

MATERIAL SAFETY DATA SHEET


**Top Dog Glycel
Ultra Max Herbicide**
1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Glycel Ultra Max Herbicide
EPA Reg. No.: 86004-6-69361
Chemical name: Not applicable
Synonyms: None
Company: Repar Corporation, P.O. Box 4321, Silver Spring, MD 20914
Emergency numbers: FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT Call CHEMTREC - Day or Night: 1-800-424-9300 toll free in the continental U.S., Puerto Rico, Canada, or Virgin Islands.
Date: 06-23-2012

2. COMPOSITION/INFORMATION ON INGREDIENTS**Active ingredient**

Isopropylamine salt of N-(phosphonomethyl)glycine; {Isopropylamine salt of glyphosate}

Composition

COMPONENT	CAS No.	% by weight (approximate)
Isopropylamine salt of glyphosate	38641-94-0	50.2
Other ingredients		49.8

The specific chemical identity is being withheld because it is trade secret information of Repar Corporation.

OSHA Status: This product is hazardous according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

3. HAZARDS IDENTIFICATION**Emergency overview**

Appearance and odor (color/form/odor): Blue / Liquid, (viscous) / Slight

CAUTION!

CAUSES MODERATE EYE IRRITATION

Potential health effects

Likely routes of exposure: Skin contact, eye contact, inhalation

Eye contact, short term: Irritating to eyes.

Skin contact, short term: Not expected to produce significant adverse effects when recommended use instructions are followed.

Inhalation, short term: Not expected to produce significant adverse effects when recommended use instructions are followed.

Refer to section 11 for toxicological and section 12 for environmental information.

4. FIRST AID MEASURES**Eye contact**

Immediately flush with plenty of water.

Continue for at least 15 minutes.

If easy to do, remove contact lenses.

If there are persistent symptoms, obtain medical advice.

Skin contact

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

Inhalation: Remove to fresh air.

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.
Advice to doctors: This product is not an inhibitor of cholinesterase.

Antidote: Treatment with atropine and oximes is not indicated.

5. FIRE-FIGHTING MEASURES

Flash point: None.

Extinguishing media: Recommended: Water, foam, dry chemical, carbon dioxide (CO₂)

Unusual fire and explosion hazards:

Minimize use of water to prevent environmental contamination.

Environmental precautions: see section 6.

Hazardous products of combustion: Carbon monoxide (CO), nitrogen oxides (NOx), phosphorus oxides (P_xO_y)

Fire fighting equipment

Self-contained breathing apparatus.

Equipment should be thoroughly decontaminated after use.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Use personal protection recommended in section 8.

Environmental precautions

SMALL QUANTITIES:

Low environmental hazard.

LARGE QUANTITIES:

Minimize spread.

Contain spillage with sand bags or other means.

Keep out of drains, sewers, ditches and water ways.

Notify authorities.

Methods for cleaning up

Absorb in earth, sand or absorbent material.

Dig up heavily contaminated soil.

Collect in containers for disposal.

Refer to section 7 for types of containers.

Flush residues with small quantities of water.

Minimize use of water to prevent environmental contamination.

Refer to section 13 for disposal of spilled material.

7. HANDLING AND STORAGE

Good industrial practice in housekeeping and personal hygiene should be followed.

Storage

Compatible materials for storage: stainless steel, aluminum, fiberglass, plastic

Incompatible materials for storage: unlined mild steel galvanized steel, see section 10.

Keep out of reach of children.

Keep away from food, drink and animal feed.

Keep only in the original container.

Shelf life currently under test.

Recommended maximum shelf life: 2 years.

Follow all local/regional/national/international regulations.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Airborne exposure limits**

Components	Exposure Guidelines
Isopropylamine salt of glyphosate	No specific occupational exposure limit has been established.
Other ingredients	No specific occupational exposure limit has been established.

Engineering controls: No special requirement when used as recommended.

Eye protection

If there is significant potential for contact: Wear chemical goggles.

Applicators and other handlers must wear eye protection.

Skin protection

If repeated or prolonged contact: Wear chemical resistant gloves.

Respiratory protection: No special requirement when used as recommended.

When recommended, consult manufacturer of personal protective equipment for the appropriate type of equipment for a given application.

9. PHYSICAL AND CHEMICAL PROPERTIES

These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

Color/color range:	Blue
Form:	Liquid (viscous)
Odor:	Slight
Flash point:	None
Specific gravity:	1.199
pH:	4.8

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of handling and storage.

