

SAFETY DATA SHEET
Glyphos Soluble Concentrate Herbicide

SDS # : FO002203-A
Revision date: 2018-10-10
Format: NA
Version 1.01



1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name Glyfos Soluble Concentrate Herbicide

Other means of identification

Product Code(s) FO002203-A

Synonyms GLYPHOSATE: Glycine, N-(phosphonomethyl)- (CAS name);
N-(Phosphonomethyl)glycine (IUPAC name)

Active Ingredient(s) Glyphosate, in the form of its isopropylamine salt

Chemical Family Phosphonoglycine

PCP # 24359

Recommended use of the chemical and restrictions on use

Recommended Use: Herbicide

Restrictions on Use: Use as recommended by the label.

Supplier Address

FMC Corporation
2929 Walnut Street
Philadelphia, PA 19104
(215) 299-6000 (General Information)
msdsinfo@fmc.com (E-Mail General Information)

Emergency telephone number

For leak, fire, spill or accident emergencies, call:

1 800 / 424-9300 (CHEMTREC - U.S.A.)
1 703 / 741-5970 (CHEMTREC - International)
1 703 / 527-3887 (CHEMTREC - Alternate)

Medical Emergencies:

1 800 / 331-3148 (ProPharma Group - U.S.A. & Canada)
1 651 / 632-6793 (ProPharma Group - All Other Countries - Collect)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Serious eye damage/eye irritation	Category 2B

GHS Label elements, including precautionary statements

EMERGENCY OVERVIEW

Warning

Hazard Statements

H332 - Harmful if inhaled
H320 - Causes eye irritation
H401 - Toxic to aquatic life



Precautionary Statements - Prevention

P202 - Do not handle until all safety precautions have been read and understood
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P271 - Use only outdoors or in a well-ventilated area
P273 - Avoid release to the environment
P264 - Wash hands thoroughly after handling
P280 - Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

P312 - Call a POISON CENTER or doctor if you feel unwell
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337 + P313 - If eye irritation persists: Get medical advice/ attention
P302 + P352 - IF ON SKIN: Wash with plenty of water and soap
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P391 - Collect spillage

Precautionary Statements - Storage

P405 - Store locked up

Precautionary Statements - Disposal

P501 - Dispose of contents/container according to label directions

Hazards not otherwise classified (HNOC)

No hazards not otherwise classified were identified.

Other Information

Toxic to aquatic life with long lasting effects. May be harmful in contact with skin.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Family Phosphonoglycine.

Chemical name	CAS-No	Weight %
Glyphosate IPA Salt	38641-94-0	31

Synonyms are provided in Section 1.

*Note: The product contains about 480 g/L of the active ingredient Glyphosate as its isopropylamine salt, equivalent to 360 g/L of the free acid Glyphosate (CAS # 1071-83-6).

4. FIRST AID MEASURES

Eye Contact	Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for further 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 further treatment advice.
Inhalation	Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.
Ingestion	Call a physician or poison control center immediately. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Never give anything by mouth to an unconscious person
Most important symptoms and effects, both acute and delayed	<p>Skin contact: May see mild irritation at the site of contact.</p> <p>Eye contact: Possible irritation and redness.</p> <p>Ingestion: Possible irritation of the throat.</p> <p>Inhalation: May experience irritation of the throat with a feeling of tightness in the chest.</p> <p>Delayed/Immediate effects: Immediate effects can be expected after short-term exposure. No known/observed signs or symptoms of short-term (acute) exposure. Prolonged or repeated (chronic) exposure may cause damage to organs.</p>
Indication of immediate medical attention and special treatment needed, if necessary	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Water spray, dry chemical, carbon dioxide (CO ₂), or foam.
Specific Hazards Arising from the Chemical	Combustible liquid. This material may burn when exposed to extreme heat, flame and other ignition sources. Closed containers may rupture if exposed to excess heat or flame due to build-up of internal pressure. Reacts with materials made of iron, galvanized steel and unlined steel, releasing flammable hydrogen gas, which may ignite.
Hazardous Combustion Products	Carbon oxides (COx), Nitrogen oxides (NOx), Phosphorus oxides.
Explosion data	
Sensitivity to Mechanical Impact	Not expected to be sensitive to mechanical impact.
Sensitivity to Static Discharge	Static electricity might be sufficient to ignite dust clouds. Possibility of ignition will depend on the minimum ignition energy (MIE) and the type of operations undertaken with the material. MIE values are not provided in this SDS.
Protective equipment and precautions for firefighters	As in any fire, wear self-contained breathing apparatus and full protective gear. Move containers from fire area if you can do it without risk. Use water spray to cool fire exposed surfaces and protect personnel.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Isolate and post spill area. Remove all sources of ignition. Wear suitable protective clothing, gloves and eye/face protection. For personal protection see section 8.
Other	For further clean-up instructions, call FMC Emergency Hotline number listed in Section 1

"Product and Company Identification" above.

