

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

### ***Product Identification***

Designation NPK Fertiliser

Tradename 13-5-18 5MU

13-2-15 5MU (N-P-K)

### ***Company***

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## **2. COMPOSITION/INFORMATION ON INGREDIENTS**

### ***Nature of Ingredients and Concentration***

CAS Number None applies - Preparation

EINECS Number None applies - Preparation

EINECS Name None applies - Preparation

Molecular Formula None applies - Preparation

Product description Compound fertiliser prepared from raw materials which include potassium sulphate, ammonium sulphate, methylene urea, magnesium sulphate and monoammonium phosphate.

Form White, Grey, Brownish or Coloured crystals.

### ***Classification***

Not classified as a material hazardous for supply according to EEC Directive 88/379/EEC.

### ***Human Health***

13-5-18 5MU is basically harmless when handled correctly. However the following points should be noted:

#### ***Skin contact***

Prolonged contact may cause some irritation.

#### ***Eye Contact***

May cause irritation following contact.

#### ***Ingestion***

Small quantities are unlikely to cause toxic effect.

Large quantities may give rise to gastro-intestinal disorders.

#### ***Inhalation***

High dust concentrations of air-borne material may cause irritation of the nose and upper respiratory tract with symptoms such as sore throat and coughing.

#### ***Long Term Effects***

No adverse effects are known

### ***Fire and Thermal Decomposition Products***

Inhalation of decomposition gases can cause irritation and corrosive effects on the respiratory system. Some lung effects may be delayed.

### ***Environment***

13-5-18 5MU is a compound NPK fertiliser containing ammonium, potassium, and phosphate. Heavy spillage may cause adverse environmental impact such as eutrophication in confined surface waters. (See section 12).

### ***Other***

13-5-18 5MU is stable under normal storage and handling conditions.

It is not itself combustible.

13-5-18 5MU melts and decomposes if heated strongly. On decomposition it gives off water vapour and toxic gases such as ammonia and oxides of nitrogen. Decomposition is accelerated by a number of substances: see Section 10.

Heating of 13-5-18 5MU under strong confinement (eg in tubes and drains) may lead to a violent reaction or explosion especially if contaminated by some of the substances mentioned in Section 10.

## **3. HAZARDS IDENTIFICATION**

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## **4. FIRST AID MEASURES**

## **Product**

### *Skin contact*

Wash the affected area with soap and water

### *Eye contact*

Flush/Irrigate eyes with copious amounts of water for at least 10 minutes. Obtain medical attention if eye irritation persists.

### *Ingestion*

Do not induce vomiting.

Give water or milk to drink.

Obtain medical attention if more than a small quantity has been swallowed.

### *Inhalation*

Remove from source of exposure to dust.

Obtain medical attention if adverse effects occur.

## **Fire and Decomposition Products**

### *Skin contact*

Wash areas in contact with hot material copiously with cold water.

Obtain medical attention.

### *Inhalation*

- Remove from source of exposure to fumes.
- Keep warm and at rest even though no symptoms may be evident.
- Give oxygen especially if there is blueness around the mouth.
- Artificial respiration should only be applied if breathing fails.
- Under medical review for at least 48 hours as delayed pulmonary oedema may develop.

## **5. FIRE FIGHTING MEASURES**

### ***If 13-5-18 5MU is not directly involved in the fire***

- Use the best available means to extinguish the fire.

### ***If 13-5-18 5MU is involved in the fire***

- Call the fire brigade.
- Avoid breathing the fumes (toxic). Stand upwind of the fire.
- Use a self-contained breathing apparatus if fumes are being entered.
- Fight the fire with plenty of water.

- Do not use chemical extinguishers or foams or attempt to smother the fire with steam or sand.

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- Open doors and windows of the store to give maximum ventilation.
- Do not allow molten fertiliser to run into drains.
- Prevent any contamination of 13-5-18 5MU by oils or other combustible materials.
- Inform the local authorities immediately if water-containing fertiliser enters any drains or watercourse.

## **6. ACCIDENTAL RELEASE MEASURES**

Any spillage of 13-5-18 5MU should be cleaned up promptly, swept up and placed in a clean labelled container for safe disposal. Do not allow it to mix with sawdust and other combustible or organic substances.

Depending on the degree or nature of contamination, dispose of by use as a fertiliser or to an authorised waste facility.

Take care to avoid contamination of watercourses and drains and inform the appropriate authority in case of accidental contamination of watercourses.

## **7. HANDLING & STORAGE**

### ***Handling***

- Avoid excessive generation of dust.
- Avoid contamination by diesel oil, grease and other combustible materials as well as incompatible materials.
- Avoid unnecessary exposure to the atmosphere to prevent moisture pick-up.
- Wear gloves when handling 13-5-18 5MU over long periods.

