



**UNITED**  
INTERNATIONAL INC.

**United International Co., Ltd.**

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## Material Safety Data Sheet

### GAMMA HEXALACTONE

United International Co., Ltd. asks to its customers receiving this material safety data sheet to study it carefully in order to know the dangers presented by the product and to inform its employees, agents, and sub-contractors. The end user is responsible for the handling and the storage of the product to refer to legislative, regular and administrative up to date texts, concerning the protection of the workers and the population and the environmental. This information is based on our current level of knowledge given by our own suppliers.

Date/revised: Aug. 11, 2011	Date issued: Dec. 04, 2008
Product: Gamma hexalactone	

#### 1. Substance/preparation and company name

**Company:**

United International Co., Ltd.

18/F, Huaren International Building, 2A Shandong Road, Qingdao, China - 266071

#### 2. Composition/information on ingredients

**Chemical name:** Gamma hexalactone

**CAS No.:** 695-06-7

**FEMA No.:** 2556

**FDA No.:** 172.515

**CE No.:** 2254c

**EINECS No.:** 211-778-8

#### 3. Physical and chemical properties

**Appearance:** Colorless to pale yellow liquid

**Formula:**  $C_6H_{10}O_2$

**Molecular weight:** 114.14

**Boiling point:** 219 °C

**Refractive index:** 1.4370-1.4420

**Density:** 1.020-1.025g/cm<sup>3</sup>

**Odor:** Slight sweet aroma of herb

**Assay:** 99.0% min.

#### 4. Hazards identification

**Human hazardous:** In his pure state, and when it is not correctly manipulated or when inhaled excessively, product can cause irritation of the skin, eyes and respiratory tracks.

**Environment hazardous:** If leaked, product can pollute subsoil, soil and superficial water.

#### 5. First aid measures

**Inhalation:** In case of excessive inhalation, expose the person to fresh air and if necessary, obtain medical assistance.

**Eyes:** Immediately rinse eyes with water. If any sign of tissue damage or persistent irritation is apparent, obtain medical assistance immediately.

**Skin:** Remove contaminated clothing. Wash skin immediately with water and soap. If any sign of tissue damage or persistent irritation is apparent obtain medical assistance immediately

**Ingestion:** Rinse mouth with water. Obtain medical assistance immediately. Do not induce vomiting.

## 6. Fire fighting and measures

**Flash point:** 104°C

**Explosion Limits:** N/A

**Individual protection equipments:** Use general extinction equipments for fire fighting and use breathing equipment. Avoid inhalation of fumes and vapours.

**Suitable extinguishing media:** CO<sub>2</sub>, extinction powder or foam. Do not use: water directly.

## 7. Accidental release measures

**Person-related precautionary measures:** Remove all sources of ignition. In case of existing, avoid breathing combustion vapours. Provide proper ventilation. Avoid breathing vapours. Avoid the contact with the skin, eyes and mucous.

**Environmental-protection measures:** Spillages should be contained by use of sand or another inert material. Avoid penetration in the sewage system and surface water.

**Methods for cleaning:** Spillages should be contained by use of sand or another inert material. All the materials used for cleaning spillages should be disposed of promptly in accordance with current legislation.

## 8. Handling and storage

**Handling:** Apply according to good manufacturing and industrial hygiene practices. Respect good personal hygiene practices. Do not drink, eat or smoke during manipulation. Respect the precaution rules of the industrial risks. Keep away from sources of ignition. The incorporation to the finished product must be done at the lowest possible temperature. Ensure good ventilation of work station

**Storage:** Store according to the local and/or national storage rules, respecting the precautions printed on the labels. Store in hermetic recipients, better full, in cool, dry and ventilated areas away from heat sources and protected from light. Keep air contact to a minimum. Keep away from sources of ignition and flames. Fulfil the chemical agent storage regulation. Do not store this product near any kind of food, or drinkable water.

## 9. Exposure controls and personal protection

**Respiratory protection:** Required when vapors/aerosols are generated.

**Hand:** Use chemical resistant gloves.

**Eyes:** Use safety glasses.

**Skin:** Avoid skin contact.

**Environment exposure control:** Avoid discharging into drainage water. Only eliminate by authorized companies.

## 10. Stability and reactivity

**Chemical stability:** Stable under normal conditions

**Conditions to avoid:** High temperatures, pressure and inadequate manipulation of packages.

**Incompatibilities with other materials:** Acid, alkaline and oxidizing agents

**Hazardous decomposition products:** Under normal conditions of storage are not known

dangerous substances in decomposition.

<b>11. Toxicological information</b>
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**LD<sub>50</sub> Oral, rat:** 1650 mg/Kg

<b>12. Ecological information</b>
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N/A

<b>13. Disposal considerations</b>
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Dispose of in a manner consistent with federal, state, and local regulations.

<b>14. Transport information</b>
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**Emergency TEL:** +86-532-86069596; 83891505~9

<b>15. Regulatory information</b>
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N/A

<b>16. Other information</b>
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**Shelf life:** 12 months minimum in sealed containers protected from light and air

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind expressed or implied is made with respect to the information contained here.