Environmental Precautions	Keep material out of lakes, streams, ponds, and sewer drains. Prevent entry into waterways, sewers, basements or confined areas.
Methods for Containment	Dike to confine spill and absorb with non-combustible absorbent such as clay, sand or soil. Vacuum or shovel waste into a drum and label contents for disposal.
Methods for cleaning up	Remove all sources of ignition. Ventilate area of release. Stop the spill at source if it is safe to do so. Contain and absorb spilled material with inert, non-combustible absorbent material, such as sand. Sweep up and shovel into suitable containers for disposal. For a water spill, confine the spill immediately with booms. Large spills that soak into the ground should be dug up, placed into suitable containers and disposed of appropriately (see Section 13). Notify the appropriate authorities as required.

7. HANDLING AND STORAGE

Handling	<p>Handle in accordance with good industrial hygiene and safety practice. Do not contaminate other pesticides, fertilizers, water, food, or feed by storage or disposal. Avoid contact with skin, eyes and clothing. Do not breathe vapors or spray mist. Remove all sources of ignition. Keep away from heat, sparks and open flame. No smoking.</p> <p>This product should be mixed, stored or applied using only stainless steel, fiberglass, plastic, or plastic lined containers and equipment. This product can react with containers made of iron, galvanized steel and unlined steel to produce flammable hydrogen gas. Avoid contact with incompatible materials. Use caution when opening cap. Keep containers tightly closed when not in use.</p>
Storage	Keep away from open flames, hot surfaces and sources of ignition. Keep in a dry, cool and well-ventilated place. Keep out of reach of children and animals. Keep/store only in original container.
Incompatible products	Strong oxidizing agents, Alkalies, Iron, Galvanized steel, Unlined steel

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Appropriate engineering controls

Engineering measures	Apply technical measures to comply with the occupational exposure limits. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.
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Individual protection measures, such as personal protective equipment

Eye/Face Protection	For dust, splash, mist or spray exposure, wear chemical protective goggles.
Skin and Body Protection	Avoid contact with skin and clothing. Wear long-sleeved shirt, long pants, socks, and shoes. Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
Hand Protection	Impervious gloves Wash the outside of gloves with soap and water prior to removal. Inspect regularly for leaks.
Respiratory Protection	Do not breathe vapors, mist or gas. In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit. Use only with adequate ventilation.
Hygiene measures	Clean water should be available for washing in case of eye or skin contamination. Remove and wash contaminated clothing before re-use. Wash skin prior to eating, drinking, chewing gum or using tobacco. Shower or bathe at the end of working. Launder work clothing

separately from regular household laundry.

General information

If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Viscous, Liquid suspension
Physical State	Liquid
Color	Clear, yellow
Odor	Nearly odorless, Mild amine
Odor threshold	No information available
pH	4.5 @ 20°C (1% dilution in water)
Melting point/freezing point	< 0 °C / 32 °F
Boiling Point/Range	113 °C / 235 °F
Flash point	> 113 °C / > 235 °F Approximately
Evaporation Rate	No information available
Flammability (solid, gas)	No information available
Flammability Limit in Air	
Upper flammability limit:	No information available
Lower flammability limit:	No information available
Vapor pressure	1.75 x 10 ⁻⁷ mm Hg at 25°C
Vapor density	No information available
Relative density	No information available
Specific gravity	1.165 g/cm ³ @ 68°F (20°C)
Water solubility	Miscible with water
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Viscosity, kinematic	43 cSt @ 20°C
Viscosity, dynamic	No information available
Explosive properties	No information available
Oxidizing properties	Non-oxidizing
Molecular weight	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity	This product can react with containers made of iron, galvanized steel and unlined steel to produce flammable hydrogen gas which may form a highly combustible gas mixture with air. This gas mixture could flash or explode when exposed to heat, sparks, flame, welder's torch, lighted cigarettes or other ignition sources.
Chemical Stability	Stable under recommended storage conditions.
Possibility of Hazardous Reactions	None under normal processing.
Hazardous polymerization	Hazardous polymerization does not occur. The product does react with caustic (alkaline) materials to liberate heat, however this is an acid-base neutralization reaction and is not polymerisation.
Conditions to avoid	Heat, flames and sparks. Extremes of temperature and direct sunlight
Incompatible materials	Strong oxidizing agents, Alkalies, Iron, Galvanized steel, Unlined steel.
Hazardous Decomposition Products	See Section 5 for more information.

