



## AIC MODEL SAFETY DATA SHEET SDS FERTILISER GROUP 6

This 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:



### SDS FERTILISER GROUP 6

*Products in Group 6 are solid straight Nitrogen fertilisers: urea and mixtures of urea with diluents.*

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

### 1.1 Identification of the Substance/preparation

*The company should state the trade name(s) and product shipping name e.g. urea.*

### 1.2 Use

*As a fertiliser.*

### 1.3 Company

*Provide the company's name, address, telephone number and e-mail address of the competent person responsible for the Safety Data Sheet.*

### 1.4 Emergency Telephone

*State the emergency telephone number and specify if the number is available only during office hours.*

## 2. HAZARDS IDENTIFICATION

### 2.1 Regulatory Classification

Neither urea nor these fertiliser preparations are classified as dangerous materials according to EC Directive 67/548/EEC or 1999/45/EC.

### 2.2 Physicochemical hazards

These fertilisers are not hazardous; they are neither combustible nor oxidising.

### 2.3 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/m<sup>3</sup> as an 8 hour Time Weighted Average. See HSE Guidance Notes EH40/2005 and HSG 173.

Fire and thermal decomposition products: Inhalation of decomposition gases, which can contain, for example, ammonia, isocyanic acid and NO<sub>x</sub> can cause irritation, corrosive effects on the respiratory system and serious lung effects. Some lung effects may be delayed.

### 2.4 Environment

Urea is a nitrogen fertiliser. Heavy spillage may cause adverse environmental impact such as eutrophication in confined surface waters. See Section 12.

### 2.5 Other Hazards

On heating it melts and further heating can cause decomposition, releasing toxic fumes containing ammonia.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

The main ingredient is ammonium sulphate (total nitrogen 21%).

## 4. FIRST AID MEASURES

### 4.1 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. Rinse mouth with water. 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. Obtain medical advice if symptoms persist.

### 4.2 Fire and Thermal Decomposition Products

*Inhalation:* remove from source of exposure to fumes. Keep warm and at rest. Provide medical assistance and monitoring, as delayed pulmonary oedema may develop.

## 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:-

- Evacuate the area.
- Avoid breathing the fumes. Wherever possible wear an approved breathing mask when fighting a fire or when fumes are being emitted.
- Call the fire brigade.
- Fight the fire from upwind and from outside the buildings, if possible.
- Use plenty of water.
- Where combustible material is the source of the fire, extinguish

this source as a matter of priority.

- Open doors and windows to give maximum ventilation.
- Do not allow molten fertiliser to run into drains.
- If fire run-off water enters any drain or water course, inform the appropriate water authorities immediately.

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal Precautions

Do not smoke. Avoid dust inhalation. Avoid contact with decomposition products. See also section 8.

### 6.2 Environmental protection

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

Inform the appropriate water authority in the event of accidental watercourse contamination.

### 6.3 Methods for cleaning up

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

### 6.4 Disposal

See section 13.

## 7. HANDLING AND STORAGE

**7.1 Handling:** Avoid excessive generation of dust.

Avoid producing and inhaling dust. See also section 8.

Avoid unnecessary exposure to the atmosphere to prevent moisture pick-up.

Avoid contamination by other materials.

Avoid application of heat.

**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.

Ensure that any contaminated product or spillage is segregated from normal product and disposed of in conformity with section 13.

### 7.3 Packaging Materials

Polyethylene (PE), polypropylene (PP) and PTFE.

## 8. EXPOSURE CONTROL/PERSONAL PROTECTION

### 8.1 Workplace Exposure Limits (WEL)

EH40/2005 Workplace Exposure Limits (published by HSE) specify for dust: TWA 10 mg/m<sup>3</sup> (inhalable)

TWA 4 mg/m<sup>3</sup> (respirable)

*Note: limestone is a listed substance in Table 1 in EH40.*

### 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.

In the presence of thermal decomposition gases use self-contained breathing apparatus.

## 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

Melting point

Urea 133°C (Decomposes)

Bulk density

Urea 700-780kg/m<sup>3</sup>.

Solubility in water

Urea 1080g/l at 20°C

## 10. STABILITY AND REACTIVITY

### 10.1 Stability

Stable under normal storage and handling conditions.

### 10.2 Conditions to Avoid

High temperature, contamination by incompatible/combustible materials, application of heat and confinement e.g. welding or hot work on equipment or plant which may have contained fertiliser without first washing thoroughly to remove all fertiliser.

### 10.3 Materials to Avoid

Urea reacts with sodium or calcium hypochlorite to form explosive nitrogen trichloride.

### 10.4 Hazardous decomposition products

Ammonia, iso-cyanic acid fumes, CO<sub>2</sub> and other gases released.

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Acute Toxicity

LD50 (oral, rat) > 2000mg/kg

### 11.2 Contact

Non-irritating to skin and eyes.

Prolonged contact may cause irritation of the skin.

### 11.3 Inhalation

Prolonged exposure to dust may cause irritation

When heated gives off toxic gases, see 2.3.

### 11.4 Ingestion

Small quantities unlikely to cause toxic effect.

Large quantities may give rise to gastro-intestinal disorders.

## 12. Ecological Information

### 12.1 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.

### 12.2 Mobility

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

### 12.3 Persistence/Degradability

Substantially bio-degradable in water.

### 12.4 Bio-accumulation

Low potential for bio-accumulation.

## 13. DISPOSAL CONSIDERATIONS

Depending on the degree and nature of contamination/physical deterioration and quantity of the material, dispose of by use as a fertiliser on farm, by spreading thinly on open ground or to an authorised disposal facility. Take care to avoid the contamination of watercourses and drains.

Measures should be taken to completely empty the bag of its contents, ensuring that residues of fertiliser do not contaminate the packaging during disposal (incineration, recycling, land filling

etc).

## **14. TRANSPORT INFORMATION**

### **14.1 UN classification**

Not classified i e 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 Regulations & Directives**

Regulation 2003/2003/EC relating to fertilisers, OJ 304/1 20.11.2003

### **15.2 National Regulations**

The Fertilisers Regulations 1991, SI No. 2197 (as amended in 1995 and 1998).

The EC fertilizers (England and Wales) Regulations 2006, SI No. 2486.

## **16. OTHER INFORMATION**

### **Sources of Data and References**

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.

---

Product Supplied by:

Safety Data Sheet Compiled by:

Agricultural Industries Confederation  
Confederation House  
East of England Showground  
Peterborough, PE2 6XE  
Tel: (01733) 385230 Fax: (01733) 385270