POLYSTABIL® VZK
Scale Inhibitor for Waste Water Treatment

Product Description

Composition: polyelectrolyte based on polycarboxylates, 40% solution in water
Appearance: clear liquid
Density: approx. 1.2 g/cm³
pH-value: approx. 7.5
Viscosity (Brookfield, 20 °C): approx. 250 mPa*s

CAS-Number of the main component ("active substance"): 9003-04-7
2-Propenoic acid, homopolymer, sodium salt

Fields of Application

POLYSTABIL® VZK is particularly suitable for scale prevention in waste water treatment, e.g. in pipe systems and dewatering machines. Due to its broad applicability, the product covers a wide range of process conditions. Scaling from effluent water is effectively prevented also in conditions of high load of electrolytes and temperatures and already abundant particles are dispersed. The efficiency of the product provides a maximum of cost efficiency and process stability.

Properties

POLYSTABIL® VZK is a polycarboxylate with a low molecular weight. It is non volatile and practically insensitive to hydrolysis in the temperature range that comes into question. It exhibits excellent effectiveness when stabilising carbonate hardness even under difficult conditions and can guarantee a high cooling performance over a long period. The versatility of this product allows a higher process flexibility. POLYSTABIL® VZK is phosphorus and nitrogen free.
The functions of this product, due to its special molecular weight distribution, not only as a scale inhibitor but also as a dispersant in the water treatment.
The scale inhibition effect is especially pronounced against CaCO₃, CaSO₄, F- and MG-compounds, silicic acid and silicates.

Application and Dosage

The product may be applied either pure (as delivered) or diluted with water. The product can be mixed with water in any proportion. The dosage is dependant on the application conditions and the water quality respectively.

Operating Reliability and Accident Prevention

Hazard Identifications: Spilled product or solution can be soaked up with absorbent material, e.g. sawdust, sand etc. and disposed of. Absorb product or solution completely. 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.
Further References: See safety data sheet.
Toxicity

Internal tests showed an acute mouse toxicity LD$_{50}$ value of > 5000 mg/kg body weight. At the concentrations used, no change in the toxicological properties of the molasses is likely (with respect to the use of molasses as animal food and the fermentation capacity of molasses).

Storage

With proper storage, i.e. in closed containers at room temperature, the shelf life of this product is at least 12 months without any loss of performance. The product is not sensitive to frost. Below freezing point it solidifies, but after re-warming to 20 - 25°C it can again be used without any loss in its performance.

Packing

Drum
Container

Environmental and Process Solutions

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