

NEWFUTURE CHEMICALS CO.,LTD

***Material Safety Data sheet***

**Hydroxyurea**

**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**PRODUCT NAME:** Hydroxyurea  
**OTHER/GENERIC NAMES:** Hydroxycarbamide  
**PRODUCT USE:** Industrial chemical  
**MANUFACTURER:** Shangrao Newfuture Environment Protection Technology Co.,Ltd. (<http://www.xwlhb.com>)  
Jinshan industrial zone, Yushan, Shangrao, Jiangxi  
Zip code:334700

**FOR MORE INFORMATION CALL:** (Monday-Friday, 9:00am-4:30pm)  
86-793-2365518

**IN CASE OF EMERGENCY CALL:** (24 Hours/Day, 7 Days/Week)  
86-793-2365516

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

<u>INGREDIENT NAME</u>	<u>CAS NUMBER</u>	<u>WEIGHT %</u>
Hydroxyurea	127-07-1	> 98

Trace impurities and additional material names not listed above may also appear in Section 15 towards the end of the MSDS. These materials may be listed for local "Right-To-Know" compliance and for other reasons.

**3. HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW:** Material is white to off-white crystalline powder.

**Warning!** Mutagen. May cause eye and skin irritation. May cause respiratory and digestive tract irritation. May cause blood abnormalities. May cause bone marrow depression.

**Target Organs:** Blood, bone marrow.

**POTENTIAL HEALTH HAZARDS**

**SKIN:** Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

**EYES:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

**INHALATION:** Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

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**INGESTION:** May cause bone marrow depression. Ingestion of large amounts may cause nausea and vomiting, which can produce dehydration, internal organ congestion and possibly coma. May cause microcytosis (smaller than normal red blood cells), normocytic anemia (reduced red blood cell count), leukopenia (reduced white blood cell count), thrombocytopenia (decreased number of blood platelets) and other blood abnormalities.

**CHRONIC:** Laboratory experiments have resulted in mutagenic effects. This substance has caused adverse reproductive and fetal effects in laboratory animals. Hydroxyurea inhibits DNA synthesis in humans. High or repeated exposure may affect the liver and kidney and damage the central nervous system as well as cause hair loss and skin rashes.

### 4. FIRST AID MEASURES

**SKIN:** In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

**EYES:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

**SERIOUS EYES:** Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

**INHALATION:** Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

**INGESTION:** Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

**SERIOUS INGESTION:** Not available.: Not additional instructions. Treat according to symptoms present

### 5. FIRE FIGHTING MEASURES

**Auto-Ignition Temperature:** Not available.

**Flash Points:** Not available.

**Flammable Limits:** Not available.

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**Products of Combustion:** These products are carbon oxides (CO, CO<sub>2</sub>), nitrogen oxides (NO, NO<sub>2</sub>...).

**Fire Hazards in Presence of Various Substances:**

Slightly flammable to flammable in presence of heat.

Non-flammable in presence of shocks.

**Explosion Hazards in Presence of Various Substances:**

Risks of explosion of the product in presence of mechanical impact: Not available.

Risks of explosion of the product in presence of static discharge: Not available.

**Fire Fighting Media and Instructions:**

SMALL FIRE: Use DRY chemical powder.

LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

**Special Remarks on Fire Hazards:** Not available.

**Special Remarks on Explosion Hazards:** Not availabl.

### 6. ACCIDENTAL RELEASE MEASURES

**Small Spill:**

Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

**Large Spill:**

Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

### 7. HANDLING AND STORAGE

**Precautions:**

Keep locked up.. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents.

**Storage:** Sensitive to moisture. Hygroscopic. Keep container tightly closed. Keep container in a cool, well-ventilated area.

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### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### **Engineering Controls:**

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

#### **Personal Protection:**

Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

#### **Personal Protection in Case of a Large Spill:**

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

**Exposure Limits:** Not available.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>APPEARANCE:</b>	white to off-white
<b>PHYSICAL STATE:</b>	Crystalline powder
<b>MOLECULAR WEIGHT:</b>	76.04
<b>CHEMICAL FORMULA:</b>	CH <sub>4</sub> N <sub>2</sub> O <sub>2</sub>
<b>ODOR:</b>	Not available
<b>PH:</b>	Not available
<b>SPECIFIC GRAVITY (water = 1.0):</b>	Not available
<b>SOLUBILITY</b>	Easily soluble in cold water, hot water. Slightly soluble in alcohol
<b>BOILING POINT:</b>	Decomposes
<b>MELTING POINT:</b>	285.8°F (141°C)
<b>VAPOR PRESSURE:</b>	Not determined
<b>VAPOR DENSITY (air = 1.0):</b>	Not determined
<b>EVAPORATION RATE:</b>	Not determined
<b>VISCOSITY:</b>	Not available
<b>FLASH POINT:</b>	Not determined
<b>AUTOIGNITION TEMPERATURE::</b>	Not determined

### 10. STABILITY AND REACTIVITY

**STABILITY:** The product is stable.

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**INSTABILITY TEMPERATURE:** Not available.

