

# Material Safety Data Sheet

## Part 1 Chemicals and enterprise identification

Chemical Name: Polyhexamethyl biguanide hydrochloride - solid  
Company name: JINING GREEN MOUNTAIN CHEMICAL CO., LTD.  
Address: Jining, Shandong Province, China  
For emergency or additional info. +86-537-227 5079

## Part 2 Hazard identification

Summary of emergencies: Swallowing is harmful. Cause serious eye damage. It may cause allergic reactions to the skin. Fatal by inhalation. Suspected to cause cancer. Prolonged or repeated exposure can cause damage to organs.

### GHS risk Category:

Acute toxicity (oral) class 4  
Severe eye injury/eye irritation category 1  
Class 1B skin sensitizers  
Acute inhalation toxicity Class 2  
Carcinogenicity category 2  
Specific target organ toxicity repeated exposure category 1  
Harm to the aquatic environment -- Acute risk category 1  
Harm to the aquatic environment - Long-term hazard category 1

### Pictogram:



### Warning: Danger

### Risk description:

H302 Harmful to swallowing.  
H318 caused eye damage.  
H317 may cause skin allergic reactions.  
H330 fatal by inhalation.  
H351 is suspected to cause cancer.  
Chronic or repeated exposure to H372 can cause organ damage.  
H410 is highly toxic to aquatic organisms and has long-lasting effects.

### Precautions:

Preventive measures:  
Clean thoroughly after P264 operation.  
P270 Do not eat, drink water or smoke when using this product.  
P280 Wear protective gloves/suits/goggles/masks.  
P261 Avoid inhalation of dust/smoke/gas/smoke/vapor/spray.  
P272 Contaminated work clothes shall not be taken out of the workplace.  
P260 Do not inhale dust/smoke/gas/smoke/vapor/spray.  
P273 To avoid release into the environment.

### **Accident response:**

P301+P312 If swallowed: Call detoxification center/doctor if you feel unwell.

If it gets into the eyes: Rinse carefully with water for a few minutes.

P302+P352 In case of skin contamination: wash thoroughly with water.

P333+P313 In case of skin irritation or rash: seek medical advice/attention.

P304+P340 If inhaled by mistake: move the person to the fresh air, keep breathing comfortable position.

P314 Seek medical advice/advice if you feel unwell.

### **Safe storage:**

P403+P233 shall be stored in a well-ventilated place.Keep container tightly closed.

P405 storage must be locked.

### **Waste disposal:**

P501 Dispose of contents/containers according to local regulations.

Physical and chemical hazards: no data available

Health hazard: Harmful to swallowing.Cause serious eye damage.It may cause allergic reactions to the skin.Fatal by inhalation.Suspected to cause cancer.Prolonged or repeated exposure can cause damage to organs.

Environmental hazards: highly toxic to aquatic organisms and have long-lasting effects.

## **Part 3 Component/component information**

Concentration 19%-21%, Polyhexamethylene biguanide hydrochloride - 20% aqueous solution, CAS 32289-58-0;

Concentration 79%-81%, Water, CAS 7732-18-5;

## **Part 4 First aid measures**

### **Urgent rescue:**

Inhalation: If inhaled, remove to fresh air.

Skin contact: Remove contaminated clothing and rinse skin thoroughly with soap and water.If you feel unwell, seek medical advice.

Eye contact: separate eyelid, flush with flowing water or normal saline.Seek medical attention immediately.

Ingestion: Gargle, do not induce vomiting. Seek medical attention immediately.

**Advice to protect the rescuer:** Move the patient to a safe location.Consult your doctor.Show this chemical safety specification to the on-site doctor.

## **Part 5 Fire protection measures**

### **Fire extinguishing agent:**

Use water spray, dry powder, foam or carbon dioxide extinguishing agent to extinguish the fire.

Avoid the use of direct running water, which may cause splashing of flammable liquids and spread the fire.

**Special risk:** no data available.

### **Fire-fighting Precautions and Protective measures:**

Fire fighters shall wear respirators and full - body fire suits to put out the fire upwind.Remove the container from the fire as much as possible into an open area.

Evacuate immediately if containers in the fire are discolored or emit sound from the safety relief device.

Isolate the scene of the accident and keep out irrelevant personnel.Collect and treat fire water to prevent environmental pollution.

## **Part 6 Emergency response to leaks**

**Operating personnel protective measures, protective equipment and emergency disposal procedures:**

It is recommended that emergency responders wear respirators, antistatic clothing and rubber oil-resistant gloves.

Do not touch or cross the spill.

All equipment used in the operation shall be earthed.

Cut off the source as much as possible.

Eliminate all ignition sources.

**Environmental protection measures:**

Absorb leakage and avoid polluting the environment. Prevent leakage into sewers, surface water and groundwater.

**Methods of receiving and removing spilled chemicals and materials used for disposal:**

Small leakage: Collect leaking liquids in airtight containers where possible. Absorb with sand, activated carbon or other inert materials and transfer to a safe place. Do not flush into drains.

Large leakage: levee or pit. Seal the drain. Cover with foam to inhibit evaporation. Transfer to tank truck or special collector with explosion-proof pump, recover or transport to waste disposal site.

## Part 7 Operation Disposal and storage

**Operational Considerations:**

Operators should be specially trained and strictly abide by the operating rules.

Handling should be performed in areas with partial or full ventilation facilities.

Avoid contact between eyes and skin, and avoid inhalation of steam.

