

NEWFUTURE CHEMICALS CO.,LTD

***Material Safety Data sheet***

**N-Hydroxysuccinimide**

**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**PRODUCT NAME:** N-Hydroxysuccinimide  
**OTHER/GENERIC NAMES:** 1-Hydroxy-2,5-Pyrrolidinedione  
**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>
N-Hydroxysuccinimide	6066-82-6	> 99

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 Appearance: white crystalline powder.  
**Warning!** Irritant. Causes eye and skin irritation. May cause respiratory and digestive tract irritation. Hygroscopic (absorbs moisture from the air). The toxicological properties of this material have not been fully investigated.

**Target Organs:** No data found.

**POTENTIAL HEALTH HAZARDS**

**SKIN:** Causes skin irritation.  
**EYES:** Causes eye irritation. May cause chemical conjunctivitis.  
**INHALATION:** May cause respiratory tract irritation. Can produce delayed pulmonary edema.  
**INGESTION:** May cause gastrointestinal irritation with nausea, vomiting and diarrhea.  
**CHRONIC:** Effects may be delayed.

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### **4. FIRST AID MEASURES**

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

**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. Do NOT use mouth-to-mouth resuscitation.

**INGESTION:** Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

**Notes to Physician:** Treat symptomatically and supportively.

### **5. FIRE FIGHTING MEASURES**

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Dusts at sufficient concentrations can form explosive mixtures with air. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Will burn if involved in a fire. Containers may explode in the heat of a fire. Runoff from fire control or dilution water may cause pollution.

**Extinguishing Media:** In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam. Use water spray to cool fire-exposed containers.

**Flash Point:** 347°F(175°C)

**Autoignition Temperature:** Not available.

**Explosion Limits, Lower:**Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health:2; Flammability: 1; Instability: 0.

### **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.

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### **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 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 breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes.

#### **Storage:**

Keep container dry. Keep in a cool place. Ground all equipment containing material. Keep container tightly closed. Keep in a cool, well-ventilated place. Combustible materials should be stored away from extreme heat and away from strong oxidizing agents.

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

**Engineering Controls:** N-Hydroxysuccinimide: No OSHA Vacated PELs are listed for this chemical.

**OSHA Vacated PELs:** Ethoxyamine Hydrochloride: No OSHA Vacated PELs are listed for this chemical.

#### **Personal Protective Equipment**

**Skin:** Wear appropriate protective gloves and clothing to prevent skin exposure.

**Eyes:** Wear safety glasses and chemical goggles if splashing is possible. Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Clothing:** Wear appropriate protective clothing to minimize contact with skin.

**Respirators:** A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

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### 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	white
PHYSICAL STATE:	Crystalline powder
pH:	Not available
MOLECULAR WEIGHT:	115.09
CHEMICAL FORMULA:	C <sub>4</sub> H <sub>5</sub> NO <sub>3</sub>
ODOR:	None reported
SPECIFIC GRAVITY (water = 1.0):	Not available
SOLUBILITY:	soluble
BOILING POINT:	Not available
Freezing/Melting Point:	199.4~203°F (93~95°C)
Decomposition Temperature:	347°F (175°C)
VAPOR PRESSURE(kpa):	Not available
VAPOR DENSITY (air = 1.0):	Not available
EVAPORATION RATE:	Not determined

### 10. STABILITY AND REACTIVITY

**Chemical Stability:** Stable at room temperature in closed containers under normal storage and handling conditions.

**Conditions to Avoid:** Incompatible materials, dust generation, excess heat, strong oxidants, exposure to moist air or water.

**Incompatibilities with Other Materials:** Moisture.

**Hazardous Decomposition Products:** Nitrogen oxides, carbon monoxide, irritating and toxic fumes and gases, carbon dioxide, nitrogen.

**Hazardous Polymerization:** Has not been reported.

### 11. TOXICOLOGICAL INFORMATION

No information available.

### 12. ECOLOGICAL INFORMATION

No information available.

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### **13. DISPOSAL CONSIDERATIONS**

**Waste Disposal:**

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

### **14. TRANSPORT INFORMATION**

No information available.

### **15. REGULATORY INFORMATION**

**FOREIGN INVENTORY STATUS:**

One the EINECS inventory. EINECS №: 228-001-3

### **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.