PRAESTOL® 55540
Flocculating Agent

Product Description

Composition: high molecular weight, medium anionic charge polyelectrolyte based on acrylamide and sodium acrylate

Appearance: white to light yellow granular material

Charge type: anionic

Bulk density: approx. 750 kg/m³

Viscosity (0.5 % in deionized water): approx. 800 mPa·s

Viscosity (0.1 % in deionized water): approx. 125 mPa·s

Viscosity (0.5 % in tap water): approx. 450 mPa·s

Viscosity (0.1 % in tap water): approx. 15 mPa·s

pH-value (0.1 % in tap water): approx. 7

Effective in pH-range: 6 - 10

The indicated characteristics are technical data and don't represent any specification data.

CAS-Number of the main component ("active substance"): 25085-02-3
2-Propenoic acid, sodium salt, polymer with 2-propenamide

Range of Application and Mode of Action

The product is used for flocculation mainly of mineral and hydroxide type solid particles and colloids. It is most suitable for the clarification of washing water used in the treatment of mining raw materials, such as hard coal, rock salt, sand, gravel and clay. It is also used in the metal producing and processing industry and in the chemical industry.

These applications usually involve the flocculation of very fine to colloidal solid particles, suspended in neutral to alkaline slurries with mainly inorganic solids.

Further range of application are in the treatment of surface and ground waters, and of various types of waste water after treatment with hydroxide formers. The mode of action of anionic PRAESTOL® products is based essentially on charge exchange between the electrical charges along the polymer chains, which are present in aqueous solution, and the surface charges of the suspended solid particles. The charge of the particle surfaces are neutralized and then a coagulation or flocculation of the particles is possible.

Application and Dosage

The product is normally used as a dilute solution (0.05 to 0.1 %). For preparation of stock solutions (approx. 0.5%) the original product is added to water with vigorous and even stirring. After a dissolving period of approx. 60 min. (at a temperature of approx. 20 °C) the solution is mature and is thus ready for use. Due to the varying properties of the slurries and sludge to be treated, the required dosages for a particular application can only be determined by carrying out laboratory tests and industrial trials. When used as a sedimentation accelerator or clarifying agent (in static sedimentation processes), only a few grams of product per cubic metre of the slurry to be clarified are required. In mechanical sludge dewatering approx. 100 g/m³ of wet sludge are required, in order to achieve high machine throughput and discharge water free of solids.

Operating Reliability and Accident Prevention

Hazards Identifications: Caution! Spilled product or solution when in contact with water or moisture causes surfaces to become extremely slippery. Secure the area! Solid product should be swept up and disposed of correctly. Moist product or slution can be soaked up with absorbent material such as sawdust or sand before being swept up and disposed of. Carefully wash away small residuals amounts from the area with a strong water jet. Discharge into the drain for subsequent biological waste effluent treatment.
Precautionary Measures: Put on personal protection equipment (suitable gloves, protective goggles, respiratory protection, if possible). The general precautionary measures that apply when handling chemicals should be observed.

First Aid Measures: With eye contact, rinse with much water for a prolonged time — if ill effects occur seek medical advice. After skin contact, wash with water and soap directly and take off contaminated clothing. The product is swallowed, seek medical advice immediately.

Materials of Construction: Our experience has shown that the products and solutions are non-corrosive in contact with materials used for tanks and pipes, such as fiberglass plastics, plastic-lined materials and stainless steel.

Handling: When dust is formed ensure there is sufficient ventilation. Take measures against the build up of electrostatic charge. The product itself is not explosive. However, fine dust may form explosive mixtures in air. Avoid deposition of dust.

Further References: See safety data sheet

Storage

The product is basically sensitive to moisture, such as condensation, water droplets and humidity. Contact with water (droplets) can lead to local formation of knots and lumps. The product should therefore be stored in dry, closed containers and protected against moisture. The containers should be resealed after removing the material. The storage temperature should not exceed 40 °C for long periods

Water contaminating class: 1 slightly hazardous to water (self classification)

Storage Stability under Correct Storage Conditions

<table>
<thead>
<tr>
<th>Material Type</th>
<th>Stability Period</th>
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</thead>
<tbody>
<tr>
<td>Granular material in original packing</td>
<td>at least 12 months</td>
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<tr>
<td>0.5 % stock solution in tap water*</td>
<td>at least 2 weeks</td>
</tr>
<tr>
<td>0.1 % ready-to-use solution in tap water*</td>
<td>at least 3 days</td>
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</tbody>
</table>

* Krefeld tap water: approx. 25 °dH (degrees of German hardness), pH-value: approx. 7, conductivity: approx. 600 µS/cm

Packing

Paper valve bag
Big bag

Environmental and Process Solutions

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