Sulphate of Ammonia

Issue Date: 15-Mar-16
Revision Date: 15-Mar-16
Revision Number: 1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

1.1 Name of Product

Sulphate of Ammonia

1.2 Use of the Substance/Preparation

Fertiliser

1.3 Manufacturer/Distributor

Thomas Elliott (Fertilisers)
Selby Place
Stanley Industrial Estate
Skelmersdale
WN8 8EF
Tel: 01695 51875
Email: info@thomas-elliott.co.uk

1.4 Emergency Contact

Tel: 01695 51875 (Office Hours)

2. HAZARDS IDENTIFICATION

2.1 Classification

Classification according to Directive EC 1272/2008 Classification, Labelling and Packaging.

Physical hazards

Not Classified

Health hazards

Not Classified

Environmental hazards

Not Classified

2.2 Label elements

Not Applicable

2.3 Other hazards

Mixture not classed as PBT or vPvB.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance

Ingredient	CAS/EINECS	Classification	% w/w
Ammonium Sulphate	7783-20-2 231-984-1	None	N/A

4. FIRST AID MEASURES

4.1 Description of First Aid Measures

Eye contact – Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Skin contact – Wash exposed areas of skin with soap and water following use. Wash all contaminated clothing before re-use.
Ingestion – wash out mouth with water and seek medical advice.
Inhalation – remove to fresh air.

4.2 Most important symptoms and effects, both acute and delayed

Eye Contact: Based on components, product is considered to present little hazard by eye contact.
Skin Contact: Based on components, product is considered to present little hazard by skin contact.
Ingestion: Based on components, product is considered to present little hazard by oral exposure.
Inhalation: Unlikely to cause harmful effects under normal handling and use.

4.3 Indication of immediate medical attention and special treatment needed

None

5. FIRE FIGHTING MEASURES

5.1 Extinguishing Media

Use foam, carbon dioxide, dry powder, sand. The mixture is not classified as flammable. As such extinguishing media appropriate for surrounding materials should be chosen.

5.2 Special hazards arising from substance or mixture

Non combustible. Thermal decomposition will evolve toxic and corrosive vapours. See Section: 10. Harmful vapours can be given off at temperatures above 235^{o}C.

5.3 Advice for firefighters

Contain spread of extinguishing fluids. Wear self-contained breathing apparatus in confined spaces.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions

Ensure adequate ventilation. Wear protective gloves and eye protection. Wash hands and exposed skin after handling.

6.2 Environmental precautions

Do not allow to enter drains or sewers. Spillages or uncontrolled discharges into watercourses must be alerted to the appropriate regulatory body.

6.3 Methods and material for containment and cleaning up:

Sweep up and shovel product or use other means and place in container for reuse (preferred) or disposal.

7. HANDLING & STORAGE

7.1 Precautions for Safe Handling

Ensure good ventilation at workplace. Ensure good hygiene practices are observed. Do not eat, drink or smoke when handling this product. Do not breathe dust. Avoid contact with skin and eyes. Ensure workplace exposure limits are observed. Do not block stack pallets.

7.2 Conditions for Safe Storage

Keep in a cool, well-ventilated place away from strong oxidising agents, alkalis, chlorates, nitrates and nitrites. Stock should be turned over bimonthly to minimise caking. Protect against fire and explosion. Keep away from food and feedstuffs.

7.3 Specific end use

Fertiliser

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1 Control parameters

Dust (total inhalable) Long-term exposure limit (LTEL)	10	mg/m^3 (8hr TWA)
Dust (respirable) Long-term exposure limit (LTEL)	4	mg/m^3 (8hr TWA)

8.2 Exposure Controls:

The following precautions are considered to be good practice when using any chemicals irrespective of their classification unless otherwise specified. Primary Hazard considered as handling of concentrate.

Gloves: to BS EN374 of gauntlet type in Natural Rubber or PVC (not Nitrile) recommended for acid resistance.

Clothing: Coveralls/apron to BS EN465/466/4679.

9. PHYSICAL & CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance	White, crystalline solid
Odour	Odourless
pH	Approx. 5 (100g/L)
Boiling point	n/a
Melting point	350^{o}C
Flash point	n/a
Flammability	n/a
Autoflammability	n/a
Explosivity	n/a
Oxidising properties	n/a
Vapour Pressure	n/a
Bulk density	1.0 – 1.12g/ml
Solubility	754g/L at 20^{o}C
Decomposition temperature	>235^{o}C

9.2 Other Information:

None

10. STABILITY & REACTIVITY

10.1 Reactivity

No information available.

