



# Material Safety Data Sheet

Solid Fuel Tablets

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Solid Fuel Tablets  
**Product Use:** Solid Fuel

### Supplier Information

**Company Name:** HANGZHOU NEW LINE CO., LTD.  
**Address:** RM.60H, NO.1 GUODU DEVELOPMENT BLDG., NO.182 ZHAOHUI ROAD,  
HANGZHOU, ZHEJIANG, CHINA.  
**Tel:** 0086-571-85803892  
**Fax:** 0086-571-85803893  
**Email:** ellenhu@mail.hz.zj.cn  
**Emergency Telephone:** 13906521426

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

**Substance/Preparation:** Substance

Ingredients Name	Content/%	CAS NO.	EC NO.	RISK PHRASES
Hexamethylenetetramine	>99	100-97-0	202-905-8	F; R11- R42/43

**Note:** See Section 8 of MSDS for exposure limit data for these ingredients. Full text of risk phrases appearing in section 2: see section 16.

This MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of the product.

## 3. HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

Highly flammable. May cause sensitization by inhalation and skin contact. Hygroscopic (absorbs moisture from the air).

### Potential Health Effects

#### Eye:

Causes eye irritation. Causes redness and pain.

#### Skin:

Causes skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this



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material. Causes redness and pain.

### **Ingestion:**

May cause gastrointestinal irritation with nausea, vomiting and diarrhea.

### **Inhalation:**

Causes respiratory tract irritation. May cause respiratory sensitization.

### **Chronic:**

No information found.

## 4. FIRST AID MEASURES

### **Eyes:**

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

### **Skin:**

Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

### **Ingestion:**

Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. 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.

### **Notes to Physician:**

## 5. FIRE FIGHTING MEASURES

### **General Information:**



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As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Containers may explode in the heat of a fire. Dust can be an explosion hazard when exposed to heat or flame. Flammable solid. May re-ignite after fire is extinguished. May be ignited by friction, heat, sparks, or flame.

### **Extinguishing Media:**

Use water fog, dry chemical, carbon dioxide, or regular foam. Cool containers with flooding quantities of water until well after fire is out.

## **6. ACCIDENTAL RELEASE MEASURES**

### **General Information:**

Use proper personal protective equipment as indicated in Section 8.

### **Spills/Leaks:**

Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up, and then place into a suitable container for disposal. Avoid generating dusty conditions. Remove all sources of ignition. Use a spark-proof tool.

## **7. HANDLING AND STORAGE**

### **Handling:**

Wash thoroughly after handling. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Avoid ingestion and inhalation. Use with adequate ventilation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

### **Storage:**

Keep away from heat, sparks, and flame. Store in a cool, dry place. Keep container closed when not in use. Keep away from strong acids. Flammables-area.

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



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### Engineering Controls:

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Personal Protective Equipment

### Eyes:

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.

### Skin:

Wear appropriate protective gloves to prevent skin exposure.

### Clothing:

Wear appropriate protective clothing to prevent skin exposure.

### Respirators:

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical State:** Tablets

**Color:** white

**Odor:** Not available.

**pH:** Not available.

**Vapor Pressure:** Not available.

**Viscosity:** Not available.

**Boiling Point:** Not available.

**Freezing/Melting Point:** Not available.

**Auto ignition Temperature:** Not available.



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**Flash Point:** 250 deg C

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

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

**Decomposition Temperature:** Not available.

**Solubility in water:** Soluble in water.

**Specific Gravity/Density:** 1.2~1.4(Water = 1)

**Molecular Formula:** C<sub>6</sub>H<sub>12</sub>N<sub>4</sub>

**Molecular Weight:** 140.1108

### 10. STABILITY AND REACTIVITY

**Chemical Stability:**

Stable under normal temperatures and pressures. Hygroscopic: absorbs moisture or water from the air.

**Conditions to Avoid:**

Incompatible materials, dust generation, exposure to moist air or water.

**Incompatibilities with Other Materials:**

Strong oxidizing agents, strong acids, sodium peroxide.

**Hazardous Decomposition Products:**

Nitrogen oxides, carbon monoxide, carbon dioxide, formaldehyde.

**Hazardous Polymerization:** Not available.

### 11. TOXICOLOGICAL INFORMATION

**RTECS#:**

**CAS# 100-97-0:** MN4725000

**LD50/LC50:**

**CAS# 100-97-0:** Oral, mouse: LD50 = 569 mg/kg.

**Carcinogenicity:**



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Hexamethylenetetramine - Not listed by ACGIH, IARC, or NTP.

### Other:

See actual entry in RTECS for complete information.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity:

Fish toxicity: LC50 (96 hr) Pimephales promelas = 49800 mg/l

## 13. DISPOSAL CONSIDERATIONS

Products which are considered hazardous for supply are classified as Special Waste and the disposal of such chemicals is covered by regulations which may vary according to location. Contact a specialist disposal company or the local waste regulator for advice. Empty containers must be decontaminated before returning for recycling.

## 14. TRANSPORT INFORMATION

### IATA

**Shipping Name:** HEXAMETHYLENETETRAMINE

**Hazard Class:** 4.1

**UN Number:** 1328

**Packing Group:** III

### IMO

**Shipping Name:** HEXAMETHYLENETETRAMINE

**UN Number:** 1328

**Packing Group:** III

### RID/ADR

**Shipping Name:** HEXAMETHYLENETETRAMINE



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**Hazard Class:** 4.1

**UN Number:** 1328

**Packing group:** III

## 15. REGULATORY INFORMATION

### European/International Regulations

European Labeling in Accordance with EC Directives

**Hazard Symbols:** XN F

**Risk Phrases:**

R 11 Highly flammable.

R 42/43 May cause sensitization by inhalation and skin contact.

**Safety Phrases:**

S 16 Keep away from sources of ignition – No smoking.

S 22 Do not breathe dust.

S 24 Avoid contact with skin.

S 37 Wear suitable gloves.

### WGK (Water Danger/Protection)

CAS# 100-97-0: 1

### Canada

CAS# 100-97-0 is listed on Canada's DSL List.

CAS# 100-97-0 is listed on Canada's Ingredient Disclosure List.

### US FEDERAL

TSCA

CAS# 100-97-0 is listed on the TSCA inventory.

## 16. OTHER INFORMATION



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### Risk phrases in section 2:

**R 11** Highly flammable.

**R 42/43** May cause sensitization by inhalation and skin contact.

**Issue Date:** Dec. 16, 2008

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\* \* \* END OF MSDS \* \* \*