POLYSTABIL® KWS
Scale Inhibitor for Open Cooling Systems

Product Description

Composition: Sodium polyacrylate, modified, aqueous solution
Appearance: colourless to yellowish clear liquid
Density (20 °C): approx. 1.2 g/cm³
pH-value: approx. 6
Viscosity (Brookfield, 20 °C): max. 250 mPa*s
Dry content: approx. 40 %

Range of Application

The product was specially developed for use in power station cooling systems. Due to its specifically chosen molecular weight distribution, it exhibits very good dispersing properties as well as excellent stabilising properties. Especially for the treatment of very hard water this product is an excellent stabilizer. It can be used in systems where conditions vary considerably and the flexibility of this product covers a wide range of system conditions. This product makes it possible, due to its high effectiveness, to achieve an economical operation of cooling systems by safely stabilising and reliably dispersing the impurities even at higher concentrations and extreme dirt loading. The efficiency of the product guarantees a maximum in operational economics and safety.

Properties

This product is a chemical 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. It is phosphorus and nitrogen free and can be used together with chlorine as a biocide. The functions of this product, due to its special molecular weight distribution, not only as a scale inhibitor but also as a dispersant in cooling water. The scale inhibition effect is especially pronounced against CaCO₃, CaSO₄, silicic acid, silicic silicates and BaSO₄.

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

Hazards 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. If the product is ingested, 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

Our own certified investigations into the acute oral toxicity using male mice as the test animals resulted in an LD₅₀ value of greater than 5000 mg/kg of body weight. The acute fish toxicity of the product was found to be > 100 mg/l. The chronic bacteria toxicity lies over 4000 mg/l.

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
Road tanker

Environmental and Process Solutions

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