Hazardous decomposition: Thermal decomposition: Hazardous products of combustion: see section 5.

Materials to avoid/Reactivity: Reacts with galvanized steel or unlined mild steel to produce hydrogen, a highly flammable gas that could explode.

11. TOXICOLOGICAL INFORMATION

This section is intended for use by toxicologists and other health professionals.

Data obtained on similar products and on components are summarized below.

Acute oral toxicity

Rat, LD50: > 5,000 mg/kg body weight

Practically non-toxic.

FIFRA category IV.

Acute dermal toxicity

Rat, LD50: > 5,000 mg/kg body weight

Practically non-toxic.

FIFRA category IV.

Skin irritation

Rabbit, 6 animals, OECD 404 test:

Days to heal: 10

Primary Irritation Index (PII): 1.7/8.0

Slight irritation.

FIFRA category IV.

Eye irritation

Rabbit, 6 animals, OECD 405 test:

Days to heal: 7

Moderate irritation.

FIFRA category III.

Acute inhalation toxicity

Rat, LC50, 4 hours, aerosol: > 2.01 mg/L

Practically non-toxic.

FIFRA category IV.

Skin sensitization

Guinea pig, Buehler test:

Positive incidence: 0 %

Negative.

No skin sensitization.

N-(phosphonomethyl)glycine: {glyphosate}

Mutagenicity

In vitro and in vivo mutagenicity test(s):

Not mutagenic.

Repeated dose toxicity

Rabbit, dermal, 21 days:

NOAEL toxicity: > 5,000 mg/kg body weight/day Target organs/systems : none

Other effects: none

Rat, oral, 3 months:

NOAEL toxicity: > 20,000 mg/kg diet

Target organs/systems : none

Other effects: none

Carcinogenicity

Mouse, oral, 24 months:

NOEL tumor: > 30,000 mg/kg diet

NOAEL toxicity: ~ 5,000 mg/kg diet

Tumors: none

Target organs/systems : liver

Other effects: decrease of body weight gain, histopathologic effects

Rat, oral, 24 months:

NOEL tumor: > 20,000 mg/kg diet

NOAEL toxicity: ~ 8,000 mg/kg diet

Tumors: none

Target organs/systems: eyes
Other effects: decrease of body weight gain, histopathologic effects

Toxicity to reproduction/fertility

Rat, oral, 3 generations:

NOAEL toxicity: > 30 mg/kg body weight

NOAEL reproduction: > 30 mg/kg body weight

Target organs/systems in parents: none

Other effects in parents: none

Target organs/systems in pups: none

Other effects in pups: none

Developmental toxicity/teratogenicity

Rat, oral, 6 - 19 days of gestation:

NOAEL toxicity: 1,000 mg/kg body weight

NOAEL development: 1,000 mg/kg body weight

Other effects in mother animal: decrease of body weight gain, decrease of survival

Developmental effects: weight loss, post-implantation loss, delayed ossification

Effects on offspring only observed with maternal toxicity.

Rabbit, oral, 6 - 27 days of gestation:

NOAEL toxicity: 175 mg/kg body weight

NOAEL development: 175 mg/kg body weight

Target organs/systems in mother animal: none

Other effects in mother animal: decrease of survival

Developmental effects: none

12. ECOLOGICAL INFORMATION

This section is intended for use by ecotoxicologists and other environmental specialists.

Data obtained on similar products and on components are summarized below.

Similar formulation

Aquatic toxicity, fish

Rainbow trout (*Oncorhynchus mykiss*):

Acute toxicity, 96 hours, static, LC50: 5.4 mg/L

Moderately toxic.

Bluegill sunfish (*Lepomis macrochirus*):

Acute toxicity, 96 hours, static, LC50: 7.3 mg/L

Moderately toxic.

Aquatic toxicity, invertebrates

Water flea (*Daphnia magna*):

Acute toxicity, 48 hours, static, EC50: 11 mg/L

Slightly toxic.

Avian toxicity

Mallard duck (*Anas platyrhynchos*):

Dietary toxicity, 5 days, LC50: > 5,620 mg/kg diet

Practically non-toxic.

Bobwhite quail (*Colinus virginianus*):

Dietary toxicity, 5 days, LC50: > 5,620 mg/kg diet

Practically non-toxic.

Arthropod toxicity

Honey bee (*Apis mellifera*):

Oral/contact, 48 hours, LD50: > 100 µg/bee

Practically non-toxic.

