

Material Safety Data Sheet

This information is based upon technical information believed to be reliable.

It is subject to revision as additional knowledge and experience as gained.

Glyphosate 35.6 %(w/v)SL

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1. Chemical Product / Company Identification

Product Name : Glyphosate IPA Salt 48 %(w/v)SL, Glyphosate IPA Salt 41% SL, Glyphosate IPA Salt 480g/L SL, Glyphosate 360g/L SL present as Isopropylamine Salt .

Manufacturer/Distributor:

Zhejiang Xinan Chemical Industrial Group Co.,Ltd.

Add: Xinanjiang, Jiande City, Zhejiang Province, P.R.China

Phone Numbers

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2. Composition/Information on Ingredients

Components

Material	CAS Number	W/V (g/L)
Glyphosate	1071-83-6	356
Inert Ingredients		814

Components are not hazardous

* Equivalent to 30.3%(w/w) of the Glyphosate acid,

3. Hazard identification

Emergency Overview

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

Potential Health Effects (on toxicity studies)

Eye irritation: Direct contact may cause temporary eye irritation and conjunctivitis.

Skin absorption: Prolonged contact may cause skin irritation.

Ingestion:

Ingestion has been reported to produce gastrointestinal 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.

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

4. First Aid Measures

First Aid

Inhalation

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

Skin Contact:

Remove contaminated clothing and shoes. Wash with plenty of soap and water for 15-20 minutes until no evidence of chemical remains. Get professional medical attention immediately.

Eye Contact

Hold eyelids open and flush with water at 15-20 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 immediately.

5. Fire Fighting Measures

Flammable properties:

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

Boiling point: 112°C

Flammable limits: Not applicable

Autoignition temperature: Not applicable

Fire fighting hazards and procedures

Extinguishing media: use Water spray, Foam, Dry Chemical, CO2.

Fire fighting instructions:

Firefighters and 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.

6. Accidental Release Measures

Spill or leak procedures: Liquid spills on the floor or other impervious surfaces should be contained or diked, and should be absorbed with attapulgite, bentonite, or other absorbent clays.

Accidental release measures continued: Collect contaminated absorbent, place in plastic-lined metal drum, and dispose of in accordance with instructions provided under DISPOSAL. Thoroughly scrub floor with a strong industrial type detergent solution and rinse with warm water.

Liquid spills that soak into the ground should be dug up, place in plastic-lined metal drums, and dispose of leaking container in accordance with instructions provided under DISPOSAL. Any received spilled liquid should be similarly collected and disposed of.

7. Handling and Storage

General information: Avoid contact with eye, 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.

8. Exposure Controls/Personal Protection

Pesticide applicators and workers

These workers must refer to the product label and directions for use attached to the product for agricultural use requirements.

Manufacturing, commercial blending, and 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 to heavy spray or mist, use NIOSH/MSHA approved equipment for pesticide vapor/mist is recommended. The respirator use limitations specified by NIOSH/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.

Exposure control/personal protection continued:

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 use.

Airborne exposure limits: See section 2

9. Physical and Chemical Properties

Form: liquid

Odour: Odorless

PH : 4.0-8.5

Flash point not applicable

Density Value 1.16 – 1.17 g/cm³

Reference temperature 20°C

Solubility in water soluble

10. Stability and Reactivity

General Information:

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

Incompatibility with other materials:

Spray solutions of this product should be mixed, and stored, or applied using only stainless steel, aluminum, fiberglass, plastic or plastic-lined containers. Do not mix, store or apply this product or spray solutions of this product in galvanized or unlined steel (except stainless steel) containers or spray tank. This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas which may form 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.

Polymerization:

Does not occur, 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.

11. Toxicological Information

Acute:

Inhalation(4 H): Slightly toxic LC50=5.23 mg/l (rat)

Eye irritation: Non- irritating

Skin irritation: Non-irritating (rabbit-4-hour exposure)

Skin absorption: practically non-toxic(rabbit LD50>5000mg/kg)

Oral : slightly toxic to practically non-toxic (rat LD50; 5000mg/kg, Mouse LD50>5000mg/kg)

No skin irritation, allergy, or photoallergy was reported in human volunteers following repeated skin exposure. No skin irritation or photoirritation was reported with single skin exposure. No skin allergy was observed in guinea pigs following repeated skin exposure. Following repeated skin exposure (3 weeks) to this material at 5-times the intended use concentration, severe skin irritation and systemic toxic (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-week) 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.

