

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

**Product identifier:**

**Product name:** Urea 40%

**Relevant identified uses of the substance or mixture and uses advised against:**

**Identified uses:** Industrial Chemical.

**Company name:**

Nexchem Ltd  
Unit 3 Barshaw Park  
Leycroft Road  
Leicester  
LE4 1ET  
Tel: 0116 2311130  
24/7 Emergency Tel: 0800 246 1274  
Email: [sales@nexchem.co.uk](mailto:sales@nexchem.co.uk)

## 2. HAZARDS IDENTIFICATION

**Classification of the substance or mixture:**

**Classification (SI 2019 No. 720):**

**Physical hazards:** Not Classified.

**Health hazards:** Not Classified.

**Environmental hazards:** Not Classified.

**Label elements:**

**Hazard statements:** NC Not Classified.

**Other hazards:** This product does not contain any substances classified as PBT or vPvB.

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

**Mixtures:**

**Urea:** 40-50%

**CAS number:** 57-13-6

**EC number:** 200-315-5

**Classification:** Not Classified.

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

# SAFETY DATA SHEET

Urea 40%

Issued: 18/04/2023

Page 2

## 4. FIRST AID MEASURES

### Description of first aid measures:

|                                    |  |
|------------------------------------|--|
| <b>General information:</b>        | Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.   |
| <b>Inhalation:</b>                 | IF INHALED: Move affected person to fresh air at once.   |
| <b>Ingestion:</b>                  | Get medical attention. Do not induce vomiting unless under the direction of medical personnel. Never give anything by mouth to an unconscious person.  |
| <b>Skin contact:</b>               | Rinse immediately with plenty of water. Get medical attention if irritation persists after washing.  |
| <b>Eye contact:</b>                | Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 10 minutes. Get medical attention if any discomfort continues. |
| <b>Protection of first aiders:</b> | First aid personnel should wear appropriate protective equipment during any rescue.  |

### Most important symptoms and effects, both acute and delayed:

|                      |                             |
|----------------------|-----------------------------|
| <b>Inhalation:</b>   | No specific symptoms known. |
| <b>Ingestion:</b>    | No specific symptoms known. |
| <b>Skin contact:</b> | No specific symptoms known. |
| <b>Eye contact:</b>  | No specific symptoms known. |

### Indication of any immediate medical attention and special treatment needed:

|                              |                        |
|------------------------------|------------------------|
| <b>Notes for the doctor:</b> | Treat symptomatically. |
|------------------------------|------------------------|

## 5. FIRE-FIGHTING MEASURES

### Extinguishing media:

|                                      |   |
|--------------------------------------|---|
| <b>Suitable extinguishing media:</b> | Use fire-extinguishing media suitable for the surrounding fire. |
|--------------------------------------|---|

### Special hazards arising from the substance or mixture:

|                          |             |
|--------------------------|-------------|
| <b>Specific hazards:</b> | None known. |
|--------------------------|-------------|

### Hazardous combustion products:

#### Thermal decomposition or combustion products may include the following substances:

Harmful gases or vapours.  
Carbon dioxide (CO<sub>2</sub>).  
Carbon monoxide (CO).  
Oxides of nitrogen.  
Ammonia.

### Advice for firefighters:

**Protective actions during firefighting:** Avoid breathing fire gases or vapours. Evacuate area. Control run-off water by containing and keeping it out of sewers and watercourses.

### Special protective equipment for firefighters:

Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing will provide a basic level of protection for chemical incidents.

[cont...]

# SAFETY DATA SHEET

Urea 40%

Issued: 18/04/2023

Page 3

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures:

**Personal precautions:** No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Do not touch or walk into spilled material. Avoid contact with skin and eyes.

### Environmental precautions:

**Environmental precautions:** Avoid discharge to the aquatic environment. Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

### Methods and material for containment and cleaning up:

**Methods for cleaning up:** Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Contain and absorb spillage with sand, earth or other non-combustible material. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

### Reference to other sections:

**Reference to other sections:** For personal protection, see Section 8. For waste disposal, see Section 13.

## 7. HANDLING AND STORAGE

### Precautions for safe handling:

**Usage precautions:** Wear protective clothing as described in Section 8 of this safety data sheet.

**Advice on general occupational hygiene:** Wash promptly if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.

### Conditions for safe storage, including any incompatibilities:

**Storage precautions:** Store in accordance with local regulations. Store in tightly-closed, original container in a dry, cool and well-ventilated place. Store away from incompatible materials (see Section 10).

