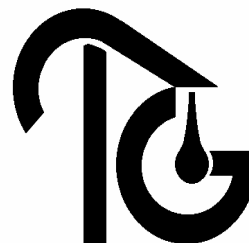


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PRODUCT DATA SHEET

(This booklet incorporates the Specification and M.S.D.S.)

PRODUCT	ALUMINIUM SULPHATE	
CAS NO.	10043-01-3	
TARIFF NO.	283322000	
U.N NO.	N/R	
EINECS NO.	2331350	
IMCO CLASS	N/R	
HAZARDS	IRRITANT	
SPECIFICATION REFERENCE	AS247/275/3	DATE SEP 94
REFERENCE NO.	ALSU/1	DATE SEP 94
PREVIOUS EDITION.		DATE

PRODUCT SPECIFICATION

Product Name Aluminium Sulphate
 Alternative Name
 Product Grade

SALES SPECIFICATION

PROPERTY	IRON FREE GROUND	IRON FREE KIBBLED	COMMERCIAL SLABS	
Alumina - Al ₂ O ₃	16.9% Min	16.9% Min	13.5% Min	AAS-L-1A
Total Sulphate - SO ₃	38.5% Min	38.5% Min	31.8% Min	AAS-L-2A
Basic Sulphate - SO ₃	0.5% Min	0.5% Min		AAS-L-3A
Iron - Fe ₂ O ₃	0.005% Max	0.006% Max	0.7% Max	AAS-L-15A
Insolubles	0.15% Max	0.15% Max	0.20% Max	AAS-L-38A

NOTES

Exclusion of Liability

Information contained in this publication is accurate to the best of the knowledge and belief of Tennants.

Any information or advice obtained from Tennants otherwise than by means of this publication and whether relating to Tennants materials or other materials, is also given in good faith. However, it remains at all times the responsibility of the customer to ensure that Tennants materials are suitable for the particular purpose intended.

Tennants accepts no liability whatsoever (except as otherwise provided by law) arising out of the use of information supplied, the application, adaptation or processing of the products described herein, the use of other materials in lieu of Tennants materials or the use of Tennants materials in conjunction with such other materials.

Health and Safety

A Material Safety Data Sheet has been issued describing the health, safety and environmental properties of this product, identifying the potential hazards and giving advice on the handling precautions and emergency procedures. This must be consulted fully before handling, storage and use.

SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

Product:	Aluminium Sulphate	
COMPANY:	TENNANTS DISTRIBUTION LIMITED	
	Hazelbottom Road	Botany Way
	Cheetham	Purfleet
	Manchester	Essex
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2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Formulae:	
Chemical Family Name:	
CAS No.:	10043-01-3
EINECS No.:	2331350

3. HAZARDS IDENTIFICATION

Main Hazards	Severe Irritant
Health Effects - Eyes	Severe irritation, redness, soreness
Health Effects - Skin	Severe irritation, redness, soreness
Health Effects - Ingestion	Gastric irritation, nausea, vomiting if large doses swallowed
Health Effects - Inhalation	Irritation of nose, mouth and lungs

4. FIRST AID MEASURES

First Aid - Eyes	Immediately flood the eye with plenty of water for at least 15 minutes. Obtain medical attention.
First Aid - Skin	Wash skin with plenty of water and seek medical attention if symptoms persist. Wash out mouth with water; give plenty of water to drink. Obtain prompt medical attention. Do not encourage vomiting
First Aid - Ingestion:	
First Aid - Inhalation	Remove to fresh air and obtain medical advice.

5. FIRE FIGHTING MEASURES

This product is not flammable. Use extinguisher to suit cause of fire. Note: Toxic fumes are liberated above 600°C

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Wear appropriate protective clothing.
Environmental Precautions:	Try to prevent the material from entering drains or water courses. Advise Authorities if spillage has entered water course or sewer or has contaminated soil or vegetation.
Methods of Cleaning	Damp down spillage, vacuum or shovel up into labelled plastic containers for disposal. Dispose of in accordance with Local Authority Regulations.

