

# MATERIAL SAFETY DATA SHEET

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## Section 1 - Identification of Chemical Product and Company

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**Company:** Spectra Chemicals and Commodities (Shanghai) Co.,Ltd.

Tel: 0086-21-68754315

Fax: 0086-21-68754341

E-mail: md@spectra.com.cn

**Product Name:** Glyphosate Technical

**Creation Date:** 25<sup>th</sup>, July 2004

**Revision Date:** 24<sup>th</sup>, July 2008

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## Section 2 - Hazards Identification

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### EMERGENCY OVERVIEW

**Warning!** Causes eye irritation. Harmful if swallowed or inhaled. May cause skin irritation.

### POTENTIAL HEALTH EFFECTS

**Inhalation:** Occupational exposure to this product has been reported to cause respiratory tract irritation. Symptoms include coughing, sneezing, wheezing, and blood-tinged mucous.

**Eye Irritation:** Direct contact may temporary eye irritation and conjunctivitis.

**Skin Absorption:** Prolonged contact may cause skin irritation.

**Ingestion:** Ingestion has been reported to produce gastro-intestinal discomfort with irritation of the mouth, nausea, vomiting, and diarrhea. Oral ingestion of large quantities of concentrated product has been reported to result in hypotension and pulmonary edema.

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## Section 3 - Composition/Information on Ingredients

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| Ingredients       | CAS No    | Proportion |
|-------------------|-----------|------------|
| Glyphosate        | 1071-83-6 | 95% min    |
| Other ingredients |           | 5% max     |

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## Section 4 - First Aid Measures

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**Inhalation:** Remove victim to fresh air. If not breathing, give artificial respiration preferably mouth-to-mouth. Get professional medical attention immediately.

**Eye Contact:** Hold eyelids open and flush with water at least 15-20 minutes until no evidence of chemical remains. Get professional medical attention immediately.

**Skin Contact:** Remove contaminated clothing and shoes. Wash with plenty of soap and water for 25-20 minutes until no evidence of chemical remains. Get professional medical attention immediately.

**Ingestion:** This material will produce gastrointestinal irritation. Immediately dilute by swallowing water or milk. Do not attempt to give anything by mouth to an unconscious person. Get professional medical attention.

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## Section 5 - Fire Fighting Measures

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**Flash point & Method:** >200°F –tag closed cup

**Flammable Limits:** Not applicable

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**Autoignition Temperature:** Not applicable

## **FIRE FIGHTING HAZARDS&PROCEDURES**

**Extinguishing Media:** Use dry Chemical, carbon dioxide, water spray or foam.

**Fire Fighting instructions:** Firefighters or others who may be exposed to vapors or products of combustion should wear full protective clothing and self-contained breathing apparatus. Equipment should be thoroughly cleaned after each use.

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## **Section 6 - Accidental Release Measures**

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**Personal precautions:** Avoid skin contact and take orally.

**Environmental precautions:** Avoid breakage of packages.

**Spill or leak procedures:** Solide spillage should be picked up with an industrial vacuum cleaner and disposed off in accordance with local regulations.

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## **Section 7 - Handling and Storage**

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Avoid contact with eyes, skin, and clothing.

Avoid breathing vapor or spray mist.

Use with adequate ventilation.

Keep container closed.

Wash thoroughly after handling.

Avoid contamination of seed, feed, or foodstuffs.

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## **Section 8 - Exposure Controls and Personal Protection**

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### **PESTICIDE APPLICATIONS&WORKERS**

These workers must refer to the Product Label and Directions for Use attached to the product for Agricultural Use Requirements in accordance with Standard.

### **MANUFACTURING, COMMERCIAL BLENDING, &PACKAGING WORKERS**

**Ventilation:** No special precautions are recommended.

**Respiratory Protection:** Respiratory protection should not be required for normal use and handling. During periods of abnormal exposure that heavy spray or mist, use NIOSH/MSHA approved equipment for pesticide vapor/mist is recommended. The respirator use limitations specified by NOISH/MSHA or the manufacturer must be observed.

**Eye Protection:** Wear chemical safety goggles during mixing/pouring operations or other activities in which eye contact with undiluted material is likely to occur.

**Protective Clothing:** In cases in which prolonged or repeated skin contact with this material may occur, long-sleeved shirt, long pants, and chemical protective (e.g. rubber) gloves are recommended. Wash hands and contaminated skin after handling. Clothing soaked with a solution of this material should be promptly removed and laundered before reuse.

