



Material Safety Data Sheet

FOR EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT, CALL:
CHEMTREC 1-800-424-9300

Section 1—Chemical Product and Company Identification

Product Name:	AgriSolutions™ Cornerstone®	EPA Reg. No. 1381-191
Common Name:	Glyphosate Herbicide	
Chemical Description:	Isopropylamine Salt of Glyphosate	
Manufacturer's Name:	WINFIELD SOLUTIONS, LLC	Medical Emergency Telephone Number:
P. O. Box 64589		1-877-424-7452
St. Paul, MN 55164-0589		MSDS Revision Date: 09/07/2010
		Supersedes documents dated 07/15/2005 and 09/12/2007

Section 2—Hazards Identification

Emergency Overview: Moderate eye irritant. May react with metals such as galvanized or mild steel to produce hydrogen gas which could form a highly combustible gas mixture. Product may cause oxygen deficiency in enclosed spaces; follow all OSHA regulations pertaining to confined space entry. See health effects below.

CAUTION: Keep out of reach of children.

Route(s) of Entry: Eyes, Inhalation, Skin, and Ingestion.

Health Hazards (Acute and Chronic):

Inhalation: Low inhalation toxicity.

Eyes: May cause moderate irritation.

Skin: Contact may cause slight irritation.

Ingestion: No significant adverse health effects are expected to develop if only small amounts (less than a mouthful) are swallowed.

Medical Conditions Generally Aggravated by Exposure:

None known. Preexisting respiratory conditions may be aggravated by exposure to mists.

Section 3—Composition Information on Ingredients

Ingredient	% (wt)	CAS reg. #
Isopropylamine salt of glyphosate	41.0%	38641-94-0

*Ingredients not specifically listed are considered to be non-hazardous and are claimed as confidential business information.

NFPA HAZARD RATING:			
0	Least		
1	Slight	2	Health
2	Moderate	0	Flammability
3	High	1	Reactivity
4	Severe		

Section 4—First Aid Measures

Inhalation: Remove person to fresh air and assist breathing as needed. Seek medical attention if irritation persists.

Ingestion: Seek medical attention or call a poison control center immediately.

Eyes: Flush with clean water for at least 15 minutes. Lift eyelids to facilitate irrigation. Seek medical attention if eye irritation persists.

Skin: Remove contaminated clothing and wash before re-using. Flush skin with water, and then wash with soap and water. Seek medical attention if skin becomes irritated.

After first aid, get appropriate in-plant, paramedic, or community medical support.

Section 5—Fire and Explosion Hazard Data

Extinguishing Media: Use water spray, foam or dry chemical.

Special Fire Fighting Procedures: Wear self-contained breathing apparatus and full bunker gear. Smoke and fumes from fire may contain hazardous components. Evacuate area and fight fire upwind from a safe distance to avoid hazardous vapors and decomposition products. Contain run-off by diking to prevent contamination of water supplies.

Hazardous Combustion Products: Carbon monoxide, nitrogen oxides, phosphorous oxides.

Unusual Fire and Explosion Hazards: Product may decompose in fire releasing irritating or toxic gases. Containers may burst from internal pressure under extreme fire conditions.

Section 6—Accidental Release Measures

Small Spills: Clean-up personnel should protect against mist inhalation and skin contact. Avoid generating mists. Absorb small spills on sand, vermiculite or other inert absorbent. Place contaminated material in appropriate container for disposal.

Large Spills: Clean-up personnel should protect against mist inhalation and skin contact. Avoid generating mist. Dike large spills using absorbent or impervious material such as clay or sand. Recover and contain as much free liquid as possible for reuse. Allow absorbed material to solidify, and scrape up for disposal. After removal, scrub the area with detergent and water and neutralize with dilute alkaline solutions of soda ash, or lime.

Containment: Do not release into sewers or waterways. Dike spills to prevent contamination to water supplies. Wear appropriate personal protection equipment (See Section 8.)