**Specific end use(s):** The identified uses for this product are detailed in Section 1.2.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Control parameters:** Urea (CAS: 57-13-6)

**DNEL:**  
Workers - Inhalation; Long term systemic effects: 292 mg/m<sup>3</sup>  
Workers - Inhalation; Short term systemic effects: 292 mg/m<sup>3</sup>  
Workers - Dermal; Long term systemic effects: 580 mg/kg/day  
Workers - Dermal; Short term systemic effects: 580 mg/kg/day

[cont...]

# SAFETY DATA SHEET

Urea 40%

Issued: 18/04/2023

Page 4

**DNEL:** General population - Inhalation; Long term systemic effects: 125 mg/m<sup>3</sup>  
General population - Inhalation; Short term systemic effects: 125 mg/m<sup>3</sup>  
General population - Dermal; Long term systemic effects: 580 mg/kg/day  
General population - Dermal; Short term systemic effects: 580 mg/kg/day  
General population - Oral; Long term systemic effects: 42 mg/kg/day  
General population - Oral; Short term systemic effects: 42 mg/kg/day

**PNEC:** Fresh water; 0.047 mg/l

## Exposure controls:

**Appropriate engineering controls:** Provide adequate ventilation. Good general ventilation should be adequate to control worker exposure to airborne contaminants.

**Eye/face protection:** Personal protective equipment that provides appropriate eye and face protection should be worn. Chemical splash goggles.

**Hand protection:** Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, wear gloves that are proven to be impervious to the chemical and resist degradation. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.

**Other skin and body protection:** Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.

**Hygiene measures:** Provide eyewash station and safety shower. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke.

**Respiratory protection:** Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties:

**Appearance:** Clear liquid.  
**Colour:** Colourless.  
**Odour:** Odourless.  
**Odour threshold:** Not determined.  
**pH:** pH (diluted solution): 5 - 7 @ 100g/l  
**Melting point:** Not determined.  
**Initial boiling point and range:** Not determined.  
**Flash point:** Not determined.  
**Evaporation rate:** Not determined.  
**Evaporation factor:** Not determined.

[cont...]

## SAFETY DATA SHEET

Urea 40%

Issued: 18/04/2023

Page 5

**Upper/lower flammability or explosive limits:** Not determined.

**Other flammability:** Not determined.

**Vapour pressure:** Not determined.

**Vapour density:** Not determined.

**Bulk density:** ~ 1.10 kg/l

**Solubility(ies):** Not determined.

**Partition coefficient:** Not determined.

**Auto-ignition temperature:** Not determined.

**Decomposition Temperature:** Not determined.

**Viscosity:** Not determined.

**Explosive properties:** Not determined.

**Oxidising properties:** Not determined.

**Other information:**

### 10. STABILITY AND REACTIVITY

**Reactivity:** There are no known reactivity hazards associated with this product.

**Chemical stability:**

**Stability:** Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.

**Possibility of hazardous reactions:** No potentially hazardous reactions known.

**Conditions to avoid:** There are no known conditions that are likely to result in a hazardous situation.

**Incompatible materials:**

**Materials to avoid:** Avoid contact with the following materials: Acids. Alkalis. Nitrates Nitrites. Reacts with calcium hypochlorite or sodium hypochlorite to form the explosive nitrogen trichloride.

**Hazardous decomposition products:** Does not decompose when used and stored as recommended.

### 11. TOXICOLOGICAL INFORMATION

**Information on toxicological effects:**

Toxicological information on ingredients.

**Urea**

**Acute toxicity – oral:**

**Acute toxicity oral (LD<sub>50</sub> mg/kg):** 14,300.0

**Species:** Rat

**Notes (oral LD<sub>50</sub>):** Based on available data the classification criteria are not met.

**ATE oral (mg/kg):** 14,300.0

**Acute toxicity – dermal:**

**Notes (dermal LD<sub>50</sub>):** Based on available data the classification criteria are not met.

[cont...]

## SAFETY DATA SHEET

Urea 40%

Issued: 18/04/2023

Page 6

### Acute toxicity – inhalation:

**Notes (inhalation LC<sub>50</sub>):** Based on available data the classification criteria are not met.

### Skin corrosion/irritation:

**Animal data:** Based on available data the classification criteria are not met.

### Serious eye damage/irritation:

**Serious eye damage/irritation:** Based on available data the classification criteria are not met.

### Respiratory sensitisation:

**Respiratory sensitisation:** Based on available data the classification criteria are not met.

### Skin sensitisation:

**Skin sensitisation:** Based on available data the classification criteria are not met.

### Germ cell mutagenicity:

**Genotoxicity - in vitro:** Based on available data the classification criteria are not met.

### Carcinogenicity:

**Carcinogenicity:** NOAEL 2250 mg/kg, Oral, Rat.

Based on available data the classification criteria are not met.

