

Specifications and Data:

SWIMMING POOL

ALUMINUM SULFATE LOW IRON - GRANULAR

Characteristics:

Aluminum sulfate (or "alum") is a pale cream to white colored granular amorphous material which dissolves in water to produce a solution with a pH of approximately 3.5 at 1%.

Grades and Forms:

Low iron grade: granular.

This product is not for food or drug use. Meets American Water Works Association Standard B 403-82 for use in treatment of municipal and industrial water supplies.

Packages and Shipping Containers:

Grade	Package	Net Wt.
Low Iron	Paper bag	50, 100 lbs.
	Bulk transport	
	Bulk car	

Shipping Regulations:

DOT Classification: ORM-E

Shipments:

FOB Tampa, FL
 Passaic, NJ
 Syracuse, NY
 N. Claymont, DE
 Marrero, LA
 *E. St. Louis, IL
 Cleveland, OH

*Not available as of 1/85.

Method of Manufacture:

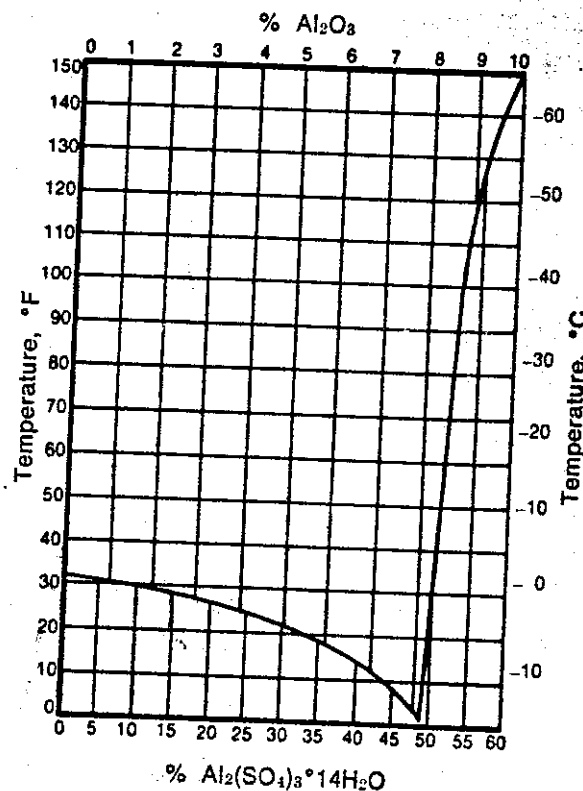
Low Iron Granular alum is made by reacting alumina trihydrate with sulfuric acid. The liquor is concentrated, followed by an air-drying process to produce uniformly-sized granules.

Properties:

Formula	$Al_2(SO_4)_3 \cdot 14H_2O$ (approx.)
Molecular Weight	594
Solubility	See Graph
pH of 1% solution	3.5 (approx.)
Bulk Density	60.6 lbs/ft ³ (970 Kg/m ³)
Typical Screen Size	100% thru 7 mesh (3 mm) <1% thru 35 mesh (0.50mm)
Angle of Repose	38%

Typical Analyses:

% Total soluble Al_2O_3	17.2
% Free Al_2O_3	0.5
% Total iron (as Fe_2O_3)	0.007
% Insoluble in water	0.03



Solubility of Low Iron Granular Aluminum Sulfate (17.1% Al_2O_3) In Water

Product Markets and Uses:

MARKET	USE	REASON FOR USE
Cellulosic insulation	Additive to cellulosic insulation	Enhances fire retardancy
Clay manufacturers	China clay beneficiation	Flocculates clay slurry
Dyers	Mordant for dyes	Fixes dyes on textile fibers
Grease manufacturers	Manufacture of aluminum soaps and greases	Source of aluminum ion
Industrial wastewater treatment	Sewage and industrial wastewater treatment	Solids removed by coagulation and flocculation. Phosphorus removal by chemical precipitation
Manufacture of alumina trihydrate and printing inks	Manufacture of alumina trihydrate for lakes and color extenders	Source of aluminum ion
Municipal wastewater treatment	Sewage treatment	Solids removed by coagulation and flocculation. Phosphorus removed by chemical precipitation
Potable water treatment	Water treatment	Solids, turbidity and color removed by flocculation
Pulp and paper mills	Process water and mill effluent treatment	Solids and color removal
	Sizing papers	Fixes rosin size and other additives on paper fibers
Soap manufacturers	Manufacture of glycerin from soap lyes	Reinforces coagulating action of ferric chloride in purifying spent lye
Swimming pools, oil well operators, manufacturers	Water treatment	Solids and color removed by coagulation and flocculation
Tanneries	Tanning furs and white leathers	Insolubilizes collagen without discoloring skin
Zeolite and catalyst manufacturers	Manufacture of zeolites and aluminosilicate catalysts and carriers	Source of aluminum ion

Product Safety Information:

As with any chemical, aluminum sulfate requires care in handling. Anyone responsible for the procurement, use, or disposal of the product or its container should familiarize himself and those handling the product with the appropriate safety and handling precautions involved. Such information may be obtained by writing to:

Allied Corporation
 Technical Service—Alum
 P. O. Box 6
 Solvay, New York 13209

In the event of an emergency with this product, call the 24-hour Allied Corporation Number: 201-455-2000.

533-153 1.5K 9/84

Additional Information Available:

"Aluminum Sulfate," Bulletin No. 521-001.

Allied Corporation
 Water Treatment Chemicals
 P. O. Box 1139R
 Morristown, NJ 07960

