**

#### **15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

#### **15.2. Chemical Safety Assessment**

Currently we do not have any Information from our supplier about this.

### **16. Other information**

#### **Full text of R-phrases referred to under sections 2 and 3.**

R36/38 Irritating to eyes and skin.

#### **Full text of H-Statements referred to under sections 2 and 3.**

H315 Causes skin irritation.

H319 Causes serious eye irritation.

#### **Further information**

Other information : The information provided in this Safety Data Sheet is correct to

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|| Indicates updated section.