**CONDITIONS OF INSTABILITY:** Excessive heat, moisture.

**INCOMPATIBILITY WITH VARIOUS SUBSTANCES:** Reactive with oxidizing agents.

**CONOSIVITY:** Not available.

**SPECIAL REMARKS ON REACTIVITY:** Sensitive to moisture. Hygroscopic.

**SPECIAL REMARKS ON CONOSIVITY:** Not available.

**HAZARDOUS DECOMPOSITION PRODUCTS:**

Nitrogen oxides, carbon monoxide, carbon dioxide.

**HAZARDOUS POLYMERIZATION:**

Has not been reported.

### 11. TOXICOLOGICAL INFORMATION

**ROUTES OF ENTRY:** Inhalation. Ingestion.

**TOXICITY TO ANIMALS:** Acute oral toxicity (LD50): 5760 mg/kg [Rat].

**CHRONIC EFFECTS ON HUMANS:**

CARCINOGENIC EFFECTS: 3 (Not classifiable for human.) by IARC.

MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast.

**OTHER TOXIC EFFECTS ON HUMANS:** Hazardous in case of skin contact (irritant), of ingestion, of inhalation.

**SPECIAL REMARKS ON TOXICITY TO ANIMALS:** Not available.

**SPECIAL REMARKS ON CHRONIC EFFECTS ON HUMANS:**

May cause adverse reproductive effects(post-implantation mortality and fetotoxicity) and birth defects based on animal data.

May affect genetic material.

May cause cancer based on animal data. Human data found.

**SPECIAL REMARKS ON OTHER TOXIC EFFECTS ON HUMANS:**

**Acute Potential Health Effects:**

**Skin:** May cause skin irritation. High exposure may cause hair loss and skin rash.

**Eyes:** May cause eye irritation.

**Inhalation:** May cause respiratory tract irritation with coughing and dyspnea.

**Ingestion:** Ingestion of large amounts may cause digestive tract irritation with sore mouth, stomach pain, nausea,vomiting, hypermotility, and diarrhea. May cause bone marrow depression and reduce the marrow's ability to make white blood cells (reduced resistance to infection), blood latelets(increased bleeding tendency), and red blood cells (anemia,

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weakness). High exposure can also affect the metabolism, liver, kidneys, and damage the nervous system/affect behavior(drowsiness, somnolence, disorientation, hallucinations, convulsions).

**Chronic:** Potential Health Effects:

### 12. ECOLOGICAL INFORMATION

**ECOTOXICITY:** Not available.

**BOD5 AND COD:** Not available.

**PRODUCTS OF BIODEGRADATION:**

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**TOXICITY OF THE PRODUCTS OF BIODEGRADATION:**

The product itself and its products of degradation are not toxic.

**SPECIAL REMARKS ON THE PRODUCTS OF BIODEGRADATION:**

Not available.

### 13. DISPOSAL CONSIDERATIONS

**Waste Disposal:**

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

### 14. TRANSPORT INFORMATION

**DOT CLASSIFICATION:** Not a DOT controlled material (United States).

**IDENTIFICATION:** Not applicable.

**SPECIAL PROVISIONS FOR TRANSPORT:** Not applicable.

### 15. REGULATORY INFORMATION

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Hydroxyurea

California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: Hydroxyurea New Jersey: Hydroxyurea

**Other Regulations:** EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

**Other Classifications:**

**WHMIS (Canada):** Not controlled under WHMIS (Canada).

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### **DSCL (EEC):**

R33- Danger of cumulative effects.

R36/38- Irritating to eyes and skin.

R40- Possible risks of irreversible effects.

S2- Keep out of the reach of children.

S24/25- Avoid contact with skin and eyes.

S36/37- Wear suitable protective clothing and gloves.

S46- If swallowed, seek medical advice immediately and show this container or label.

### **HMIS (U.S.A.):**

**Health Hazard: 2      Fire Hazard: 1      Reactivity: 0**

**Personal Protection: E**

### **National Fire Protection Association (U.S.A.):**

**Health: 2                  Flammability: 1      Reactivity: 0**

### **Specific hazard:**

### **Protective Equipment:**

Gloves.

Lab coat.

Dust respirator. Be sure to use an.

approved/certified respirator or.

equivalent.

Splash goggles.

## **16. OTHER INFORMATION**

**CURRENT ISSUE DATE:** August 6, 2005.

**PREVIOUS ISSUE DATE:** October 28, 2004.

**CHANGES TO MSDS FROM PREVIOUS ISSUE DATE ARE DUE TO THE FOLLOWING:**

Amended:

Information Telephone Number, Section 1.

Respiratory Protection, Section 8.

Exposure Guidelines (corrected typo.), Section 8.

Transport Information, Section 14,

Foreign Inventory Status, Section 15.

**OTHER INFORMATION:** None.