Keep away from fires and heat sources. Smoking is strictly prohibited in the workplace.

If canning is needed, the flow rate should be controlled and there should be a grounding device to prevent the accumulation of static electricity.

Avoid contact with prohibitions such as oxidants (see Part 10).

Handle with care to prevent damage to packing and container.

Equipped with the appropriate variety and quantity of fire fighting equipment and leakage emergency treatment equipment.

**Precautions for storage:**

Store in a cool, ventilated warehouse.

The temperature should not exceed 37°C.

Keep separate from oxidants and edible chemicals, and avoid mixing them (see Part 10 for prohibited substances).

Keep container sealed.

Keep away from fire and heat.

Explosion-proof lighting and ventilation are adopted.

Do not use spark-prone equipment and tools.

The storage area shall be equipped with leakage emergency treatment equipment and appropriate containment materials.

## Part 8: Contact control/personal protection

Engineering control:

Closed operation to prevent leakage.

Enhance ventilation.

Set up automatic alarm device and emergency ventilation facilities.

Emergency evacuation routes and necessary evacuation areas shall be set up.

Provide safe shower and eye washing facilities.

Personal protective Equipment:

Respiratory protection: When the concentration in the air exceeds the limit, wear a filter type gas mask (half mask).

Hand protection: Wear rubber oil - resistant gloves.

Eye protection: Wear chemical safety eye protection.

Skin and body protection: Wear permeable protective clothing.

## **Part 9 Physical and chemical properties**

Appearance and appearance: White to yellowish liquid

Odour: Odourless

PH value: 3.0-7.0

Melting point/freezing point (°C) : No data available

Boiling point, initial boiling point and boiling range (°C) : No data available

Spontaneous combustion temperature (°C) : No data available

Flash point (°C) : No data available

Decomposition temperature (°C) : No data available

Evaporation rate [butyl acetate in 1] : no data available

Saturation vapor pressure (kPa) : No data available

Flammability (solid, gas) : no data available

Relative density (water in 1) : No data available

Vapor density (air in 1) : no data available

Odor threshold (mg/m<sup>3</sup>) : No data available

N-octyl alcohol/water partition coefficient (LG P) : no data available

Solubility: Soluble in water

Viscosity: no data available

## **Part 10 Stability and reactivity**

Stability: The product is stable when stored and used at normal ambient temperature.

Hazard response: No data available.

Avoid contact conditions: electrostatic discharge, heat, moisture, etc.

Banned substances: strong oxide, strong acid, strong base.

Dangerous decomposition products: no data available.

## **Part 11 Toxicological information**

Information on the likely routes of exposure:

Ingestion (swallowing), skin/eye exposure and inhalation.

Symptoms related to the physical, chemical and toxicological characteristics: /

Acute health effects:

Ingestion may cause symptoms such as nausea, vomiting and abdominal pain.

Skin contact may cause redness and irritation.

Inhalation may be fatal and cause cough, throat irritation.

Eyes contact can cause pain and irritation.

Chronic health effects:

Repeated or prolonged contact may cause skin sensitization and damage respiratory tract.

Numerical measures of toxicity(such as acute toxicity stimates): /

**Acute toxicity:**

Oral: No data available.

Inhalation: No data available.

Percutaneous: No data available.

**Skin irritation or corrosion:** No data available.

**Eye irritation or corrosion:** No data available.

**Respiratory or skin allergies:** No data available.

**Germ cell mutation:** No data available.

**Carcinogenicity:** No data available.

**Reproductive toxicity:** No data available.

**Specific target organ system toxicity - one exposure:** No data.

**Specific target organ system toxicity - repeated exposure:** No data available.

**Inhalation hazard:** No data available.

## **Part 12 Ecological information**

**Ecotoxicity:**

Acute toxicity test of fish: No data available

Daphnia acute activity inhibition test: No data available

Algal growth inhibition test: No data available

Toxicity to microorganisms: No data available

**Persistence and degradation:** no data available.

**Bioaccumulation or bioaccumulation:** no data available.

**Migration in soils:** no data available.

## **Part 13 Waste disposal**

**Waste chemicals:** Recycle whenever possible.

If it cannot be recycled, incineration is used for disposal. This product shall not be disposed of by means of drainage.

**Contaminated packaging:** Return the container to the manufacturer or dispose of it in accordance with national and local regulations.

**Attention to waste:** Before disposal of waste should refer to the relevant national and local regulations.

See Section 8 for safety precautions for disposal personnel.

## **Part 14 Transport information**

**UN Number:** 2810

**UN proper shipping name:** Toxic liquid, organic, n.o.s. (Polyhexamethylene biguanide hydrochloride)

**Classification of transportation hazards:** 6.1

**Packaging categories:** II

Marine pollutants (yes/no) : Yes

Environmental hazards: Severe marine pollutant.

## **Part 15 Regulatory information**

**Relevant laws and regulations in China:**

《Railway Management Rules for The Carriage of Dangerous Goods》

《Hazardous Chemicals Safety Management Ordinance》

**Part 16 Additional information**

The above information is considered correct but does not claim to be complete and should be used only as a guide. The information in this document is based on our current knowledge and applies to the appropriate safety precautions for the product. It does not represent any guarantee of the performance of the product.

The Company and its subsidiaries shall not be liable for any damage caused by handling or contact with the above products. Please refer to the back of the invoice or packing list for additional terms of sale.