### Reproductive toxicity

**Reproductive toxicity – fertility:** Based on available data the classification criteria are not met.

**Reproductive toxicity – development:** Based on available data the classification criteria are not met.

### 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:

**Aspiration hazard:** Not relevant. Solid.

**Inhalation:** No specific symptoms known.

**Ingestion:** No specific symptoms known.

**Skin contact:** No specific symptoms known.

**Eye contact:** No specific symptoms known.

[cont...]

## SAFETY DATA SHEET

Urea 40%

Issued: 18/04/2023

Page 7

### 12. ECOLOGICAL INFORMATION

Ecological information on ingredients.

Urea

**Ecotoxicity:** Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

**Toxicity:**

Ecological information on ingredients.

Urea

**Toxicity:** Based on available data the classification criteria are not met.

**Acute aquatic toxicity:**

**Acute toxicity – fish:** LC<sub>50</sub>, 96 hour: 6810 mg/l, Fish

**Acute toxicity – aquatic invertebrates:** EC<sub>50</sub>, 24 hour: 10000 mg/l, Freshwater invertebrates

**Acute toxicity – aquatic plants:** NOEC, 192 hour: 47 mg/l, Algae

**Persistence and degradability:**

Ecological information on ingredients.

Urea

**Persistence and degradability:** The product is readily biodegradable.

**Bioaccumulative potential:**

**Partition coefficient:** Not determined.

Ecological information on ingredients.

Urea

**Bioaccumulative potential:** Bioaccumulation is unlikely.

**Mobility in soil:**

Ecological information on ingredients.

Urea

**Mobility:** The product is water-soluble and may spread in water systems.

**Results of PBT and vPvB assessment:**

Ecological information on ingredients.

Urea

**Results of PBT and vPvB assessment:** This substance is not classified as PBT or vPvB according to current UK criteria.

**Other adverse effects:**

Ecological information on ingredients.

Urea

**Other adverse effects:** None known.

[cont...]

## SAFETY DATA SHEET

Urea 40%

Issued: 18/04/2023

Page 8

### 13. DISPOSAL CONSIDERATIONS

#### Waste treatment methods:

**General information:** The generation of waste should be minimised or avoided wherever possible. Reuse or recycle products wherever possible. Disposal of this product, process solutions, residues and by products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. Dispose of contents/container in accordance with local regulations.

**Disposal methods:** Dispose of contents/container in accordance with local regulations.

### 14. TRANSPORT INFORMATION

**General:** The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

**UN number:** Not applicable.

**UN proper shipping name:** Not applicable.

**Transport hazard class(es):** No transport warning sign required.

**Packing group:** Not applicable.

#### Environmental hazards:

**Environmentally hazardous substance/marine pollutant:** No.

**Special precautions for user:** Not applicable.

**Transport in bulk according to Annex II of MARPOL and the IBC Code:**

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:** Not applicable.

### 15. REGULATORY INFORMATION

#### Safety, health and environmental regulations/legislation specific for the substance or mixture:

**National regulations:** Health and Safety at Work etc. Act 1974 (as amended).  
Control of Substances Hazardous to Health Regulations 2002 (as amended).  
The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"].  
EH40/2005 Workplace exposure limits.  
GB CLP Regulation.  
The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020 (SI 2020 No. 1577) (as amended).

**Chemical safety assessment:** No chemical safety assessment has been carried out.

[cont...]



# SAFETY DATA SHEET

Urea 40%

Issued: 18/04/2023

Page 9

**Note:** The regulatory information given above only indicates the principal regulations specifically applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

## 16. OTHER INFORMATION

### Abbreviations and acronyms used in the safety data sheet:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.

RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.

IATA: International Air Transport Association.

ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air.

IMDG: International Maritime Dangerous Goods.

CAS: Chemical Abstracts Service.

ATE: Acute Toxicity Estimate.

LC50: Lethal Concentration to 50 % of a test population.

LD50: Lethal Dose to 50% of a test population (Median Lethal Dose).

EC<sub>50</sub>: 50% of maximal Effective Concentration.

PBT: Persistent, Bioaccumulative and Toxic substance.

vPvB: Very Persistent and Very Bioaccumulative.

DNEL: Derived No Effect Level.

PNEC: Predicted No Effect Concentration.

REACH: The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020 No. 1577.

NOEC: No Observed Effect Concentration.

NOAEL: No Observed Adverse Effect Level.

UN: United Nations.

IBC: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk (International Bulk Chemical Code).

**Legal disclaimer:** The information contained in this SDS does not constitute a risk assessment, and should not replace the user's own assessment of risks as required by other health and safety legislation. This advice is given by Nexchem Ltd who accept no legal liability for it except otherwise provided by law. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.