



Safety Data Sheet

MEYCHEM Technical Glyphosate

1. PRODUCT AND COMPANY IDENTIFICATION

Product name

MEYCHEM Technical Glyphosate

EPA Reg. No.

80967-2

Product Use

Herbicide

Chemical name

Not applicable

Synonyms

None

Company

MEY Corporation, 121 S. Estes Drive, Suite 101, Chapel Hill, NC 27514

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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. For calls originating elsewhere: 1-703-527-3887 (collect calls accepted).

2. HAZARDS IDENTIFICATION

Emergency overview

Appearance and odor (color/form/odor): White / Crystalline powder / Odorless – slightly pungent

WARNING

CAUSES SUBSTANTIAL BUT TEMPORARY EYE INJURY

HARMFUL IF INHALED

Potential health effects**Likely routes of exposure**

Skin contact, eye contact, and inhalation.

Eye contact, short term

Cause eye irritation.

Skin contact, short term

May cause skin irritation with itching and redness. Not expected to produce significant adverse effects when recommended use instructions are followed.

Inhalation, short term

Dust may cause respiratory tract irritation. Not expected to produce significant adverse effects when recommended use instructions are followed.

Single ingestion

Harmful if swallowed.

OSHA Status

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

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

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

N-(phosphonomethyl)glycine: {Glyphosate}

Composition

COMPONENT	CAS No.	% by weight (approximate)
Glyphosate	1071-83-6	95
Other ingredients	Trade Secret	5

4. FIRST AID MEASURES

Use personal protection recommended in Section 8.

Eye Contact

If in eyes, hold eye open and rinse slowly and gently for 15-20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing. Call a poison control center or doctor for treatment advice.

Skin contact

Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. Wash clothes and clean shoes before reuse.

Inhalation

If inhaled, move person to fresh air. If person is not breathing, call the emergency number or ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advice.

Ingestion

Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

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**

Does not flash.

Extinguishing media

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

Unusual fire and explosion hazards

None. Minimize use of water to prevent environmental contamination.

Environmental precautions

See Section 6.

Hazardous products of combustion

Carbon monoxide (CO), nitrogen oxides (NOx), and phosphorus oxides (PxOy).

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. Avoid breathing dust. Keep upwind of spillage.

Environmental precautions

SMALL QUANTITIES: Low environmental hazard.

LARGE QUANTITIES: Minimize spread. Keep out of drains, sewers, ditches and water ways.

Methods for cleaning up

SMALL QUANTITIES: Sweep, scoop or vacuum and collect in containers for disposal. Flush spill area with water.

LARGE QUANTITIES: Dig up heavily contaminated soil. Collect in containers for disposal. Refer to Section 7 for types of containers. Flush spill area with water. Minimize use of water to prevent environmental contamination.

Refer to Section 13 for disposal of spilled material. Use handling recommendations in Section 7 and personal protection recommendations in Section 8.

7. HANDLING AND STORAGE

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

Handling

Use only with adequate ventilation. Avoid contact with eyes, skin and clothing. Avoid breathing dust. When using do not eat drink or smoke. Wash hands thoroughly after handling or contact. Wash contaminated clothing before reuse. Minimize dust generation and accumulation. Thoroughly clean equipment after use. Do not contaminate drains, sewers and water ways when disposing of equipment rinse water. Refer to Section 13 for disposal of rinse water. Emptied packages retain vapor, product residue, and dust. FOLLOW LABELLED WARNINGS EVEN AFTER CONTAINER IS EMPTIED.

Storage

Maximum storage temperature 120° F (50° C). Compatible materials for storage are stainless steel, aluminum, fiberglass, and plastic. Incompatible materials for storage are galvanized steel and unlined mild steel, see Section 10. Keep out of reach of children. Keep away from food, drink and animal feed. Keep only in the original container. Keep container tightly closed in a cool, well-ventilated place. Keep container dry. Keep container off wet floors. Minimum shelf life is 5 years. Follow all local, regional, national, and international regulations.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Airborne exposure limits

Components	Exposure Guidelines
Glyphosate	No specific occupational exposure limit has been established.
Other ingredients	No specific occupational exposure limit has been established.

