

## 1. Product and Company Identification

<b>Material name</b>	<b>ALUMINUM SULFATE HYDRATE</b>
<b>Version #</b>	02
<b>Revision date</b>	08-26-2011
<b>CAS #</b>	17927-65-0
<b>Product Codes</b>	<b>J.T.Baker: 0564</b> <b>Macron: 3208</b>
<b>Synonym(s)</b>	Sulfuric acid, aluminum salt (3:2), hydrate
<b>Manufacturer</b>	Avantor Performance Materials, Inc.
<b>Address</b>	3477 Corporate Parkway Suite #200 Center Valley, PA 18034 US
<b>Customer Service</b>	855-282-6867
<b>24 Hour Emergency</b>	908-859-2151
<b>Chemtrec</b>	800-424-9300

## 2. Hazards Identification

<b>Emergency overview</b>	DANGER
	Harmful if swallowed. Causes eye burns. Causes skin irritation. Dust extremely irritating to the eyes and respiratory tract. Prolonged exposure may cause chronic effects.
<b>OSHA regulatory status</b>	This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).
<b>Potential health effects</b>	
<b>Routes of exposure</b>	Ingestion. Inhalation. Skin contact. Eye contact.
<b>Eyes</b>	Causes eye burns. Dust or splashes from the mixture may cause permanent eye damage.
<b>Skin</b>	Causes skin irritation. Prolonged or repeated contact with skin may cause redness, itching, irritation and eczema/chapping.
<b>Inhalation</b>	Dust extremely irritating to the respiratory tract.
<b>Ingestion</b>	Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
<b>Target organs</b>	Eyes. Skin. Respiratory system. Brain. Kidneys. Liver.
<b>Chronic effects</b>	Ingestion over a long period of time may cause damage to the liver, kidneys and nervous system.
<b>Potential environmental effects</b>	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

## 3. Composition / Information on Ingredients

Components	CAS #	Percent
ALUMINUM SULFATE HYDRATE	17927-65-0	98 - 100

**Composition comments** CAS # 17927-65-0 can be described by the CAS # 7784-31-8, 16828-11-8, & 10043-01-3.

## 4. First Aid Measures

<b>First aid procedures</b>	
<b>Eye contact</b>	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Call a physician or poison control center immediately. In case of irritation from airborne exposure, move to fresh air. Get medical attention.

<b>Skin contact</b>	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing separately before reuse. Destroy or thoroughly clean contaminated shoes.
<b>Inhalation</b>	Move to fresh air. If breathing stops, provide artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
<b>Ingestion</b>	Call a physician or poison control center immediately. Only induce vomiting at the instruction of medical personnel. Never give anything by mouth to an unconscious person. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
<b>Notes to physician</b>	Keep victim under observation. Treat symptomatically.
<b>General advice</b>	In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Show this safety data sheet to the doctor in attendance. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

## 5. Fire Fighting Measures

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<b>Flammable properties</b>	The product is not flammable. No unusual fire or explosion hazards noted.
<b>Extinguishing media</b>	
<b>Suitable extinguishing media</b>	Water spray. Carbon dioxide (CO2). Dry chemical powder. Foam.
<b>Unsuitable extinguishing media</b>	None known.
<b>Protection of firefighters</b>	
<b>Specific hazards arising from the chemical</b>	Fire may produce irritating, corrosive and/or toxic gases.
<b>Protective equipment and precautions for firefighters</b>	Use water spray to cool unopened containers. Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Cool containers exposed to flames with water until well after the fire is out.
<b>Special protective equipment for fire-fighters</b>	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. Wear self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode when fighting fires.
<b>Specific methods</b>	In the event of fire and/or explosion do not breathe fumes.

## 6. Accidental Release Measures

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<b>Personal precautions</b>	Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Keep upwind. Keep out of low areas. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained.
<b>Environmental precautions</b>	Do not allow to enter drains, sewers or watercourses. Prevent further leakage or spillage if safe to do so.
<b>Methods for containment</b>	Prevent entry into waterways, sewers, basements or confined areas. Stop leak if you can do so without risk. Dike the spilled material, where this is possible.
<b>Methods for cleaning up</b>	Avoid dust formation.
	Large Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal.
	Small Spills: Sweep up and place in a clearly labeled container for chemical waste. Clean surface thoroughly to remove residual contamination.
	Never return spills in original containers for re-use. Clean up in accordance with all applicable regulations. Collect in a non-combustible container for prompt disposal.

## 7. Handling and Storage

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<b>Handling</b>	Wear appropriate personal protective equipment. Avoid breathing dust. Do not get in eyes and avoid contact with skin and clothing. Do not taste or swallow. Wash thoroughly after handling. Do not eat, drink or smoke when using the product. See Section 8 of the MSDS for Personal Protective Equipment.
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**Storage**

Keep tightly closed in a dry, cool and well-ventilated place.

**8. Exposure Controls / Personal Protection****ACGIH**

Material	Type	Value	Form
ALUMINUM SULFATE HYDRATE (17927-65-0)	TWA	1.0000 mg/m <sup>3</sup>	Respirable fraction.

**Engineering controls**

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**Personal protective equipment****Eye / face protection**

Chemical goggles and face shield are recommended.

**Skin protection**

Wear appropriate chemical resistant clothing. Wear appropriate chemical resistant gloves.

**Respiratory protection**

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Respirator type: High-efficiency particulate respirator with full facepiece.

**General hygiene considerations**

Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

**General**

Wear chemical protective equipment that is specifically recommended by the manufacturer. Launder contaminated clothing before reuse.