10.2 Stability

Stable under normal conditions

10.3 Possibility of hazardous reactions

Reacts with alkalis to liberate ammonia. Can product thermally sensitive mixtures with potassium chlorate and potassium nitrate and can enhance the explosive properties of ammonium nitrate. Dangerous reactions with nitrates.

10.4 Conditions to Avoid

Keep away from heat.

10.5 Incompatible materials

Strong oxidising agents, alkalis, chlorates, nitrates and nitrites.

10.6 Hazardous Decomposition Products

Above the decomposition temperature (235^{o}C) the major volatiles will be Sulphur Oxides and Ammonia.

11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects

Acute toxicity – oral

Ingestion may cause irritation of the gastrointestinal tract.

Acute toxicity – dermal

Repeated or prolonged skin contact may result in mild irritation.

Acute toxicity – inhalation
High concentrations of dust may be irritant to the respiratory tract.

Serious eye damage/irritation
Dust may cause irritation. Permanent damage is unlikely.

Respiratory sensitisation
No specific test data are available.

Skin sensitisation
Not determined.

Germ cell mutagenicity
Genotoxicity - in vitro
This substance has no evidence of mutagenic properties.

Carcinogenicity
No specific test data are available.

Reproductive toxicity
Reproductive toxicity - fertility
Does not contain any substances known to be toxic to reproduction.

Specific target organ toxicity - single exposure
STOT - single exposure
Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure
STOT - repeated exposure
Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard
Not anticipated to present an aspiration hazard, based on chemical structure.

Eye contact
The product is considered to be a low hazard under normal conditions of use. May cause eye irritation.

Ecotoxicity
The product is not expected to be toxic to aquatic organisms

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Not classified as hazardous. Provides nutrients essential to plant growth.

12.2 Persistence and degradability

Due to the soil character of the substance the calculation of a fugacity model and Henry's Law Constant is not appropriate. Based on the physico-chemical properties of ammonium sulphate, water is expected to be the main target compartment. Although ammonium sulphate can be created in the atmosphere from ammonia and sulphur dioxide, this process is limited by atmospheric sulphur dioxide, not by ammonia, which has many natural sources. Particulate ammonium sulphate is removed from air by wet and dry deposition. There is no evidence for photo degradation of ammonium sulphate. In unsterilised soil, ammonium sulphate is mineralised fairly rapidly, and subsequently nitrified. Nitrification and denitrification processes also occur naturally in streams and rivers, as well as in many secondary sewage treatment processes.

12.3 Bioaccumulative potential

Based on the high water soluble and ionic nature, ammonium sulphate is not expected to adsorb or bioaccumulate to a significant extent.

12.4 Mobility in soil

Mobility in soil may be reduced through ion-ion interactions.

12.5 Results of PBT and vPvB

The product does not contain any substances classified as PBT or vPvB.

12.6 Other adverse data

Inorganic product which cannot be eliminated from water by biological purification processes. Ammonium Salt, NH4+: can oxidise to nitate or be reduced to nitrogen by micro organisms. Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations.

13. DISPOSAL CONSIDERATIONS

Disposal route should not permit contamination of groundwater.

13.1 Waste treatment methods

Dispose of waste through a reputable waste disposal contractor in accordance with the Environmental Protection Act 1990.

14. TRANSPORT INFORMATION

14.1 UN-Number

ADR, IMDG, IATA Not applicable

14.2 UN proper shipping name

ADR, IMDG, IATA Not applicable

14.3 Transport hazard class(es)

ADR, IMDG, IATA Not applicable

14.4 Packaging Group

ADR, IMDG, IATA Not applicable

14.5 Environmental hazards

Not a marine pollutant

14.6 Special precautions for user

None

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific to this substance:

This substance is classified and labelled in accordance with regulation 1999/45/EC, 1272/2008, the statutory instrument No.716 2009 Chemicals (Hazard Information and Packaging) regulations and the EC Fertiliser Regulations 2003, Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

15.2 Chemical Safety Assessment

Not undertaken for this material

16. OTHER INFORMATION

Reason for revision

MSDS re-formatted in-line with regulation 453/2010 all sections affected.

Liability

The product label provides information on the use of the product: do not use otherwise, unless you have assessed any potential hazard involved and the safety measures required. Prepared by Thomas Elliott (Fertilisers), for Health and Safety purposes from the best knowledge available at the time of printing.