



PSDS GROUP 6 PRODUCT AIC PRODUCT SAFETY DATA SHEET - GROUP 6

INTRODUCTION

This Product Safety Data Sheet applies exclusively to products manufactured or marketed by members of the Agricultural Industries Confederation. It does not apply to any other product of similar name or nature. The products covered will be clearly identified by the name of the marketer and/or manufacturer on the associated labels and/or documents. Qualifying product will be marked as follows:



1. IDENTIFICATION OF THE PRODUCT AND THE COMPANY

1.1 Identification of the Product

Products in Group 6 are the straight nitrogen products, urea and ammonium sulphate and will be identified as such.

1.2 Company

See details below

2. COMPOSITION/INFORMATION ON INGREDIENTS

These products may be essentially pure and will contain urea (Total nitrogen 46%) or ammonium sulphate (Total nitrogen 21%) as essential ingredients.

3. HAZARDS IDENTIFICATION

3.1 Human Health

Products are of a low toxicity but prolonged skin or eye contact may cause some irritation.

Ingestion: Small quantities are unlikely to cause toxic effect.

Large quantities may give rise to gastro-intestinal disorders.

Inhalation: Low toxicity dust but high concentration of air-borne material may cause irritation of the nose and upper respiratory tract with symptoms such as sore throat and coughing. Generally regarded as a nuisance dust with no specific official Occupational Exposure Limit (OEL). Recommend a total inhalable dust standard for nuisance dust of 10 mg/m³ as an 8 hour Time Weighted Average. See HSE Guidance Notes EH 40 and HSG 173.

Inhalation of decomposition gases (eg in a fire) may cause serious lung effects.

3.2 Environment

Urea and ammonium sulphate are nitrogen fertilisers. Heavy spillage may cause adverse environmental impact such as eutrophication in confined surface waters. See Section 12.

4. FIRST AID MEASURES

Product

Skin contact: wash the affected area with soap and water

Eye contact: irrigate eyes with copious amounts of eyewash solution or water for at least 10 minutes. Obtain medical advice if symptoms persist.

Ingestion: **do not** induce vomiting. Give milk or water to drink. Obtain medical attention if more than small quantities have been swallowed.

Inhalation: remove from source of exposure to dust. Keep warm and at rest. Obtain medical advice if symptoms persist.

Fire and Thermal Decomposition Products

Inhalation: remove from source of exposure to fumes. Keep warm and at rest.

5. FIRE-FIGHTING MEASURES

When the fertiliser is **not** directly involved in the fire use the best means available to control the fire.

When the fertiliser is involved:-

1. Avoid breathing the fumes. Wherever possible wear an approved breathing mask when fighting a fire or when fumes are being emitted.
2. Call the fire brigade.
3. Use plenty of water.
4. Open doors and windows to give maximum ventilation.
5. **Do not** allow molten fertiliser to run into drains.

If water containing the fertiliser enters any drain or water course, inform the appropriate water authorities immediately. Note also first aid precautions (4).

6. ACCIDENTAL RELEASE MEASURES

Clean up spillage promptly. Sweep up and place in a clean appropriately labelled container.

7. HANDLING AND STORAGE

7.1 Handling: Avoid excessive generation of dust. Avoid unnecessary exposure to the atmosphere to prevent moisture pick-up.

7.2 Storage: The basic requirements are the avoidance of involvement in a fire and contamination. Locate away from sources of heat, fire or explosion. Keep away from combustible materials and chemical substances taking particular care on farms to ensure that it is not stored near hay, grain, diesel, etc. Ensure high standard of house-keeping in the storage areas. **Do not** permit smoking or the use of naked lights in the storage area. Buildings used for storage should be dry and well ventilated, stacks therein should be at least 1 metre from walls, eaves and beams. Further storage guidance is given in HSE Guidance IND(G)230L

8. EXPOSURE CONTROL/PERSONAL PROTECTION

8.1 Occupational exposure limits

No specific official limits

ACGIH recommended value (1995-1996) for inhalable particulate:
TLV/TWA 10mg/m³.

8.2 Precautionary and engineering measures

Avoid high dust concentration and provide ventilation where necessary.

8.3 Personal Protection

Wear suitable gloves when handling the product over long periods.

Use suitable dust respirator if dust concentration is high.

After handling product, wash hands and observe good hygiene practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Solid uniform prills, granules or crystals pale yellow/brown to white in colour unless deliberately coloured during manufacture.
Odour	Odourless.
pH water solution (100g/l)	Urea 9 - 10 Ammonium sulphate 4 - 6.
Melting point	Urea 133°C (Decomposes) Ammonium sulphate 235°C (Decomposes)
Bulk density	Urea 700-780kg/m ³ . Ammonium sulphate 1000 - 1100kg/m ³
Solubility in water	Urea 1080g/l at 20°C Ammonium sulphate 760g/l at 20°C

10. STABILITY AND REACTIVITY

Stable under normal storage and handling conditions. Urea reacts with sodium or calcium hypochlorite to form explosive nitrogen trichloride. Ammonium sulphate liberates ammonia when in contact with alkalies eg Caustic Soda, Soda Ash.

Do not weld or apply heat to equipment or plant which may have contained the fertiliser without first washing thoroughly to remove all fertiliser.

11. TOXICOLOGICAL INFORMATION

11.1 General

See Section 3.1.

11.2 Toxicity Data

Urea and ammonium sulphate
LD50 (oral, rat) > 2000mg/kg

12. Ecological Information

12.1 Mobility

Soluble in water. Predicted to have a high mobility in soil.

12.2 Persistence/Degradability

Substantially bio-degradable in water.

12.3 Bio-accumulation

Low potential for bio-accumulation.

12.4 Ecotoxicity

Urea: Has low intrinsic aquatic toxicity but will exert a substantial oxygen demand when significant quantities, as in a spillage, reach a watercourse and may cause damage to aquatic life.

Ammonium Sulphate: Harmful to aquatic organisms. Increases in pH above 7.5 will lead to an increased load of non-ionised ammonia which is markedly more toxic to aquatic life.

13. DISPOSAL CONSIDERATIONS

Depending on the degree of contamination, dispose of by use on farm, by spreading thinly on open ground or to an authorised waste facility

14. TRANSPORT INFORMATION

14.1 UN classification

Not classified ie considered non-hazardous material according to UN Orange Book and international transport codes e.g. RID (rail), ADR (road) and IMDG (sea).

15. REGULATORY INFORMATION

15.1 EC Directives

76/116/EEC (Relating to fertilisers)

15.2 National Regulations

The Fertilisers Regulations 1991 and subsequent amendments.

16. OTHER INFORMATION

This safety data sheet provides health and safety information. The product is to be used in applications consistent with best farming practice. Individuals handling this product should be informed under COSHH of the recommended safety precautions and should have access to this information. The product information in this data sheet is to the best of the AIC's knowledge correct as at the date of publication.

Neither the AIC nor the Manufacturer or Supplier accepts liability for any loss or damage (other than that arising from death or personal injury caused by negligence if proved) resulting from reliance on this information. Further information on individual products covered by this safety data sheet may be obtained from the Supplier or the Company whose name, address and telephone number will be found on the fertiliser container

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