Engineering controls

Have eye wash facilities immediately available at locations where eye contact can occur.

Eye protection

If there is significant potential for eye contact wear suitable eye protection such as chemical safety goggles or a face shield.

Skin protection

If there is 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 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	White
Odor	Odorless – slightly pungent
Physical state	Solid, crystalline powder
Melting point	185°C
Boiling point	Not applicable
Flash point	Does not flash
Explosive properties	Not explodable
Auto ignition temperature	Not flammable
Specific gravity	1.705 @ 20°C
Vapor pressure	No significant volatility
Vapor density	Not applicable
Evaporation rate	Not applicable
Dynamic viscosity	Not applicable
Kinematic viscosity	Not applicable
Density	1.84 g/cm ³
Solubility	Water: 10.5 g/L @ 20°C
pH	2.5 @ 20°C
Partition coefficient	log Pow: < -3.2 @ 25°C (glyphosate)

10. STABILITY AND REACTIVITY**Stability**

Stable under normal conditions of handling and storage.

Oxidizing properties

Not an oxidizer or reducer.

Materials to avoid and reactivity

Reacts with galvanized steel or unlined mild steel to produce hydrogen, a highly flammable gas that could explode.

Hazardous decomposition

Thermal decomposition: Hazardous products of combustion are carbon monoxide (CO), nitrogen oxides (NOx), phosphorus oxides (PxOy), and ammonia (NH3). See Section 5.

Self-accelerating decomposition temperature (SADT)

No data.

11. TOXICOLOGICAL INFORMATION

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

N-(phosphonomethyl)glycine: {glyphosate}

Acute oral toxicity

Rat, LD50 (limit test): > 5,000 mg/kg body weight. Practically non-toxic. FIFRA category IV.

Acute dermal toxicity

Rabbit, LD50 (limit test): > 5,000 mg/kg body weight. Practically non-toxic. FIFRA category IV.

Acute inhalation toxicity

Rat, LC50 (limit test), 4 hours, aerosol: > 2.6 mg/L. Practically non-toxic. FIFRA category IV.

Skin irritation

Rabbit, 6 animals, OECD 404 test: Days to heal 3. Primary Irritation Index (PII) 0.3/8.0. Slight irritation. FIFRA category IV.

Eye irritation

Rabbit, 6 animals, OECD 405 test: Days to heal 14. Severe irritation. FIFRA category II.

Skin sensitization

Guinea pig, maximization test: Positive incidence 0 %. Negative. No skin sensitization.

Mutagenicity

Micronucleus test(s): Not mutagenic.

Ames test(s): Not mutagenic with and without metabolic activation.

Repeated dose toxicity:

Rabbit, dermal, 21 days: NOAEL toxicity > 5,000 mg/kg body weight/day.

Rat, oral, 3 months: NOAEL toxicity > 20,000 mg/kg diet.

Chronic effects/carcinogenicity

Mouse, oral, 24 months: NOAEL toxicity ~ 5,000 mg/kg diet. NOEL tumor > 30,000 mg/kg diet.

Rat, oral, 24 months: NOAEL toxicity ~ 8,000 mg/kg diet. NOEL tumor > 20,000 mg/kg diet.

Toxicity to reproduction/fertility

Rat, oral, 2 generations: NOAEL toxicity 10,000 mg/kg diet. NOAEL reproduction > 30,000 mg/kg diet.

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.

Rabbit, oral, 6 - 27 days of gestation: NOAEL toxicity 175 mg/kg body weight. NOAEL development 175 mg/kg body weight.

12. ECOLOGICAL INFORMATION

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

N-(phosphonomethyl)glycine: {glyphosate}

Aquatic toxicity, fish

Rainbow trout (*Oncorhynchus mykiss*): Acute toxicity, 96 hours, static, LC50 86 mg/L. Slightly toxic.

