

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT

General Product Name: Glyphosate Technical

CAS Number: 1071-83-6

Molecular Formula: $C_3H_8O_5NP$

Molecular Weight: 169

2. COMPOSITION/ INFORMATION ON INGREDIENTS

This product contains no hazardous materials.

3. HAZARDS IDENTIFICATION

Environmental Hazards: NA

Health Hazards: Have a little stimulation to the skin and eyes.

4. FIRST AID MEASURES

EYE CONTACT:

Irrigate eyes with a certain amount of water or physiological saline. If there are persistent symptoms, obtain medical advice.

INHALATION:

Remove to fresh air; seek medicinal attention if symptoms persist.

SKIN CONTACT:

Immediately wash affected skin with plenty of water. Take off contaminated clothing, wristwatch, jewellery. Wash clothes before re-use.

INGESTION:

Immediately offer water to drink. Never give anything by mouth to an unconscious person. Do not induce vomiting unless directed by medical personnel. If symptoms occur, get medical attention.

5. FIRE FIGHTING MEASURES

Flash Point: $130.0^{\circ}C$ or $266.0^{\circ}F$ min.

EXTINGUISHING MEDIA:

Recommended: Water, foam, dry chemical, carbon dioxide (CO_2)

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Minimize use of water to prevent environmental contamination.

HAZARDOUS PRODUCT OF COMBUSTION

Carbon monoxide (CO), nitrogen oxides (NO_x), phosphorus oxides (P_xO_y).

FIRE FIGHTING EQUIPMENT

Self-contained breathing apparatus. Equipment should be thoroughly decontaminated after use.

6. ACCIDENTAL RELEASE MEASURES SPILL CLEAN-UP PROCEDURES

Remove sources of ignition, contain spill to smallest area possible. Stop leak if possible. Pick up small spills with absorbent materials and dispose of properly to avoid spontaneous combustion.

Recover large spills for salvage or disposal. Wash hard surfaces with safety solvent or detergent to remove remaining oil film. Greasy nature will result in a slippery surface.

7. HANDING AND STORAGE

Store in closed containers between $50^{\circ}F$ and $120^{\circ}F$

Keep away from oxidizing agents, excessive heat, and ignition sources.

Store and use in well ventilated areas.

Do not store or use near heat, spark or flame, store out of sun.

Do not puncture, drag, or slide this container.

Drum is not a pressure vessel; never use pressure to empty.

8. EXPOSURE CONTROL/ PERSONAL PROTECTION**RESPIRATION PROTECTION:**

If vapors or mists are generated, wear an authorization approved organic vapor/mist respirator.

PROTECTIVE CLOTHING:

Safety glasses, goggles, or face shield recommended to protect eyes from mists or splashing. PVC coated gloves recommended to prevent skin contact.

OTHER PROTECTIVE MEASURES:

Employees must practice good personal hygiene, washing exposed areas of skin several times daily and laundering contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Items	Value
Nature	Non-volatile crystal
Appearance	White powder
Glyphosate content, %(m/m)	97.0 min
Weight loss after drying, %(m/m)	1.0 max
Insoluble in water, %(m/m)	0.2 max
Other impurity, %	1.8 max

10. STABILITY AND REACTIVITY**GENERAL:**

This product is stable and hazardous polymerization will not occur.

INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID:

Strong oxidizing agents

HAZARDOUS RECOMPOSITION PRODUCTS:

Combustion produces carbon monoxide, carbon dioxide along with thick smoke.

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Ingestion: No adverse effects expected, however, large amounts may cause nausea and vomiting.

Eye contact: An eye irritant.

Skin contact: Contact with skin may result in irritation.

Inhalation: Material may be irritant to the mucous membranes of the respiratory tract (airways).

Long Term Effects: No information available for the product.

Toxicological Data: Oral LD50 (rat): 4873 mg/kg.

12. ECOLOGICAL INFORMATION

Ecotoxicity: Avoid contaminating waterways.

Aquatic toxicity:

Toxic to aquatic organisms. May cause long term adverse effects in the aquatic environment.

LC50 - *Oncorhynchus mykiss* - 1.1 mg/l - 96.0 h

EC50 - *Daphnia magna* - 2.95 mg/l - 48 h

13. DISPOSAL CONSIDERATION

WASTE DISPOSAL:

Waste may be disposed by a licensed waste disposal company. Contaminated absorbent material may be disposed of in an approved landfill. Follow local, state and national disposal regulations.

14. TRANSPORT INFORMATION

14.1 DOT

Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

IATA

Non-Hazardous for Air Transport: Non-Hazardous for Air Transport.

IMO

Non-Hazardous for sea Transport: Non-Hazardous for sea Transport.

ADR/RID Class: None

Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

UN Name: None.

Packaging Requirements: The product can be shipped in all modes of transportation. Suggested Packaging is Bags.

15. REGULATORY INFORMATION

Chemical Safety Management of Dangerous Goods Regulations (issued by State Department on 17 Feb 1987) and Chemical Safety Management of Dangerous Goods Regulations Ordinance have been issued against safe using, production, storage, transportation, loading the hazardous chemical goods. In the 6.1 section of Dangerous Chemical Common Use Classification and Signs, it has been categorized as one of the poison commodities.

16. OTHER INFORMATION

Above information is to the best knowledge of company and believed accurate and reliable. However, no presentation, warranty or guarantee of any kind, express or implied, is made as to its accuracy, reliable or completeness and we assume no responsibility for any loss, damage or expense, direct or consequential, arising out of use. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use.

17. MANUFACTURER INFORMATION

Manufacturer: Sichuan Hebang Biotechnology Co., Ltd.

Address: Niu Hua Town, Wutongqiao District, Leshan, Sichuan, China

Tel.: +86-0833-3207565 Fax: +86-0833-3205569