

MATERIAL SAFETY DATA SHEET

1. PRODUCT IDENTIFICATION

PRODUCT NAME: GLYPHOSATE
CHEMICAL FORMULA: C₃H₁₁N₂O₅P
CHEMICAL NAME: N-(PHOSPHONOMEHYL)GLYCINE
CAS NO.: 40465-66-5
PRODUCT USE: HERBICIDE

2. COMPOSITION AND INGREDIENT INFORMATION

INGREDIENT NAME: GLYPHOSATE
CAS REGISTRY NUMBER 40465-66-5
TYPICAL WR.% W.V: 95%

3. HEALTH HAZARD INFORMATION

EMERGENCY OVERVIEW
WHITE OR LIGHT YELLOW POWDER
KEEP OUT OF REACH OF CHILDREN
MAY CAUSE EYE IRRITATION
MAY CAUSE SKIN IRRITATION
POTENTIAL HEALTH EFFECTS
Dermal contact, ingestion and inhalation of the product are the primary routes to induce potential adverse health effects. Inhalation of aerosol during application of the product as part of its end use is another potential route of entry, eye and skin irritation may occur from contact with the liquid or spray mixture.

4. FIRST AID MEASURES

IF SWALLOWED: INDUCE VOMITING BY TOUCHING BACK OF THROAT WITH FINGER AND WASH STOMACH. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSEIOUS PERSON. SHOULD BE SEND TO THE HOSPITAL TREAUNENT IMMEDIATELY.

IF IN EYE: LMEDIATELY RIMES EYES WITH A LARGE AMOUNT OF RUNNING WATER. HOLD EYELIDS APART TO RINSE THE ADVICE OF A PHYSICIAN.

IF ON SKIN: WASH WITH PLENTY OF SOAP AND WATER,INCLUDING HAIR AND UNDER FINGERMAILS. DO NOT APPLY ANY MEDICATING AGENTS EXCEPT ON THE ADBICE OF A PHYSICIAN. REMOVE CONTAMINATED CLOTHING AND DECONTAMINATE PRIOR TO USE.

IF INHALED: MOVE VICTIM FROM CONTAMINATED AREA TO FRESH AIR.APPLY ARTIFICIAL RESPIRATION IF NECESSARY.

NOTES TO PHYSICIAN: THERE IS NO SPECIFIC ANTIDOTE

5. FIRE AND EXPLOSION INFORMATION

AUTO-IGNITION TEMPERATURE: N/A

FLASH POINT:

NOT FLAMMABLE

EXTINGUISHING MEDIA

WATER FOG, CARBON DIOXIDE, DRY CHEMICAL, FOAM AND HALOGENATED AGENTS.

FIRE FIGHTING INSTRUCTIONS

THE PRODUCT IS NOT FLAMMABLE.BUT IF FIRING, FIRE FIGHTERS AND OTHERS WHO MAY BE EXPOSED TO PRODUCTS OF COMBUSTION SHOULD WEAR FULL FIRE FIGHTING TURN OUT GEAR AND SELF-CONTAINED BREATHING APPARATUS. FIRE FIGHTING EQUIPMENT SHOULD BE THOROUGHLY DECONTAMINATED AFTER USE.PERSON WHO MAY HAVE BEEN EXPOSED TO CONTAMINATED SMOKE SHOULD BE IMMEDIATELY EXAMINED BY A PHYSICIAN AND CHECKED FOR SYMPTOMS OF POISONING.THE SYMPTOMS SHOULD NOT BE MISTAKEN FOR HEAT EXHAUSTION OR SMOKE INHALATION.

6. ACCIDENTAL RELEASE MEASURES

IN CASE OF SPILL OR LEAK

STOP THE LEAK, IF POSSIBLE. VENTILARED THE SPACE INVOLVED. ABSORB, SWEEP UP, PLACE IN CONTAINER FOR DISPOSAL. SHUT OFF OR REMOVE ALL IGNITION SOURCES. PREVENT WATERWAY CONTAMINATION.CONSTRUCT A DIKE TO PREVENT SPREADING.PROTECT WORKS WITH WATER SPRAY. COLLECT RUN-OFF WATER AND TRANSFER TO DRUMS OR TANKS FOR LATER DISPOSAL.

7. HANDLING AND STORAGE

HANDLING

HARMFUL IF SWALLOWED, INHALED, OR ABSORBED THROUGH THE SKIN. CAUSES EYE IRRITATION. DO NOT BREATHE GAS OR ALLOW TO GET IN EYES, ON SKIN, OR ON CLOTHING. WASH HANDS, ARMS AND FACE THOROUGHLY WITH SOAP AND WARM WATER AFTER USE AND BEFORE EATING OR SMOKING. WASH ALL COMAMINATED CLOTHING WITH SOAP AND NOT WATER BEFORE RAUSE. DO NOT COMANINATE FEED OR FOOD ITEMS. KEEP OUT OF REACH OF CHILDREN.