11. TOXICOLOGICAL INFORMATION

Product Information

LD50 Oral	> 5000 mg/kg (rat)
LD50 Dermal	> 2000 mg/kg (rat)
LC50 Inhalation	> 4.86 mg/L (4-hr) (rat) - Maximum attainable concentration (zero mortality)

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Serious eye damage/eye irritation May cause slight irritation.
Skin corrosion/irritation May cause slight irritation.
Sensitization Not expected to be sensitizing based on the components.

Information on toxicological effects

Symptoms Symptoms from skin contact may include redness, itching and swelling. Inhalation of dust may cause shortness of breath, tightness of the chest, a sore throat and cough. May cause irritation of respiratory tract. Ingestion may cause irritation of mouth, throat, and stomach. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects. No known/observed signs or symptoms of short-term (acute) exposure. Prolonged or repeated (chronic) exposure may cause damage to organs.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Mutagenicity Not a mutagen based on the evaluated studies
Carcinogenicity Contains no ingredient listed as a carcinogen
Reproductive toxicity Not expected to have reproductive effects.
Teratogenicity Not expected to be a teratogen.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Target organ effects Eyes, Skin, Respiratory System, Digestive system
Aspiration hazard No information available.

Chemical name	ACGIH	IARC	NTP	OSHA
Glyphosate IPA Salt 38641-94-0		Group 2A		X

Legend:

IARC (International Agency for Research on Cancer)

Group 2A - Probably Carcinogenic to Humans

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

12. ECOLOGICAL INFORMATION

Ecotoxicity

Glyphosate IPA Salt (38641-94-0)				
Active Ingredient(s)	Duration	Species	Value	Units
Glyphosate	48 h EC50	Daphnia	21.6	mg/L
	LC50 5 d	Mallard duck	>5,620	mg/kg
	LC50 5 d	Bobwhite quail	>5,620	mg/kg
	EC50 96h	Algae	2.2	mg/L
	LD50	Bee	>100	µg/bee

Persistence and degradability Glyphosate: Persistent. Readily hydrolyzes.

Bioaccumulation Glyphosate: Bioaccumulation is unlikely.

Mobility Glyphosate. Relatively immobile in soil.

13. DISPOSAL CONSIDERATIONS

Waste disposal methods Improper disposal of excess pesticide, spray mixture, or rinsate is prohibited. If these wastes cannot be disposed of by use according to label instructions, contact appropriate disposal authorities for guidance. Proper personal protective equipment, as described in Sections 7 and 8, must be worn while handling materials for waste disposal.

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Contaminated Packaging

Containers must be disposed of in accordance with local, state and federal regulations.
Refer to the product label for container disposal instructions.

14. TRANSPORT INFORMATION

<u>DOT</u>	NOT REGULATED
<u>TDG</u>	NOT REGULATED
<u>ICAO/IATA</u>	NOT REGULATED
<u>IMDG/IMO</u>	NOT REGULATED

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic health hazard	Yes
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

FIFRA Information

This chemical is a pesticide product registered by the 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, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

CAUTION

*Causes substantial but temporary eye injury.
Harmful if inhaled or absorbed through the skin.
Do not get in eyes, on skin or on clothing.
Wash thoroughly with soap and water after handling.
Remove contaminated clothing and wash clothing before re-use.*

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

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This product does not contain any substances regulated by state right-to-know regulations

International Inventories

This product does not contain any substances on the International Inventories.

Chemical name	TSCA (United States)	DSL (Canada)	EINECS/ELINCS (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines)	AICS (Australia)
Glyphosate IPA Salt 38641-94-0		X	X	X	X			X

CANADA

WHMIS Statement

This product has been classified in accordance with the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

This product is a Pest Control Product and is not regulated as a Controlled Product under the Hazardous Products Act (HPA). However, for reference purposes only, this product would have the following WHMIS Classification if it were regulated as a Controlled Product under the HPA:

WHMIS Hazard Class

D2B - Toxic materials



16. OTHER INFORMATION

NFPA	Health Hazards 1	Flammability 1	Instability 0	Special Hazards -
HMIS	Health Hazards 2*	Flammability 1	Physical hazard 0	Personal Protection X

*Indicates a chronic health hazard.

NFPA/HMIS Ratings Legend

Severe = 4; Serious = 3; Moderate = 2; Slight = 1; Minimal = 0

Revision date:

2018-10-10

Reason for revision:

(M)SDS sections updated

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End of Safety Data Sheet