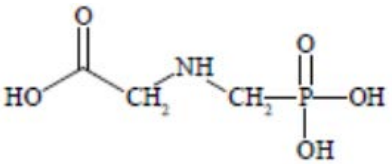


MATERIAL SAFETY DATA SHEET

GLYPHOSATE 71% SG

Manufacturer: BR Agrotech Limited
1505, Vikram Tower, Rajendra Place
New Delhi to 110008, India



1. PRODUCT IDENTIFICATION

Product	Glyphosate 71% SG
Intended Use	Herbicide
IUPAC Name	N-(phosphonomethyl)-glycine
Molecular Mass	169.1
Chemical formula	C ₃ H ₈ NO ₅ P
Structural Formula	
CAS No.	1071-83-6

2. HAZARDOUS IDENTIFICATION

Hazard Category	Hazard Statement Code
Acute Oral Tox. 5	H303
Acute Dermal Tox. 5	H313
Aquatic Acute 2	H401
Aquatic Chronic 2	H411

Hazard pictogram:

	
GHS07 Exclamation Mark	GHS09 Environment

Signal Word: **WARNING**

3. CHEMICAL COMPOSITION

Chemical Name	Content (% w/w)
Glyphosate a.i.	71.00% Min.
Other Ingredients	Q.S. to make 100%

4. FIRST AID MEASURES

Eyes	:	Hold eyelids open and flush with copious amounts of water for 10 - 15 minutes. Call a physician if irritation persists or develops after flushing.
Skin	:	Remove contaminated clothing. Wash skin with soap and water. Get medical attention if irritation persists. If signs of intoxication (poisoning) occur, get medical attention immediately.
Ingestion	:	Do not give any things, if victim is unconscious. Get medical attention immediately.
Inhalation	:	First, remove victim to fresh air or uncontaminated area. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention as soon as possible.
Not To Physician	:	No specific antidote available, therefor treatment is supportive and symptomatic.

5. FIRE FIGHTING MEASURES

Extinguishing Media	:	Water, foam, dry chemical and carbon dioxide (CO ₂).
Hazardous products of combustion	:	Carbon monoxide (CO), phosphorus oxides (P _x O _y), nitrogen oxides (NO _x).
Fire-fighting Equipments	:	Keep out of smoke, cool exposed containers with water spray. Fight fire from upwind position. Use self-contained breathing equipment. Use water delivered as a fine spray to control fire and cool adjacent area. Contain run-off by diking to prevent entry into sewers or waterways. Equipment or materials involved in pesticide fires may become contaminated.
Incompatibility	:	Avoid contact with oxidizing materials and bases.

6. ACCIDENTAL RELEASE MEASURES

Action to take for spills/leaks	:	Isolate area and keep unauthorized people away. Do not walk through spilled material. Avoid breathing dusts and skin contact. Avoid generating dust (a fine water spray mist, plastic film cover, or floor sweeping compound may be used if necessary). Use recommended protective equipment while carefully sweeping up spilled material. Scrub contaminated
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		area with soap and water. Rinse with water. Use dry absorbent material such as clay granules to absorb and collect wash solution for proper disposal. Contaminated soil may have to be removed and disposed. Do not allow material to enter streams, sewers, or other waterways.
Environmental precautions	:	Do not allow to enter drains or water courses. When the product contaminates public waters, inform appropriate authorities in accordance with local regulations.

7. HANDLING AND STORAGE

Handling	:	Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Empty containers may contain residual dust which has the potential to accumulate following settling. Such dusts may explode in the presence of an appropriate ignition source.
Storage	:	Store in its original labeled container in shaded, well-ventilated area, away from heat. Do not store in galvanized steel or unlined steel containers and should not be stored next to foodstuffs and water supplies. Local regulations should be complied with.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<p>Engineering controls</p>	<p>Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard.</p> <p>Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.</p> <p>: Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.</p> <p>Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.</p>
<p>Personal protection</p>	<p><i>Eye/face protection:</i> Goggles should be used when needed to prevent dust from getting into the eyes.</p> <p><i>Skin protection:</i> Wear long sleeves and trousers to prevent skin contact.</p> <p>: <i>Respiratory protection:</i> Under normal handling conditions, no respiratory protection is needed; however, when potential exposure to product dust is excessive, wear a NIOSH-approved respirator for dusts and mists or for pesticides.</p> <p><i>Additional protective measures:</i> Clean water should be available for washing in case of eye or skin contamination. Educate and train employees in safe use of the product. Follow all label</p>