Isopropylamine salt of glyphosate:

This material was practically nontoxic orally (rats) or after skin application (rabbits). It was nonirritating to rabbit eyes, and practically nonirritating to rabbit skin. In repeat dosing studies (8-month), dogs fed this material exhibited slight body weight changes. Following repeated skin exposure (3-weeks) to this material, skin irritation was the primary effect in rabbit. Additional toxicity information is available on glyphosate, the active herbicidal ingredient of isopropylamine salt of glyphosate, which has been tested in mutagenicity, teratogenicity, reproductive, acute, subchronic, and chronic toxicity studies.

Surfactant: the surfactant component of this material is reported to cause irritation to the eyes and skin and may contribute to the irritation potential reported for the herbicide. Ingestion may produce gastrointestinal irritation, nausea, vomiting, and diarrhea.

12. Ecological Information

Oral LD50 Dog: >5.0 ml/kg (practically non-toxic)

Oral LD50 goat: 4660mg/kg (slight toxic)

48-hour oral LD50 honeybee: >100ug/bee

Ecological information continued:

48-hour Dermal LD50 honeybee: > 100ug/bee

48-hour EC50 daphnia magna (with aeration): 37 mg/l (slightly toxic)

48-hour EC50 daphnia magna (with aeration): 24 mg/l (slightly toxic)

48-hour EC50 gammarus pseudolimnaeus: 42 mg/l (slightly toxic)

96-hour TL50 Carp: 19.7 ppm (slightly toxic)

96-hour LC50 Crayfish >1000ppm (practically non-toxic)

96-hour LC50 Fathead minnow: 9.4mg/l (Moderately toxic)

96-hour LC50 Rainbow Trout(Satiet): 15.26mg/l (slightly toxic)

96-hour LC50 Rainbow Trout (Flow-through): 8.2mg/l (slightly toxic)

96-hour LC50 Bluegill sunfish (Static):	14mg/l (slightly toxic)
96-hour LC50 Bluegill sunfish (Flow-through):	5.8mg/l (Moderately toxic)
96-hour LC50 Channel Catfish:	16mg/l (slightly toxic)
96-hour LC50 Coho salmon :	22mg/l (slightly toxic)
96-hour LC50 Chinook salmon:	20mg/l (slightly toxic)

Carp contained in a static pond were unaffected at any time during a 90-day observation period following exposure by aerial application of this material at the normal use concentration. Tissue residue analysis indicated glyphosate, the active ingredient in this material will not bioaccumulate.

Exposure to this material in fresh water at concentration of 0, 10, 103 and 990 ug/l for 10 days did not impair the ability of salmon smolts to adapt to seawater.

Immersion of chicken eggs at four different embryo ages (0, 6, 12 and 18 days) for about five seconds in 1 or 5% vol/vol material in water solutions was reported to have no adverse effects on the hatchability or time to hatch of the eggs.

Brahman-cross heifers were given this material by gavage, at daily dosage of 0, 400, 500, 630, 790, and 1000mg/kg for 7 consecutive days. Clinical signs of toxicity, including loss of appetite, diarrhea, and death (790 and 1000 mg/kg) were observed at 500mg/kg or above. The no-effect level was considered to be 400 mg/kg/day.

13. Disposal Considerations

Wastes resulting from the use of this product that can not be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable regulations.

An empty container retains vapour and product residue. Observe all labeled safeguards until container is cleaned, reconditioned or destroyed. Do not cut or weld on or near this container.

Disposal considerations continued:

Metal drums: Triple rinse container, and then offer for recycling or reconditioning, or puncture and disposal of in a sanitary landfill, or by other procedures approved by local authorities.

Plastic Jugs: Do not reuse container. Triple rinse container, then puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by local authority, by burning. If burned, stay out of smoke.

14. Transportation Information

Road and Rail Transport

Not classified as a Dangerous Good under NZS 5433:1999

Marine Transport

Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

Air Transport

Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

15. Regulation Information

This material is listed in Institute for the Control of Agrochemicals Ministry of Agriculture,

16. Other Information

Additional information

Technical datas are issued based on Zhejiang Xinan Chemical Industrial Group Co.,Ltd. data and relative studies until 10th november , 2009.

This data in this Material Safety Data Sheet only to the specific material designated and does not relate to use in combination with any other material or in any process.

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