Elchemy

ELRASA – AS G2™ (Aluminium Sulphate)

Technical Datasheet

1. Technical Datasheet

Property	Specification
Physical Properties	
Appearance	White crystalline solid
Physical Form	Crystals
Odor	Odorless
Molecular Weight	342.15 g/mol
Density / Specific Gravity	2.71 g/cm^3
Refractive Index	1.47
pH (aqueous solution)	≥ 2.9 (5% solution)
Chemical Properties	
Ionic Nature	Ionic compound. The bond is formed between the aluminum metal cation (Al^{3+}) and the polyatomic sulfate anion (SO_4^{2-}).
Incompatibilities	Water, strong oxidizing agents, strong bases (e.g., sodium hydroxide), ammonia, amines, and most common metals in the presence of moisture.
Hazardous Reactions / Decomposition Products	Decomposes on heating (above 770 °C) to produce toxic and corrosive fumes, including sulfur oxides (sulfur trioxide, sulfur dioxide) and aluminum oxide. Reacts with water to form a dilute sulfuric acid solution.
Thermal Properties	
Melting Point	770 °C
Boiling Point	Decomposes
Flash Point	Non-flammable
Autoignition Temperature	Not applicable
Decomposition Temperature	770 °C
Thermal Stability	Stable under normal conditions. Begins to lose water of crystallization at 250 °C.
Solubility	
Solubility in Water	Freely soluble. 36.4 g/100 mL at 20°C.
Solubility in Ethanol	Insoluble or slightly soluble.
Solubility in Benzene	Practically insoluble.

2. Dosing by Application

Application	Recommended / Max Dosage
Drinking Water Treatment (Coagulation)	5 to 200 mg/L. May be as high as 500 mg/L for highly turbid water.
Wastewater Treatment (Coagulation)	10 - 60 ppm (mg/L).
Wastewater Phosphorus Removal	10 - 30 mg/L.
General Impurity Limits (Maximum Dosage Basis)	Maximum dosage of 100 mg/L is used as a basis for calculating impurity limits in drinking water.

The information and data contained herein are believed to be accurate but may not be all inclusive and should only be used as a guide. The information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the product for his particular use and on condition that they assume the risk of the use thereof.

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