	instructions. Launder clothing after use. Wash thoroughly after handling.
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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	White granule, solid
Odor	:	Characteristic
Flash point	:	Not flammable
Moisture content	:	1.5% max.
pH	:	2 - 6

10. STABILITY AND REACTIVITY

Stability	:	Stable under recommended storage conditions.
Incompatibility	:	Avoid contact with oxidizing materials and bases.
Hazardous polymerization	:	Will not polymerize.
Conditions to Avoid	:	Excessive heat. Do not store near heat or flame.

11. TOXICOLOGICAL INFORMATION

Acute Oral (rats)	:	LD50: >2000 mg/kg
Acute Dermal (rats)	:	LD50: > 2000 mg/kg.
Inhalation (rats)	:	LC50: >2 mg/L air (4 hr)
Skin irritation (rabbits)	:	Non- irritant
Eyes irritation (rabbits)	:	Moderate-irritant
Skin sensitization (guinea pigs)	:	Not skin sensitizer

12. ECOLOGICAL INFORMATION

Toxicity to Fish,	:	LC50 (96h) : 4.2 mg/l
Daphnia	:	EC50: 3.8 mg/l
Birds	:	LD50: >2000 mg/kg
Toxicity to Bee	:	LD50 : 276.7 µg/bee (oral)
Algae	:	EC50: 1.8 – 3.6 mg/L

13. DISPOSAL CONSIDERATIONS



Disposal Instruction	: <p>Follow container label instructions for disposal of wastes generated during use in compliance with the product label. In other situations, bury in an EPA approved landfill or burn in an incinerator approved for pesticide destruction. Follow all local/ regional/ national/ international regulations. Do not reuse container.</p>
Disposal Method	: <p>This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate. In most instances the supplier of the material should be consulted.</p> <p>DO NOT allow wash water from cleaning or process equipment to enter drains.</p> <p>It may be necessary to collect all wash water for treatment before disposal.</p> <p>In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.</p>

14. TRANSPORT INFORMATION

ADR/RID Classification	
Proper shipping Name	Environmentally Hazardous Substance, Solid, N.O.S. (glyphosate)
UN No.	3077
Packing Group	III
Hazard Class	9
IMDG Classification	
Proper shipping Name	Environmentally Hazardous Substance, Solid, N.O.S. (glyphosate)
UN No.	3077
Packing Group	III
Hazard Class	9
IATA/ICAO Classification	
Proper shipping Name	Environmentally Hazardous Substance, Solid, N.O.S. (glyphosate)
UN No.	3077
Packing Group	III
Hazard Class	9

15. REGULATORY INFORMATION

Hazard pictogram:

	
GHS07	GHS09
Exclamation Mark	Environment

Signal word	WARNING
H-Phrase	<p>H303: May be harmful if swallowed</p> <p>H313: May be harmful in contact with skin</p> <p>H332: Harmful if inhaled</p> <p>H320: Cause eye irritation</p> <p>H401: Toxic to aquatic life</p> <p>H411: Toxic to aquatic life with long lasting effects</p>
Phrase	<p>S24: Avoid contact with skin.</p> <p>S36/37: Wear suitable protective clothing and gloves.</p> <p>S46: If swallowed, seek medical advice immediately and show this container or label.</p> <p>S60: This material and its container must be disposed of as hazardous waste.</p> <p>S61: Avoid release to the environment.</p>

16. OTHER INFORMATION

This MSDS summarizes best knowledge of the health and safety hazard information of the product. 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. The 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.

Prepared by: BR Agrotech Limited

Date: 11/09/2016