Bluegill sunfish (*Lepomis macrochirus*): Acute toxicity, 96 hours, static, LC50 120 mg/L. Practically non-toxic.

Aquatic toxicity, invertebrates

Water flea (*Daphnia magna*): Acute toxicity, 48 hours, static, EC50 780 mg/L. Practically non-toxic.

Aquatic toxicity, algae/aquatic plants

Green algae (*Selenastrum capricornutum*): Acute toxicity, 7 days, static, EC50 13.8 mg/L. Slightly toxic.

Diatom (*Skeletonema costatum*): Acute toxicity, 4 days, static, EC50 1.3 mg/L. Moderately toxic.

Duckweed (*Lemna gibba*): Acute toxicity, 14 days, static, EC50 (frond number) 25.5 mg/L.

Avian toxicity

Bobwhite quail (*Colinus virginianus*): Acute oral toxicity, single dose LD50 > 3,851 mg/kg body weight. Practically non-toxic.

Bobwhite quail (*Colinus virginianus*): Dietary toxicity, 5 days, LC50 > 4,640 mg/kg diet. Slightly toxic.

Mallard duck (*Anas platyrhynchos*): Dietary toxicity, 5 days, LC50 > 4,640 mg/kg diet. Slightly toxic.

Arthropod toxicity

Honey bee (*Apis mellifera*): Oral, 48 hours, LD50 100 µg/bee.

Honey bee (*Apis mellifera*): Contact, 48 hours, LD50 > 100 µg/bee. Practically non-toxic.

Soil organism toxicity, invertebrates

Earthworm (*Eisenia foetida*): Acute toxicity, 14 days, LC50 > 5,000 mg/kg dry soil. Practically non-toxic.

Soil organism toxicity, microorganisms

Nitrogen and carbon transformation test: 33.3 kg/ha, 28 days. Less than 25% effect on nitrogen or carbon transformation processes in soil.

Bioaccumulation

Bluegill sunfish (*Lepomis macrochirus*): 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

Not classified as hazardous waste by the Resource, Conservation and Recovery Act (RCRA), 40 CFR 261. Keep out of drains, sewers, ditches and water ways. Recycle if appropriate facilities and equipment are available. Burn in proper incinerator. Follow all local, regional, national, and international regulations.

Container

Dispose of as non-hazardous industrial waste. See the individual container label for disposal information. Emptied containers retain vapor, product residue and dust. Observe all labelled safeguards until container is cleaned, reconditioned or destroyed. Empty packaging completely. Do NOT reuse containers. Store for collection by approved waste disposal service. Follow all local, regional, national, and international regulations.

Use handling recommendations in Section 7 and personal protection recommendations in Section 8.

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

Glyphosate

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, and international regulations. Please consult supplier if further information is needed. For more information refer to the product label. Please consult MEY Corporation if further information is needed.

	Health	Flammability	Instability	Additional Markings
NFPA	2	1	1	
0 = Minimal hazard, 1 = Slight hazard, 2 = Moderate hazard, 3 = Severe hazard, 4 = Extreme hazard				

Commonly used abbreviations:

BCF	Bioconcentration Factor
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
EC50	50% effect concentration
ED50	50% effect dose
EPA	Environmental Protection Agency
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
Koc	Soil adsorption coefficient
LC50	50% lethality concentration
LD50	50% lethality dose
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
NFPA	National Fire Protection Association
NOAEC	No Observed Adverse Effect Concentration
NOAEL	No Observed Adverse Effect Level
NOEC	No Observed Effect Concentration
NOEL	No Observed Effect Level
OECD	Organization for Economic Co-operation and Development
OSHA	Occupational Safety and Health Administration
Pow	Partition coefficient n-octanol/water
SARA	Superfund Amendment and Reauthorization Act
STEL	Short-Term Exposure Limit
TSCA	Toxic Substances Control Act

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

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