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MATERIAL SAFETY DATA SHEET
ALUMINIUM SULPHATE

SECTION 1 IDENTIFICATION

Chemical Names and Synonyms
Aluminium Sulphate; Aluminium Sulfate; Aluminium Sulphate Hydrate; Aluminium Sulfate Hydrate
Chemical Formula
$Al_2(SO_4)_3 \cdot nH_2O$
CAS Number
17927-65-0

SECTION 2 INFORMATION ON INGREDIENTS

Ingredients Classification
$Al_2(SO_4)_3$ 48 – 58% CAS 10043-01-3; H_2O 42 – 52% CAS 7332-18-5

SECTION 3 HAZARDS IDENTIFICATION

Risk of damage to eyes. Prolonged contact with skin may cause possible dermatitis.
Occupational Exposure Limit (OEL): **TLV = 2 mg (Al)/ m^3 as TWA**

SECTION 4 PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odour: **White Crystalline Solid; Odourless**
Al Concentration: 72 – 91 g/ kg (14 – 17% as Al_2O_3
Boiling Point (deg. C)
N/A
Melting Point (deg. C)
N/A
Flash Point (deg. C)
NONE
Specific Gravity
1.85g/ cm^3 @ 15 deg. C
Autoignition (deg. C)
None
Flammable Limit (% by Vol. in Air)
Non Flammable
Vapour Pressure (mm Hg)
N/A
Solubility in Water
410g/L at 20 deg. C

SECTION 5 STABILITY AND REACTIVITY

Stable Under Normal Conditions
Conditions to Avoid
Incompatibility (Material and Conditions to Avoid) Some oxidizing agents **e.g. Chlorites and Hypochlorite. Attacks most metals liberating Hydrogen.**
Hazardous Decomposition Products
Could toxic oxides of Sulphur be emit when heated to decomposition.

SECTION 6 TOXICITY DATA

Acute effects of over exposure when:
In contact with skin irritant – after prolonged contact with skin produces sores and possible dermatitis.
In contact with eyes: **immediately and could cause severe damage which could lead to permanent visual defects or even total loss of vision.**
Inhaled: **May cause irritation to the mucous membrane of the respiratory tract.**
Ingested: Very astringent to mouth, nose and throat, normally followed by rapid expectoration.
Long Term Exposure: **Aluminium accumulates in the brain tissues, resulting in seizures and brain dysfunction.**
Toxicity Data: **LD50 6207mg/ kg (Oral-Mouse)**

SECTION 7 FIRST AID MEASURES

Skin Contact: **Remove contaminated clothing and wash affected area with copious quantities of water. Seek medical advice if irritation persists.**
Eye Contact: **Immediately irrigate with water for at least 10 minutes.**
Seek medical attention.
Inhalation: **Remove to fresh air, loose clothing and seek medical advice.**
Ingestion: **Provided patient is conscious wash out mouth with water and give 5% Sodium Bicarbonate solution followed by a demulcent such as milk. Seek medical advice immediately.**
Further Medical Advice: **If in doubt seek medical attention.**

SECTION 8 FIRE AND EXPLOSIVE HAZARD DATA

Would any material saturated with this product be subjected to spontaneous combustion?
NO.
Materials:
Fire Extinguishing Date
Water or dry power may be used in the vicinity of Aluminium Sulphate, keep containers cool with copious amounts of water.
Fire Fighting protective clothing.
Unusual Fire and Explosive Hazards
In contact with metals, Aluminium Sulphate may liberate the flammable gas Hydrogen.

SECTION 9 PERSONAL PROTECTION

General Precautions: **Eye and skin protection should be used when handing Aluminium Sulphate.**
Ventilation Requirements:
None
Respiratory Protection:
Wear dust mask.
Protective Clothing:
Gloves and acid resistant footwear are essential.
Eye Protection:
Goggle or full face mask.

SECTION 10 HANDLING AND STORAGE

Handling: **Avoid contact with skin and eyes.**

Keep away from **metals, organic materials, nitrates, chlorates and carbides.**

Storage: **No special handling equipment. Minimize production of dusts.**

SECTION 11 SPILLAGE/ ACCIDENTAL RELEASE

Small Spillage: **Wash away with large quantities of water.**
Large spillage: **Neutralize with Lime or Soda Ash then dispose of according to local regulations. Water can be used if washings can go to drain.**
Personal Precautions: **Wear full protective clothing.**
Neutralizing Chemicals: **Hydrated Lime or Soda Ash.**

SECTION 12 WASTE DISPOSAL

Neutralize with Lime and Landfill in accordance with Local Regulations.

SECTION 13 ENVIRONMENTAL INFORMATION

Environmental Fate and Distribution
High tonnage material produced in wholly contained systems. High tonnage material used in partially contained systems.
The substance is soluble in water.
Persistence and Degradation
Unlikely to cause harmful effects.
Remains indefinitely in the environment as Hydroxide.
Toxicity**: Large discharges may contribute to the acidification of water and soil and will injure aquatic life and soil micro – organisms.**
Effects on Effluent Treatment
Large discharges may contribute to the acidification of effluent treatment systems and will injure treatment organisms. The product is a primary coagulant and may cause solid settlement in treatment systems.

SECTION 14 REGULATORY INFORMATION

EEC Classification: **Irritant Hazard Symbol: Xi.**
Risk Phases: **Risk of serious damage to eyes (R 41).**
Safety Phase: **In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. (S 26)**
After contact with skin, wash immediately with plenty of water. (S28)
Wear suitable gloves. (S37)

SECTION 15 TRANSPORT INFORMATION

UN No. NR PACK. GROUP ICAO/ IATAS Class: NR
IMADG Class: NR ADR/ RID Class NR ADR/RID Item

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SECTION 16 OTHER INFORMATION

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release, and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process unless specified in the text.