

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

Product Name   MAGIC ICE MELT  
Chemical Formula   NH<sub>2</sub>.CO.NH<sub>2</sub>  
Company:           LNT SOLUTIONS LTD  
HELIOS 47, LEEDS, LS27 2DY  
  
Tel:                 +44 (0) 113 3900 567  
Telefax:           +44 (0) 113 3900 568

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name    Carbamide – commonly referred to as Urea  
CAS Number       57-13-6  
EINECS Number:   200-315-5

**3. HAZARDS IDENTIFICATION**

**Urea is not classified as a hazardous product.**  
Normally, by paying usual attention to industrial hygiene and by avoiding inhalation of dusty powder, there are no risks in handling urea.  
The dust may cause irritation to eyes, skin and by inhalation. See Section 8 for recommended precautions.  
By decomposition at high temperature toxic fumes of nitrogen oxide, ammonia and isocyanic acid can be emitted. These can also be produced by reaction of Urea with the chemicals listed under Section 7 "Handling and Storage".  
**Eye Contact**  
Irritating but does not injure eye tissue.  
**Skin Contact**  
Frequent or prolonged contact may irritate. Low order of toxicity.  
**Inhalation**  
Negligible hazard at ambient temperature. Decomposition fumes may cause breathing disorders and/or lung damage.

**Ingestion**

Minimal toxicity.

**4. FIRST AID MEASURES**

**Eye Contact**

Flush eyes with large amount of water until irritation subsides. If irritation persists, seek medical attention.

**Skin Contact**

Wash affected areas with water.

**Ingestion**

Do not induce vomiting. Give 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.

**5. FIRE FIGHTING MEASURES**

- Material will not burn.
- Decomposes. Flammable/toxic gases will form on decomposition, see Section 10 "Stability & Reactivity".
- Use water spray to cool fire exposed surfaces and to protect personnel.
- Respiratory and eye protection required for fire fighting personnel.

**6. ACCIDENTAL RELEASE MEASURES**

Sweep up spilled material and place in suitable containers for recycle or disposal. If spilled urea enters a watercourse, then the appropriate water authority and local authorities should be informed.

**7. HANDLING & STORAGE**

**Handling**

Product should not be heated above 130°C to avoid possible release of toxic fumes of ammonia, isocyanic acid and oxides of nitrogen. Contact should be avoided with oxidising agents, hypochlorites, aldehydes, inorganic acids, olefins, monomers and polymerisable esters to avoid possible release of toxic fumes of ammonia, isocyanic acid, oxides of nitrogen and biuret.

**Storage**

Storage should be in absence of source of heat and moisture to prevent lumps and dust forming. Storage may be in bulk or polyethylene bags.

**Static Discharge**

Product can accumulate static charges which can cause an incendiary electrical discharge: proper grounding procedures should be used.

**8. EXPOSURE CONTROL/ PERSONAL PROTECTION**

The recommended time weighted average exposure limits are as follows:

	Long term Exposure Limit (OEL) (TWA-8 hr)	
	mg/m <sup>3</sup>	ppm
Ammonia	18	25
Nitrogen Dioxide*	5	3
Nitrogen Dioxide	30	25
Isocyanic acid	0.02	

Short Term Exposure Limit (STEL) (TWA-10 min)

	mg/m <sup>3</sup>	ppm
Ammonia	24	35
Nitrogen Dioxide*	9	5
Nitrogen Dioxide	45	35
Isocyanic acid	0.07	

\*Most toxic component of NOx

**Personal Protection**

For open systems where contact is likely, wear safety glasses with side shields, long sleeves and chemical resistant gloves. Where over-exposure by inhalation may occur, and engineering, work practice or other means of exposure reduction are not adequate, approved respirators may be necessary.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance:       White prills or crystals  
Odour:              Odourless  
Nitrogen:           46% minimum  
pH of 10% wt sol<sup>n</sup>: 9.0 – 10.0  
Melting point:     Decomposes at 133°C  
Bulk Density       700 – 780 kg/m<sup>3</sup>  
Solubility in water: 1080g/l @ 20°C

**10. STABILITY AND REACTIVITY**

**Stability**

Urea is chemically stable at ambient conditions. By decomposition at high temperatures (133°C) toxic fumes of nitrogen oxide, ammonia and isocyanic acid can be emitted.

**Reactivity**

Contact should be avoided with oxidising agents, hypochlorites, aldehydes, inorganic acids, olefins, monomers and polymerisable esters to avoid possible release of toxic fumes of ammonia, isocyanic acid, oxides of nitrogen and biuret.

**11. TOXICOLOGICAL INFORMATION**

**General**

See Section 3.

**Toxicity**

LD<sub>50</sub> (oral rat)       > 2000 mg/kg

**12. ECOLOGICAL INFORMATION**

Urea is highly soluble in water. Therefore it is rapidly diluted in water courses and leached from soils. When dissolved, urea acts as a plant nutrient

**13. DISPOSAL CONSIDERATIONS**

**General**

Relevant authorities must be consulted before disposal of urea to drains or water courses. Sweep up spilled material and place in suitable containers for recycle or disposal. If spilled urea enters a water course then the

appropriate water authority and local authorities should be informed.

#### **14. TRANSPORT INFORMATION**

Urea is not classified as a hazardous product for carriage.

#### **15. REGULATORY INFORMATION**

Urea is not classified as a hazardous product for supply.

#### **16. OTHER INFORMATION**

This Safety Data Sheet provides Health & Safety information. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information.

The product information in this Data Sheet is, to the best of this Company's knowledge, correct as at the date of publication. The user must be satisfied that the product is entirely suitable for the purpose for which it is being used.

The Company accepts no 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.

Date of Issue: August 2009

