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SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**1.1. Product identification****Product Description:****Aluminium ammonium, sulfate dodecahydrate**

Cat No. : 16131, 56123
Other names Ammonium alum
CAS-No 7784-26-1
Molecular Formula H4 Al N O8 S2 . 12 H2 O

Relevant identified uses of the substance or mixture

Recommended Use Laboratory chemicals.
Uses advised against No Information available

Details of the supplier

Company: Silverprint Ltd
Unit 26, Albany Park, Cabot Lane, Poole
BH17 7BX
Tel: +44 (0)1202 051180
Emergency: 9-17h: +44 (0)1202 051180
24 Hrs: 112
E-mail address: sales@silverprint.co.uk

1.2.**SECTION 2: HAZARDS IDENTIFICATION****2.1. Classification of the substance or mixture**

CLP Classification - Regulation (EC) No 1272/2008

Physical hazards

Based on available data, the classification criteria are not met

Health hazards

Skin Corrosion/irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Specific target organ toxicity - (single exposure)	Category 3

Environmental hazards

Based on available data, the classification criteria are not met

Classification according to EU Directives 67/548/EEC or

1999/45/EC Symbol(s) Xi - Irritant

R-phrases(s)

R36/37/38 - Irritating to eyes, respiratory system and skin

2.2. Label elements



Signal Word

Warning

Hazard Statements

H315 - Causes skin irritation
H319 - Causes serious eye irritation
H335 - May cause respiratory irritation

Precautionary Statements

P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

2.3. Other hazards

No information available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Component	CAS-No	EC-No.	Weight %	CLP Classification - Regulation (EC) No 1272/2008	DSD Classification - 67/548/EEC
Aluminum ammonium sulfate dodecahydrate	7784-26-1		>95	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H335)	Xi;R36/37/38
Ammonium alum	7784-25-0	EEC No. 232-055-3	0	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H335)	Xi;R36/37/38

For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Eye Contact
minutes.

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Obtain medical attention.

Skin Contact
attention.

Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.

Ingestion

Do not induce vomiting. Obtain medical attention.

Inhalation

Move to fresh air. If breathing is difficult, give oxygen. Obtain medical attention.

Protection of First-aiders
precautions to

Ensure that medical personnel are aware of the material(s) involved, take protective measures and prevent spread of contamination.

4.2. Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media

Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.

Extinguishing media which must not be used for safety reasons

No information available.

5.2. Special hazards arising from the substance or mixture

Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes. Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products

Nitrogen oxides (NO_x), Sulfur oxides. **5.3. Advice for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment. Avoid dust formation.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Wear personal protective equipment. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid

ingestion and inhalation. Avoid dust formation.

7.2. Conditions for safe storage, including any incompatibilities

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

7.3. Specific end use(s)

Use in laboratories

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limits

List source(s): **UK** - EH40/2005 Containing the workplace exposure limits (WELs) for use with the Control of Substances Hazardous to Health Regulations (COSHH) 2002 (as amended). Updated by September 2006 official press release and October 2007 Supplement.

Component	European Union	The United Kingdom	France	Belgium	Spain
Aluminum ammonium sulfate dodecahydrate		STEL: 6 mg/m ³ 15 min TWA: 2 mg/m ³ 8 hr	TWA / VME: 2 mg/m ³ (8 heures).		TWA / VLA-ED: 2 mg/m ³ (8 horas)

Component	Italy	Germany	Portugal	The Netherlands	Finland
Aluminum ammonium sulfate dodecahydrate			TWA: 2 mg/m ³ 8 horas		

Component	Austria	Denmark	Switzerland	Poland	Norway
Aluminum ammonium sulfate dodecahydrate			TWA: 2 mg/m ³ 8 Stunden		TWA: 2 mg/m ³ 8 timer

Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Monitoring methods

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust

Derived No Effect Level (DNEL) — No information available

<u>Route of exposure effects</u>	Acute effects (local)	Acute (systemic)	Chronic effects (local)	Chronic effects (systemic)

Oral
Dermal
Inhalation

Predicted No Effect Concentration (PNEC)

No information available

8.2. Exposure controls

Engineering Measures

Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment

Eye Protection

Goggles (European standard - EN 166)

Hand Protection

Protective gloves

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Natural rubber	See manufacturers recommendatio	-	EN 374	(minimum requirement)
Nitrile rubber	ns			
Neoprene				
PVC				

Skin and body protection Wear appropriate protective gloves and clothing to prevent skin exposure

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

Respiratory Protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

Large scale/emergency use limits

Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure are exceeded or if irritation or other symptoms are experienced

Small scale/Laboratory use exposure

Recommended Filter type: Particulates filter conforming to EN 143
Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if

limits are exceeded or if irritation or other symptoms are experienced.

Recommended half mask:- Particle filtering: EN149:2001

When RPE is used a face piece Fit Test should be conducted

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls No information available.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance Whit

Physical State e
Solid

Odor Odorless
Odor Threshold No data available

pH 4.6 0.05M aq.sol

Melting Point/Range 93.5 °C / 200.3 °F

Softening Point	No data available	
Boiling Point/Range	200 °C / 392 °F	
Flash Point	No information available	Method - No information available
Evaporation Rate	Not applicable	Solid
Flammability (solid,gas)	No information available	
Explosion Limits	No data available	
Vapor Pressure	No data available	
Vapor Density	Not applicable	Solid
Specific Gravity / Density	1.640	
Bulk Density	No data available	
Water Solubility	150 g/L (20°C)	
Solubility in other solvents	No information available	
Partition Coefficient (n-octanol/water)		
Autoignition Temperature	Not applicable	
Decomposition Temperature	> 280°C	
Viscosity	Not applicable	Solid
Explosive Properties	No information available	
Oxidizing Properties	No information available	

9.2. Other information

Molecular Formula H4 Al N O8 S2 . 12 H2 O
Molecular Weight 453.33

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity None known, based on information available

10.2. Chemical stability Stable under normal conditions

10.3. Possibility of hazardous reactions

Hazardous Polymerization Hazardous polymerization does not occur.
Hazardous Reactions None under normal processing.

