MAXIMUM ECONOMIC YIELD

Safety Data Sheet

Wise Up Plus Glyphosate Herbicide

1. PRODUCT AND COMPANY IDENTIFICATION

Product name

Wise Up Plus Glyphosate Herbicide

EPA Reg. No.

80967-1

Product Use

Herbicide

Chemical name

Not applicable

Synonyms

None

Company

MEY Corporation, 121 S. Estes Drive, Suite 101, Chapel Hill, NC 27514
Telephone: (919) 932-5800
Fax: (919) 932-5820
E-mail: safetydatasheets@meycorp.com

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

Classification

OSHA Hazard Communication Standard, 29 CFR 1910.1200 (2012).
Acute toxicity, inhalation – Category 4

Label Elements

Signal word

WARNING!

Hazard pictogram

Hazard statement

May cause temporary eye irritation.
Harmful if inhaled.

Precautionary statement

Avoid breathing mist, vapors or spray.
Use only outdoors or in a well-ventilated area.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse with water for several minutes. Remove contact lenses, if present, and continue rinsing.
Call a POISON CENTER or physician if person feels unwell or if eye irritation persists.

Appearance and odor (color/form/odor)

Colorless – Amber / Liquid / Sweet.

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

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

Composition

COMPONENT	CAS No.	% by weight (approximate)
Isopropylamine salt of glyphosate	38641-94-0	41
Surfactants/dispersing agents	Trade Secret	15
Water	7732-18-5	44

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

Extinguishing media

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

Special hazards

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.

Flash point

Does not flash.

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.

Methods for cleaning up

SMALL QUANTITIES: Absorb only in non-combustible material. Sweep, scoop or vacuum to remove.
LARGE QUANTITIES: 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. 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

Avoid contact with eyes, skin and clothing. When using do not eat drink or smoke. Wash hands thoroughly after handling or contact. Wash contaminated clothing before reuse. 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 and product residue. FOLLOW LABELLED WARNINGS EVEN AFTER CONTAINER IS EMPTIED.

Storage

Minimum storage temperature 5° F (-15° C). 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. Partial crystallization may occur on prolonged storage below the minimum storage temperature. If frozen, place in a warm room and shake frequently to put back into solution. 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
Isopropylamine salt of glyphosate	No specific occupational exposure limit has been established.
Surfactants/dispersing agents	No specific occupational exposure limit has been established.
Water	No specific occupational exposure limit has been established.

Engineering controls

Have eye wash facilities immediately available at locations where eye contact can occur. Provide adequate ventilation and appropriate exhaust ventilation.

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. Applicators and other handlers must wear long sleeved shirt, long pants and shoes with socks.

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	Colorless - Amber
Odor	Sweet
Physical state	Liquid
Melting point	Not applicable
Boiling point	No data
Flash point	Does not flash
Explosive properties	No explosive properties
Auto ignition temperature	452°C
Self-accelerating decomposition temperature (SADT)	No data
Oxidizing properties	No data
Specific gravity	1.169 @ 20°C
Vapor pressure	25 mm Hg @ 24°C
Vapor density	No data
Evaporation rate	No data
Dynamic viscosity	73.2 mPa·s
Kinematic viscosity	62.47 cSt @ 20°C
Density	1.172 g/cm^3 @ 20°C
Solubility	Water: Completely miscible
pH	4.4 – 5.0
Partition coefficient	log Pow: < -3.2 @ 25°C (glyphosate)

10. STABILITY AND REACTIVITY

Stability

Stable under normal conditions of handling and storage.

Reactivity

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

Possibility of hazardous reactions

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

Incompatible materials

Galvanized steel or unlined mild steel.

Hazardous decomposition

Hazardous products of combustion: Carbon monoxide (CO), nitrogen oxides (NOx), and phosphorus oxides (PxOy).

11. TOXICOLOGICAL INFORMATION

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

Potential health effects

Eye contact, short term: May cause temporary eye irritation.

Skin contact, short term: Not expected to produce significant adverse effects when used as recommended.

Inhalation, short term: Not expected to produce significant adverse effects when used as recommended.

Single ingestion: Harmful if swallowed. May cause gastrointestinal tract irritation.

Data obtained on product and components are summarized below.

Isopropylamine salt of glyphosate

Acute oral toxicity

Rat, LD50: 5,108 mg/kg body weight. Practically non-toxic. FIFRA category IV.

Acute dermal toxicity

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

Acute inhalation toxicity

Rat, LC50, 4 **hours, aerosol:** 2.9 mg/L. Practically non-toxic. FIFRA category IV.

Skin irritation

Rabbit, 6 animals, OECD 404 test: Days to heal 3. Primary Irritation Index (PII) 0.5/8.0. Essentially non-irritating. FIFRA category IV.

Eye irritation

Rabbit, 6 animals, OECD 405 test: Days to heal 3. Moderate irritation. FIFRA category III.

Skin sensitization

Guinea pig, 3-induction Buehler test: Positive incidence 0 %. Negative. No skin sensitization.

N-(phosphonomethyl)glycine: {glyphosate acid}

Genotoxicity/mutagenicity

Not genotoxic/mutagenic.

Carcinogenicity

Not carcinogenic in rats or mice.

Reproductive/Developmental Toxicity/Teratogenicity

Developmental and reproductive effects in rats and/or rabbits only in the presence of significant maternal toxicity.

12. ECOLOGICAL INFORMATION

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

Isopropylamine salt of glyphosate

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

Bobwhite quail *(Colinus virginianus)*: Dietary toxicity, 5 days, LC50 > 5,620 mg/kg diet. Practically non-toxic.

Mallard duck *(Anas platyrhynchos)*: Dietary toxicity, 5 days, LC50 > 5,620 mg/kg diet. Practically non-toxic.

Arthropod toxicity

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

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 > 1,250 mg/kg soil. Practically non-toxic.

Similar formulation of isopropylamine salt of glyphosate

Aquatic toxicity, algae/aquatic plants

Green algae *(Selenastrum capricornutum)*: Acute toxicity, 72 hours, static, EbC50 (biomass) 12.4 mg/L. Slightly toxic.

Green algae *(Selenastrum capricornutum)*: Acute toxicity, 72 hours, static, NOEC 6.3 mg/L.

Soil organism toxicity, microorganisms

Nitrogen and carbon transformation test: 30 L/ha, 28 days, less than 25% effect on nitrogen or carbon transformation processes in soil.

N-(phosphonomethyl)glycine: {glyphosate acid}

Avian toxicity

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.

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

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

Excess product may be disposed of by agricultural use according to label instructions. 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 and product residue. Observe all labelled safeguards until container is cleaned,

reconditioned or destroyed. Empty packaging completely. Triple or pressure rinse empty containers. Pour rinse water into spray tank. Do NOT contaminate water when disposing of rinse waters. 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

Surfactants.

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.

Federal Fungicide, Insecticide, Rodenticide Act (FIFRA)

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

CAUTION
CAUSES EYE IRRITATION

Acute oral toxicity: FIFRA category IV.
Acute dermal toxicity: FIFRA category IV.
Acute inhalation toxicity: FIFRA category IV.
Skin irritation: FIFRA category IV.
Eye irritation: FIFRA category III.
Skin sensitization: No skin sensitization

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	1	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
cSt	Centistokes
EbC50	50% reduction of biomass concentration
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
mPa·s	Millipascal-second
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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