Soil organism toxicity, invertebrates

Earthworm (*Eisenia foetida*):

Acute toxicity, 14 days, LC50: > 1,250 mg/kg soil

Practically non-toxic.

Isopropylamine salt of glyphosate (62%)

Data obtained on product and components are summarized below.

Aquatic toxicity, algae/aquatic plants

Green algae (*Scenedesmus subspicatus*):

Acute toxicity, 72 hours, static, ErC50 (growth rate): 166 mg/L

Practically non-toxic.

N-(phosphonomethyl)glycine: {glyphosate}

Bioaccumulation

Bluegill sunfish (*Lepomis acrochirus*):

Whole fish: BCF: < 1

No significant bioaccumulation is expected.

Dissipation

Soil, field:

Half life : 2 -174 days

Koc: 884 - 60,000 L/kg

Adsorbs strongly to soil.

Water, aerobic:

Half life : <7 days

13. DISPOSAL CONSIDERATIONS

Product

Recycle if appropriate facilities/equipment available.

Burn in special, controlled high temperature incinerator.

Keep out of drains, sewers, ditches and water ways.

Follow all local/regional/national/international regulations.

Container

See the individual container label for disposal information.

Triple or pressure rinse empty containers.

Pour rinse water into spray tank.

Store for collection by approved waste disposal service.

Recycle if appropriate facilities/equipment available.

Emptied containers retain vapor and product residue.

Observe all labeled safeguards until container is cleaned, reconditioned or destroyed.

Follow all local/regional/national/international regulations.

14. TRANSPORT INFORMATION

The data provided in this section is for information only. Please apply the appropriate regulations to properly classify your shipment for transportation.

Not hazardous under the applicable DOT, ICAO/IATA, IMO, TDG and Mexican regulations.

15. REGULATORY INFORMATION

TSCA Inventory: All components are on the US EPA's TSCA Inventory

OSHA Hazardous Components: Surfactant(s)

SARA Title III Rules

Section 311/312 Hazard Categories: Immediate

Section 302 Extremely Hazardous Substances: Not applicable.

Section 313 Toxic Chemical(s): Not applicable.

CERCLA Reportable quantity: Not applicable.

16. OTHER INFORMATION

The information given here is not necessarily exhaustive but is representative of relevant, reliable data. Follow all local/regional/national/international regulations.

Please consult supplier if further information is needed.

In this document the British spelling was applied. Full denomination of most frequently used acronyms.

BCF (Bioconcentration Factor), BOD (Biochemical Oxygen Demand), COD (Chemical Oxygen Demand), EC50 (50% effect concentration), ED50 (50% effect dose), I.M. (intramuscular), I.P. (intraperitoneal), I.V. (intravenous), Koc (Soil adsorption coefficient), LC50 (50% lethality concentration), LD50 (50% lethality dose), LDLo (Lower limit of lethal dosage), LEL (Lower Explosion Limit), LOAEC (Lowest Observed Adverse Effect Concentration), LOAEL (Lowest Observed Adverse Effect Level), LOEC (Lowest Observed Effect Concentration), LOEL (Lowest Observed Effect Level), MEL (Maximum Exposure limit), MTD (Maximum Tolerated Dose), NOAEC (No Observed Adverse Effect Concentration), NOAEL (No Observed Adverse Effect Level), NOEC (No Observed Effect Concentration), NOEL (No Observed Effect Level), OEL (Occupational Exposure Limit), PEL (Permissible Exposure Limit), PII (Primary Irritation Index), Pow (Partition coefficient n-octanol/water), S.C. (subcutaneous), STEL (Short - Term Exposure Limit), TLV-C (Threshold Limit Value-Ceiling), TLV-TWA (Threshold Limit Value - Time Weighted Average), UEL (Upper Explosion Limit)

This Material Safety Data Sheet (MSDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-APPROVED PRODUCT LABELING (attached to and accompanying the product container).

This MSDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course. Use, storage and disposal of pesticide products are regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide

Act (FIFRA) through the product labeling, and all necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling. It is a violation of federal law to use a pesticide product in any manner not prescribed on the EPA-approved label.

Although the information and recommendations set forth herein (hereinafter "Information") are presented in good faith and believed to be correct as of the date hereof, Repair Corporation makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for the purposes prior to use. In no event will Repair Corporation be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR TO THE PRODUCT TO WHICH INFORMATION REFERS.