Section 7—Precautions for Safe Handling and Use

Precautions to Be Taken in Handling and Storage: Store in cool, dry areas away from children, feed and food products and sources of heat. Immediately clean up spills that occur during handling or storage. Store in original container with lid tightly closed. Store above 15°F (-10°C). If crystallized, warm to 80-90°F and re-dissolve by shaking container before using product.

DO NOT MIX, STORE OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS. This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture. This gas mixture could flash or explode, causing serious personal injury, if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source.

Other Precautions: Consult Local, State, and Federal regulations pertaining to storage and disposal.

Section 8—Control Measures/Personal Protection

Respiratory Protection: Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a properly FIT TESTED MSHA/NIOSH-approved respirator.

Ventilation: **Local Exhaust:** Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs. Local exhaust ventilation is preferred.

Note to End Users: Refer to the product label for complete Personal Protective Equipment.

Protective Gloves: Wear chemically protective gloves.

Eye Protection: Wear protective eyeglasses or chemical safety goggles. Contact lenses are not eye protective devices.

Other Protective Clothing or Equipment: Wear long sleeved shirt and long pants along with shoes plus socks.

Work/Hygienic Practices: Never eat, drink, nor smoke in work areas. Practice good hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9—Physical/Chemical Characteristics

Physical State:	Liquid	Specific Gravity (H₂O=1):	1.16 – 1.17
Vapor Pressure (mm Hg):	Not determined	Freezing Point:	15°F (-10°C)
Vapor Density (Air=1):	Not determined	Boiling Point:	Not determined
Solubility in Water (wt %):	Emulsifies	pH:	4.4
Appearance and odor:	Clear yellow to amber liquid with slight amine odor	Flash Point:	Will not flash

Section 10—Reactivity Data

Stability: Product stable at room temperature in closed containers under normal storage and handling conditions. May decompose if heated.

Chemical Incompatibilities: Strong oxidizers or bases, mild and galvanized steel.

Conditions to Avoid: Avoid temperatures above 115°F (46°C) and below 25°F (-5°C).

Hazardous Decomposition Products: Carbon monoxide, nitrogen oxides, phosphorous oxides

Hazardous Polymerization: Will not occur.

Section 11—Toxicological Information

Eye Effects: Moderate irritation (rabbit)

Skin Effects: Mild irritation (rabbit); Acute dermal LD50 > 5,000 mg/kg (male rat); Non-sensitizer (guinea pig)

Acute Inhalation Effects: LC50 > 2.5 mg/L (rat)

Acute Oral Effects: LD50 > 5,000 mg/kg (rat)

Chronic Effects: Not determined

Mutagenicity: Not determined

Teratogenicity: Not determined

Carcinogenicity:	NTP: Not listed	IARC: Not listed	OSHA: Not listed
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Section 12—Ecological Information

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

Fish Toxicity:

96 hour LC50, Rainbow trout = 8.2 mg/L

96 hour LC50, Bluegill = 5.8 mg/L

Avian Toxicity:

Oral LD50, Bobwhite quail > 3,800 mg/kg

Oral LD50, Mallard duck – Unknown

Bee Toxicity: Non-toxic

Section 13—Disposal Considerations

Waste: Dispose of in accordance with applicable Federal, state and local laws and regulations.

Container: Triple rinse (or equivalent) the empty containers. Then offer for recycling or reconditioning. See product label for details.

RCRA characteristics: None

Section 14—Transport Information

Not regulated by the U.S. DOT as a hazardous material.

Section 15—Regulatory Information

TSCA Inventory: This product is exempted from TSCA as it is solely for FIFRA regulated use.

SARA Title III, Section 302: None listed

SARA Title III, Section 311/312:	Immediate: Yes	Delayed: No
Sudden Release of Pressure: No	Fire: No	Reactive: No

SARA Title III, Section 313: None listed

CERCLA: None listed

PROPOSITION 65: WARNING: This product may contain chemicals known to the State of California to cause cancer and birth defects or reproductive harm.

Section 16—Other

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