10.4. Conditions to avoid Incompatible products. Excess heat. Avoid dust

10.5. Incompatible materials formation. Strong oxidizing agents.

10.6. Hazardous decomposition products Nitrogen oxides (NOx). Sulfur oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Product Information No acute toxicity information is available for this product

(a) acute toxicity;

Oral No data available

Dermal No data available

Inhalation No data available

(b) skin corrosion/irritation; Category 2

(c) serious eye damage/irritation; Category 2

(d) respiratory or skin sensitization;

Respiratory No data available

Skin No data available

(e) germ cell mutagenicity; No data available

(f) carcinogenicity; No data available

There are no known carcinogenic chemicals in this product

(g) reproductive toxicity;	No data available
(h) STOT-single exposure;	Category 3
(i) STOT-repeated exposure;	No data available
Target Organs	Skin, Respiratory system, Eyes.

(j) aspiration hazard;	Not applicable Solid
Symptoms / effects, both acute and delayed	No information available

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity effects Do not empty into drains.

12.2. Persistence and degradability

Persistence Soluble in water, Persistence is unlikely, based on information available.
Degradability Not relevant for inorganic substances.

12.3. Bioaccumulative potential Bioaccumulation is unlikely

12.4. Mobility in soil
mobile in the The product is water soluble, and may spread in water systems. Will likely be environment due to its water solubility. Highly mobile in soils

12.5. Results of PBT and vPvB assessment No data available for assessment.

12.6. Other adverse effects

Endocrine Disruptor Information This product does not contain any known or suspected endocrine disruptors
Persistent Organic Pollutant This product does not contain any known or suspected substance
Ozone Depletion Potential This product does not contain any known or suspected substance

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from Residues / Unused Products Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

Contaminated Packaging Dispose of this container to hazardous or special waste collection point.

European Waste Catalogue (EWC) According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.

Other Information Waste codes should be assigned by the user based on the application for which

the product

was used. Do not empty into drains.

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO

Not regulated

14.1. UN number
14.2. UN proper shipping name
14.3. Transport hazard class(es)
14.4. Packing group

ADR

Not regulated

14.1. UN number
14.2. UN proper shipping name
14.3. Transport hazard class(es)
14.4. Packing group

IATA

Not regulated

14.1. UN number **14.2. UN proper shipping name** **14.3. Transport hazard class(es)** **14.4. Packing group**

14.5. Environmental hazards No hazard identified

14.6. Special precautions for user No special precautions required

14.7. Transport in bulk according to Not applicable, packaged goods
Annex II of MARPOL73/78 and the IBC Code

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Component	HMIS	HMIS	HMIS	NLP	TSCA	DSL	NDSL	PICCS	ENCS	IECSC	AICS	KECL
Aluminum ammonium sulfate dodecahydrate	-	-	-		-	X	-	X	X	X	X	-
Ammonium alum	232-055-3	-	-		X	X	-	X	X	X	X	X

National Regulations

Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment. Take note of Dir 94/33/EC on the protection of young people at work
 Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

SECTION 16: OTHER INFORMATION

Full text of R-phrases referred to under sections 2 and 3

R36/37/38 - Irritating to eyes, respiratory system and skin

Full text of H-Statements referred to under sections 2 and 3

H315 - Causes skin irritation
 H319 - Causes serious eye irritation
 H335 - May cause respiratory irritation

Legend

CAS - Chemical Abstracts Service

TSCA - United States Toxic Substances Control Act

Section 8(b) Inventory

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/
List/Non-Domestic

Substances/EU List of Notified Chemical Substances Substances List

PICCS - Philippines Inventory of Chemicals and Chemical Substances **ENCS** - Japanese Existing and New
Chemical Substances **IECSC** - Chinese Inventory of Existing Chemical Substances **AICS** - Australian

Inventory of Chemical Substances **KECL** - Korean Existing and Evaluated Chemical Substances **NZIoC** -
New Zealand Inventory of Chemicals

WEL - Workplace Exposure Limit

TWA - Time Weighted Average

ACGIH - American Conference of Governmental Industrial Hygienists **IARC** - International Agency for Research on
Cancer

DNEL - Derived No Effect Level

PNEC - Predicted No Effect Concentration

RPE - Respiratory Protective Equipment

LD50 - Lethal Dose 50%

LC50 - Lethal Concentration 50%
NOEC - No Observed Effect Concentration
PBT - Persistent, Bioaccumulative, Toxic

EC50 - Effective Concentration 50%
POW - Partition coefficient Octanol:Water
vPvB - very Persistent, very Bioaccumulative

ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road
IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code

ICAO/IATA - International Civil Aviation Organization/International Air Transport Association
MARPOL - International Convention for the Prevention of Pollution from Ships

OECD - Organisation for Economic Co-operation and Development
BCF - Bioconcentration factor
Key literature references and sources for data
Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

ATE - Acute Toxicity Estimate
VOC - Volatile Organic Compounds

Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

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