7. HANDLING AND STORAGE

Handling	Treat as a weakly acid substance. Observe good standards of industrial and personal hygiene and avoid all unnecessary contact. Wear appropriate protective clothing if there is a possibility of contact. In particular use respiratory protection if personal exposure may exceed the OEL level in section 8. Wear goggles when handling large quantities.
Storage	Keep dry. Avoid unsegregated storage with incompatible materials e.g. cyanides, sulphides, carbonates. Avoid direct contact with galvanised or mild steel surfaces. As a solution, can be stored long term in stainless steel, plastic or rubber lined mild steel tanks.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits	The OEL (as detailed in EH40) for aluminium salts, soluble is 2mgm ⁻³ 8 hr TWA
Eye Protection	Chemical goggles
Skin Protection	PVC or rubber gloves. Wear normal workwear. An apron or over clothing may be necessary depending on the conditions of handling.
Respiratory Protection	Use local exhaust ventilation to maintain dust levels below the OEL. If for any reason this is not possible, use a BS6016 Type 2 orinasal dust respirator

9. PHYSICAL AND CHEMICAL PROPERTIES	
Physical State	Solid
Colour	White
Odour	Slight or none
Boiling Range/Point	N/A
Melting Point (°C)	Decomposes at 770
Flash Point	N/A
Explosion Limits	N/A
Solubility in Water	Very soluble in water
Vapour Pressure	N/A
Bulk Density/Specific Gravity	1.69 s.g.
Flammability	N/A
Vapour Pressure	N/A
10. STABILITY AND REACTIVITY	
Stability	Stable under normal conditions.
Materials to Avoid	Due to slight hydrolysis, dilute sulphuric acid can be formed. Avoid contact with strong alkalis, chlorites, hypochlorites, sulphites, cyanides and sulphides. Avoid contact with most metal surfaces e.g. galvanised metal, aluminium, copper, zinc and alloys of these metals.
Hazardous Decomposition Products	Can liberate toxic and corrosive fumes of SO ₂ and SO ₃ under extreme conditions when boiled to dryness or heated above 600°C
11. TOXICOLOGICAL INFORMATION	
Irritancy - Eyes	Solid aluminium sulphate has been found to be a moderate irritant to the rabbit eye.
Irritancy - Skin	Solid aluminium sulphate has been found to be non irritant to rabbit skin
Ingestion	Unlikely to be acutely harmful. Acute oral toxicity in rats LD50 exceeded 5000mg/kg
12. ECOLOGICAL INFORMATION	
Mobility	On contact with water, aluminium sulphate will hydrolyse to give dilute sulphuric acid and gelatinous aluminium hydroxide.
Environmental Hazard	Discharge to the aquatic environment should be avoided since it may lead to localised adverse effects arising from the product's physical properties. The clogging of tentacles, gills and filters of suspension feeders and the modification of the photosynthesis of algae and plankton may result from the presence of suspended particles and turbidity.
13. DISPOSAL CONSIDERATIONS	
Product Disposal	Unused material should be considered as 'special waste'. Local regulations should be consulted and waste disposed of only through licensed waste material handling companies.
14. TRANSPORT INFORMATION	
UK Transport Information	Not classified/not a transport hazard in the EEC
15. REGULATORY INFORMATION	
Dangerous Substances Directive 67/548/EEC and Dangerous Preparations Directive 88/379/EEC.	These regulations apply
Information on the Label	Aluminium sulphate solution Xi Irritant
R phrases	R36/37/38 Irritating to eyes, respiratory system and skin
S phrases	S26-28-37/39 In case of contact with eyes rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of water, wear suitable gloves and eye/ face protection.
Control of Substances Hazardous to Health (COSHH) Regulations 1988	These regulations apply in the UK
16. OTHER INFORMATION	
Draft prEN 878 - Chemicals used for the treatment of water intended for human consumption - Aluminium Sulphate, iron free grade	