STORAGE

STORE IN A COOL DRY AND AIR VERNTILATING WARE HOUSE AND PROTECTED FROM LIGHT. AVOID CONTACTING WITH FOOD, FEEDSTUFF AND SEED.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EYE/FACE PROTECTION

GOGGLES AND FULL FACE SHIELD SHOULD BE USED WHEN NEEDED TO PREVENT LIQUID FROM

SKIN PROTECTION

AVOID SKIN CONTACE. USE CHEMICAL-RESISTANT GLOVES, AND WEAT LONG SLEEVES AND TROUSERS TO PREVENT DERMAL EXPOSURE.

RESPIRATORY PROTECTION

UNDER NORMAL HANDLING CONDITIONS NO RESPIRATORY PROTECTION IS NEEDED. HOWEVER, IF NEEDED TO PREVENT RESPIRATORY IRRITATION, EITHER A RESPIRATOE APPROVED FOR DUSTS AND MISTS, OR ONE APPROVED FOR PESTICIDES.

9. PHYSICAL AND CHEMICAL PROPERTIES

COLOUR:	WHITE OR LIGHT
PHYSICAL STATE:	POWDER
ODOUR:	NOT DISTINET ODOR
MELTING POINT:	DECOMP>190C, WITHOUT MELTING
BOILING POINT:	N/A
DECOMPOSITION POINT:	>190C
VAPOUR PRESSURE:	9X10-3MPA AT 25C
DENSITY:	N/A
SOLUBILITY IN WATER	IN WATER 144+19G/L(PH3.2)
SOLUBILITY IN ORGANIC SOLVENTS:	ESSENTIALLY INSOLUBLE IN ORGANIC SOLVENTS

10. STABILITY AND REACTIVITY INFORMATION

STABILITY

STABLE OVER 5 DAYS AT 50C (PH 4.7 AND 9)

HAZARDOUS POLYMERIZATION

DOES NOT OCCUR

INCOMPATIBILITY

THE PRODUCT IS INCOMPATIBLE WITH ALKALING MATERIALS

HAZARDOUS DECOMPOSITION PRODUCTS

NOT AVAILABLE

11. TOXICOLOGICAL INFORMATION

ACUTE ORAL: ACUTE ORAL LD 50 FOR RATS 4613MG/KG

ACUTE DERMAL: ACUTE PERCUTANEOUS LD 50 FOR RABBITS>5000MG/KG

IRRITATION: SLIGHT EYE IRRITANT, NOT A SKIN IRRITANT(RABBITS)

SENSITISATION: NON-SENSITISING TO SKIN(GUINEA PIGS)

LONG-TERM STUDIES: STUDIES SHOWED NO EVIDENCE OF CARCINOGENICITY AND MUTAGENICITY TO RATS AND RABBITS.

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

GLYPHOSATE

EFFECTS ON BIRDS: LD50 FOPR BOBWHITE QUAIL>3851/KG.DIETARY LC50(8D)FOR QYAUK ABD DUCKS>4640MG/KG DIET

EFFECTS ON FISH: LC50(96H) FOR TROUT 86, BLUEGILL SUNFISH 120, HARLEQUIN FISH 168, SGEEPSHEAD MINNOW>1000MG/L

BEEES: LD50(CONTACT AND ORAL)>100UG/BEE

CHEMICAL FATE INFORMATION

NO DATA ARE AVAILABLE

13. DISPOSAL CONSIDERATIONS

NON-SELECTIVE SYSTEMIC HERBICIDE, ABSORBED BY THE FOLIAGE, WITH RAPID TRANSLOCATION THROUGHOUT THE PLANT. INACTIVATED ON CONTACT WITH SOIL.

14. TRANSPORT INFORMATION

ACCORDING TO INTERNATIONAL MARITIME DANGEROUS GOODS CODE(IMDG CODE),

THIS PRODUCT IS NON-DANGER MATERIAL, KEEPING ON VENTILATED AND DRY AREA, AND PREVENT MOIST AND SUN, NOT PT TOGETHER WITH FOOD, SEED AND FERTILIZER.

15. REGULATORY INFORMATION

IB SOIL (FIELD), DT50 3-174D, DEPENDING ON EDAPHIC ACID CLIMATIC CONDITIONS. IN WATER, DT50 VARIES FROM A FEW TO 91D, PHOTODEGRADATION IN WATER OCCURS UNDER NATURAL CONDITIONS, DT50<28D; NO SUBSTANTIAL PHOTODEGRADATION IN SOIL WAS RECORDED OVER 31D, IN A LAB, WHOLE SYSTEM WITH WATER AND SEDIMENT, DT50<14D, 14-22D. THE MAJOR MERABLITE IN SOIL AND WATER IS AMINOMETHYLPHOSPHOIE ACID.

16. OTHER INFORMATION

WASTE DISPOSAL

PESTIDIDE WASTES ARE ACUTELY HAZARDOUS.DO NOT REUSE PRODUCT CONTAINERS. DISPOSE PRODUCT COMAINERS, WASTE CONTAINERS, RESIDUES ACCORDING JOOAL HEALTH AND ENVINONMENT REGULATIONS.