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## **Section 9 - Physical and Chemical Properties**

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|                      |                          |
|----------------------|--------------------------|
| <b>Appearance</b>    | white crystalline powder |
| <b>Odour</b>         | None                     |
| <b>Melting Point</b> | 185±0.5°C                |

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|                            |                           |
|----------------------------|---------------------------|
| <b>Solubility in Water</b> | Soluble in water.         |
| <b>Density:</b>            | 1.704 (20°C)              |
| <b>Explosivity</b>         | None                      |
| <b>Flammability</b>        | Non combustible material. |

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## Section 10 - Stability and Reactivity

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**General:** This material is stable for at least five years under normal conditions of warehouse storage. Heated facilities are not required.

**Incompatible Materials:** Spray solutions of this product should be mixed, stored, or applied only in stainless steel, aluminum, fiberglass, plastic, and plastic-lined containers. DO NOT MIX, STORE, OR APPLY THIS PRODUCT, IN GALVANIZED OR UNLINED STEEL (EXCEPT STAINIZED OR UNLINED STEEL EXCEPT STAINLESS STEEL) CONTAINEEERS OR SRRAY TANKS. This product, or spray solutions of this product react with such containers and tanks to produce hydrogen gas, which may from a highly combustible gas mixture. This gas mixture could flash or explode causing serious personal injury if ignited by open flame, spark, welder's torch, lighted cigarette, or other ignition source.

**Hazardous Decomposition:** None determined

**Hazardous Polymerization:** Material is not known to polymerize. This product can react with caustic (basic) materials to liberate heat. This is not a polymerization, but rather a chemical neutralization in an acid-base reaction.

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## Section 11 - Toxicological Information

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### Acute toxicity :

**Acute oral toxicity:** LD<sub>50</sub> (male and female rats) >5000 mg/kg (Toxicity Category III)

**Acute dermal toxicity :** LD<sub>50</sub> (female rabbits) ≥ 7490 mg/kg

LD<sub>50</sub> (male rabbits) : 5010 mg/kg (Toxicity Category III)

**Acute Inhalation:** LC<sub>50</sub> (4 h) for rats >4.98 mg/l air

**Eye irritation:** Slight eye irritant.

**Skin Irritation:** Non-irritating.

No skin irritation, allergy, or photo allergy was reported in human volunteers following repeated skin exposure. No skin irritation or photo irritation was reported with single skin exposure. No skin allergy was observed in guinea pigs following repeated skin exposure.

Following repeated skin exposure (3-week) to this material at 5-times the intended use concentration, severe skin irritation and systemic toxic effects(death, reduced food consumption, body weight loss, and testicular effects) were observed in rabbits.

Slight to moderate skin irritation was the only effect in rabbits treated with 3-times the intended use concentration. Systemic toxic effects at 5-times use concentration were considered to be a secondary response to the stress of severe skin irritation, to which rabbits are particularly sensitive, rather than the result of direct systemic toxicity. There was no evidence of cholinesterase inhibition in dogs (single oral doses). Minor nasal irritation was observed following repeated inhalation (4-weeks) of a 33% solution of this material by rats. When this material was applied to skin or rhesus monkeys, an extremely low amount (1.8%) of the active ingredient was absorbed.

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## Section 12 - Ecological Information

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**Fish toxicity :** LC<sub>50</sub> (96 h) trout (*Oncorhynchus mykiss*) 8.2 mg/L.

LC<sub>50</sub> (96 h) sunfish (*Lepomis macrochirus*) 5.8 mg/L.

**Invertebrates :** EC<sub>50</sub>( 48 h) water flea (*Daphnia magna*) 11 mg/L.

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**Algal toxicity** : EC<sub>50</sub>( 72 h) Selenastrum capricornutum (growth rate): 8.0 mg/L  
EC<sub>50</sub>(7day) Duckweed: > 6 mg/L  
**Arthropod toxicity** : LD50 (48 hr) Honey bee - > 100 µg/bee  
LC50 (14 days) Earthworm - > 5,000 mg/kg of dry soil.  
**Bird toxicity**: Dietary LC<sub>50</sub> (5 day) bobwhite quail 5,620 mg/kg diet.

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## Section 13 - Disposal Considerations

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**Product:** Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal in accordance with applicable Federal, state, or Local procedures.

**Container:** Triple rinse empty containers  
Pour rinse water into spray rank.  
Store for collection by approved waste disposal servies  
Do NOT re-use containers

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## Section 14 - Transport Information

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Please apply the appropriate regulations to properly classify your shipment for transportation. Not hazardous under the applicable DOT, ICAO/IATA, IMO and TDG.

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## Section 15 - Regulatory Information

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### TSCA Inventory

All components are on the US EPA's TSCA Inventory

### SARA Title III Rules

Section 311/312 Hazard Categories

Not applicable.

Section 302 Extremely Hazardous Substances

Not applicable.

Section 313 Toxic Chemical(s)

Not applicable.

### CERCLA Reportable quantity

Not applicable.

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## Section 16 - Other Information

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This MSDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request.

**END OF MSDS**