**9. Physical & Chemical Properties**

<b>Appearance</b>	Crystalline.
<b>Color</b>	Colorless.
<b>Odor</b>	Odorless.
<b>Odor threshold</b>	Not available.
<b>Physical state</b>	Solid.
<b>Form</b>	Crystals.
<b>pH</b>	> 2.9 Aqueous solution
<b>Melting point</b>	1418 °F (770 °C) Decomposes
<b>Boiling point</b>	Not available.
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Flammability limits in air, upper, % by volume</b>	Not available.
<b>Flammability limits in air, lower, % by volume</b>	Not available.
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Specific gravity</b>	1.69
<b>Relative density</b>	Not available.
<b>Solubility (water)</b>	Soluble
<b>Partition coefficient (n-octanol/water)</b>	Not available
<b>Auto-ignition temperature</b>	Not available.

**10. Chemical Stability & Reactivity Information**

<b>Chemical stability</b>	Stable under normal temperature conditions.
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<b>Conditions to avoid</b>	Excessive heat. Water, moisture.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	Aluminum. Sulfur oxides.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.

## 11. Toxicological Information

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### Toxicological data

Product	Test Results
ALUMINUM SULFATE HYDRATE (17927-65-0)	Acute Oral LD50 Rat: 1930 mg/kg
<b>Sensitization</b>	Not a skin sensitizer.
<b>Acute effects</b>	Harmful if swallowed.
<b>Local effects</b>	Causes eye burns. Causes skin irritation. Inhalation of dusts may cause respiratory irritation.
<b>Chronic effects</b>	Ingestion over a long period of time may cause damage to the liver, kidneys and nervous system.
<b>Carcinogenicity</b>	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
<b>ACGIH Carcinogens</b>	
ALUMINUM SULFATE HYDRATE (CAS 17927-65-0)	A4 Not classifiable as a human carcinogen.
<b>Skin corrosion/irritation</b>	Causes skin irritation.
<b>Epidemiology</b>	No epidemiological data is available for this product.
<b>Mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Neurological effects</b>	Central and/or peripheral nervous system damage.
<b>Reproductive effects</b>	Contains no ingredient listed as toxic to reproduction
<b>Teratogenicity</b>	No data available to indicate product or any components present at greater than 0.1% may cause birth defects.
<b>Symptoms and target organs</b>	Severe eye irritation. Moderate skin irritation. Upper respiratory tract irritation. Behavioral changes.

## 12. Ecological Information

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### Ecotoxicological data

Product	Test Results
ALUMINUM SULFATE HYDRATE (17927-65-0)	EC50 Amphipod ( <i>Crangonyx pseudogracilis</i> ): 11.8 mg/l 48.00 hours LC50 Fathead minnow ( <i>Pimephales promelas</i> ): 3.4 mg/l 96.00 hours
<b>Ecotoxicity</b>	Expected to be toxic to aquatic organisms. May cause long-term adverse effects in the environment. The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms.
<b>Environmental effects</b>	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
<b>Persistence and degradability</b>	The product is not readily biodegradable.
<b>Partition coefficient (n-octanol/water)</b>	Not available

## 13. Disposal Considerations

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<b>Disposal instructions</b>	Dispose of this material and its container to hazardous or special waste collection point. Incinerate the material under controlled conditions in an approved incinerator. All wastes must be handled in accordance with local, state and federal regulations.
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**Contaminated packaging**

Since emptied containers retain product residue, follow label warnings even after container is emptied. Offer rinsed packaging material to local recycling facilities.

**14. Transport Information**

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**DOT**

Not regulated as dangerous goods.

**IATA**

Not regulated as dangerous goods.

**IMDG**

Not regulated as dangerous goods.

**15. Regulatory Information**

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**US federal regulations**

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

This product is not listed on the U.S. EPA TSCA Inventory. Under TSCA, hydrates are considered mixtures of their anhydrous salt and water. Accordingly, the anhydrous form is subject to TSCA reporting requirements.

**CERCLA (Superfund) reportable quantity**

ALUMINUM SULFATE HYDRATE: 5000.0000

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories**  
 Immediate Hazard - Yes  
 Delayed Hazard - Yes  
 Fire Hazard - No  
 Pressure Hazard - No  
 Reactivity Hazard - No

**Section 311 hazardous chemical**  
 Yes

**Clean Water Act (CWA)**  
 Hazardous substance

**Safe Drinking Water Act (SDWA)**  
 Contaminate candidate list

**Inventory status**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

**State regulations**

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

**Saf-T-Data**

Health: 3 - Severe (Life)

Flammability: 0 - None

Reactivity: 1 - Slight

Contact: 3 - Severe

Lab Protective Equip: D - GOGGLES &amp; SHIELD; LAB COAT &amp; APRON; VENT HOOD; PROPER GLOVES

Storage Color Code: G - Green (General Storage)

**16. Labeling Info**

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**Label Hazard Warning**

DANGER

Harmful if swallowed. Causes eye burns. Causes skin irritation. Dust extremely irritating to the eyes and respiratory tract. Prolonged exposure may cause chronic effects.

**Label Precautions**

Do not breathe dust. Do not get in eyes and avoid contact with skin and clothing. Do not taste or swallow. Use only with adequate ventilation. Wash thoroughly after handling. Keep container closed.

**Label First Aid**

Immediately flush eyes with plenty of water for at least 15 minutes. Immediately flush skin with plenty of water. If gas/fume/vapor/dust/mist from the material is inhaled, remove the affected person immediately to fresh air. Get medical attention immediately. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

**17. Other Information**

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**NFPA ratings**

Health: 2

Flammability: 0

Instability: 0

**Disclaimer**

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