### ***Storage***

- Locate away from sources of heat or fire.
- Keep away from combustible materials and substances mentioned under section 10.
- On farm, ensure that 13-5-18 5MU is not stored near hay, straw, grain, diesel oil etc.
- Ensure a high standard of housekeeping in the storage area.
- Do not permit smoking or the use of naked fire in the storage area.
- Restrict stack size and keep at least 1 metre distance around the stacks of bagged products.

- Any building used for storage should be dry and well ventilated.

- Whenever possible avoid storing 13-5-18 5MU in direct sunlight.

## **8. EXPOSURE CONTROL/ PERSONAL PROTECTION**

### ***Occupational Exposure Limits***

- No specific HSE limit
- A total inhalable dust standard (ACGIH recommended value) for nuisance dust of 10 mg/m<sup>3</sup> is recommended as an 8-hour Time Weighted Average.

### ***Precautionary and Engineering Measures***

Avoid high dust concentration and provide ventilation where necessary.

### ***Personal Protection***

- Wear suitable gloves and goggles when handling 13-5-18 5MU over long periods.
- Use a suitable dust respirator if dust concentration is high.
- After handling the product wash hands and observe good hygiene practice.

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance White, Grey, Brownish or Coloured crystals

Odour Odourless

pH water solution (10 %) >4.5

Melting point >110 °C. May decompose before melting

Boiling point decomposes

Explosive properties Not explosive as per EEC test A14 (67/548/EEC). 13-5-18 5MU has a high resistance to detonation. This resistance is decreased by the presence of contaminants and/or high temperature. Heating under strong confinement (eg in tubes or drains) may lead to a violent reaction or explosion especially if there is contamination by some of the substances in Section 10.

Oxidizing properties Not classified as an oxidizing material according to Directive 67/548/EEC and test A17.

Bulk density Approximately 800-950 kg/m<sup>3</sup>

Solubility in water Soluble in water.  
 Hygroscopic- readily picks up moisture from the air.

## **10. STABILITY AND REACTIVITY**

### ***Stability***

13-5-18 5MU is stable under normal conditions of storage, handling and use.

### ***Conditions to Avoid***

- Contamination by incompatible materials.
- Unnecessary exposure to the atmosphere.
- Closeness to sources of heat or fire.
- Welding or hot work on equipment or plant which may have contained 13-5-18 5MU without first washing thoroughly to remove all fertiliser.

### ***Materials to avoid***

Combustible materials, reducing agents, acids, alkalis, chlorates, chromates, nitrites, permanganates, metallic powders and substances containing metals such as copper, nickel, cobalt, zinc and their alloys.

## ***Hazardous Reactions/Decomposition Products***

- When strongly heated it melts and decomposes releasing toxic fumes. Violent reaction or explosion may occur in cases of strong confinement.
- When in contact with alkaline materials such as lime it may give off ammonia gas.
- See also sections 3. and 9.

## **11. TOXICOLOGICAL INFORMATION**

### ***General***

13-5-18 5MU is basically harmless when handled correctly.

### ***Toxicity Data***

For all components  
 LD50 (oral, rat) > 2000 mg/kg

## **12. ECOLOGICAL INFORMATION**

### ***Mobility***

The NH<sub>4</sub><sup>+</sup> ion is adsorbed by soil particles. Phosphates either water or citrate-soluble are translocated in the soil only over very short distances and are then immobilised. The K<sup>+</sup> ion in the soil solution is adsorbed by clay minerals and only in light soils where these are absent can part of the potassium be leached.

### ***Persistence/Degradability***

Nitrogen follows the natural nitrification/denitrification cycle to give nitrogen or nitrogen oxides. Phosphates are converted to calcium or iron / aluminium phosphates or are incorporated into the soil organic matter. Potassium is mainly adsorbed by clay minerals or remains as K<sup>+</sup> in the soil solution.

### ***Bio-accumulation***

13-5-18 5MU does not show any bio-accumulation phenomena.

### ***Ecotoxicity***

Low toxicity to aquatic life.

## **13. DISPOSAL CONSIDERATIONS**

Depending on the degree and nature of the contamination dispose of by use as a fertiliser on farm or to an authorised waste facility.

## **14. TRANSPORT INFORMATION**

UN classification Non-hazardous

Transport classification Non-hazardous

ADR/RID Not classified

IMDG Not classified

ICAO/IATA Not classified

Avoid transport with other materials where there is undue risk of contamination. Ensure that the transport is clean before loading the product.

## **15. REGULATORY INFORMATION**

### ***EEC Directives***

- 76/116/EEC (Law relating to fertilisers)
- 82/501/EEC, 87/216/EEC, 88/610/EEC (Seveso Major Accident Hazard)

The product is classified and labelled in accordance with EC directives.

## **16. OTHER INFORMATION**

This safety data sheet provides health and safety information. The product is to be used in applications consistent with Kemira Literature.

Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. Please consult Company for any further advice. The product information in this data sheet is to the Company's knowledge correct at the date of publication. The user should contact the Company for updated advice and in any event must be satisfied that the product is entirely suited for its purpose.

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