


NFPA HAZARD RATING				U.S. TRANSPORT SUMMARY	
0	Least			Not regulated by the U.S. DOT as a hazardous material. (See Section 14 for additional information.)	
1	Slight	2	Health		
2	Moderate	0	Flammability		
3	High	1	Reactivity		
4	Severe				

SECTION 1: IDENTIFICATION	
Product Name:	Cornerstone® Plus
EPA Registration #:	1381-192
Product ID/Unity #:	10016584, 10109578, 10109579, 10109580, 10109581, 1400088 (Check product packaging to ensure EPA registration number on package matches the number on this Safety Data Sheet)
Common Name:	Glyphosate herbicide
Chemical Description:	Isopropylamine salt of Glyphosate
Recommended Uses:	Agricultural Herbicide. See product label for complete list of uses and use sites.
Restrictions for Use:	See product label for information regarding restrictions on the use of this product.
Manufactured For: WINFIELD SOLUTIONS, LLC P. O. Box 64589 St. Paul, MN 55164-0589	MEDICAL EMERGENCY TELEPHONE NUMBER: 1-877-424-7452 (24hrs) Non-Emergency Business Inquiries: 1-855-494-6343 Mon – Fri 8am – 5pm (Central Standard Time)
FOR EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT, CALL: CHEMTREC 1-800-424-9300 (24 hours)	

SECTION 2: HAZARDS IDENTIFICATION	
EMERGENCY OVERVIEW: Clear pale yellow to amber liquid with no to slight amine odor. Moderate eye irritant. May react with metals such as galvanized or unlined steel to produce hydrogen gas which could form a highly combustible gas mixture.	
POTENTIAL HEALTH EFFECTS:	
Eyes: May cause moderate eye irritation.	
Skin: Short-term contact with skin may cause mild irritation. Prolonged contact with skin may lead to swelling, redness and blistering.	
Inhalation: Inhalation of mist may cause mild irritation of the upper respiratory tract.	
Ingestion: Ingestion may cause irritation of the digestive tract and lead to colitis.	
Preexisting Conditions: Preexisting skin conditions may be aggravated by exposure to mist or spray.	
*Carcinogenicity	NTP: Not listed IARC: 2A Probable carcinogen to humans OSHA: Not listed (Glyphosate)
*See Section 11 for further information	
OSHA HCS 2012 CLASSIFICATION: Eye Irritation Category 2B; Acute Inhalation Toxicity Category 4	
SIGNAL WORD: WARNING	
HAZARD STATEMENTS: Causes eye irritation. Harmful if inhaled.	
Percent of product with unknown toxicity: 0%	
<i>Continued on next page</i>	

PRECAUTIONARY STATEMENTS:	
Prevention:	Wash hands thoroughly after handling. Avoid breathing mist or spray. Use only outdoors or in a well-ventilated area.
Response:	If in eyes: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison control center (1-877-424-7452) or doctor for treatment advice if you feel unwell.
Storage:	See section 7 for storage information.
Disposal:	See section 13 for disposal information.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS		
Ingredient	% (wt)	CAS Reg. #
Isopropylamine salt of glyphosate	41.0%	38641-94-0
*Ingredients not specifically listed are non-hazardous and are considered to be confidential business information under 29 CFR 1910.1200(j).		
See Section 8 for exposure limits.		

SECTION 4: FIRST AID MEASURES	
Inhalation:	Remove person from contaminated area to fresh air and assist breathing as needed. Seek medical attention if irritation occurs.
Ingestion:	Seek medical attention or call a poison control center for treatment advice. Do not induce vomiting unless instructed to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
Eyes:	Flush eyes with clean water for at least 15 minutes. Lift eyelids to facilitate irrigation. If present, remove contact lenses after 5 minutes and continue rinsing. Seek medical attention if irritation occurs.
Skin:	Remove contaminated clothing and wash before re-using. Flush skin with water and then wash with soap and water. Seek medical attention if irritation persists.

SECTION 5: FIRE FIGHTING MEASURES	
Suitable Extinguishing Media:	Use water spray, foam or dry chemical. Foam or dry chemical extinguishing systems are recommended to prevent environmental damage due to water run-off.
Special Fire Fighting Procedures:	Wear NIOSH/MSHA approved self-contained breathing apparatus and full bunker gear. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later. Avoid breathing vapors; keep upwind.
Hazardous Combustion Products:	Carbon monoxide, nitrogen oxides and phosphorous oxides
Unusual Fire and Explosion Hazards:	May decompose in fire due to releasing irritating or toxic gases.

SECTION 6: ACCIDENTAL RELEASE MEASURES	
Personal Precautions:	Refer to Section 8 for personal protective equipment to be worn during containment and clean-up of a spill involving this product.
Environmental Precautions:	Keep spilled product from entering sewers or waterways.
Methods for Containment:	Contain spilled product by diking area with sand or earth.
Methods for Clean-up:	Cover contained spill with an inert absorbent material such as sand, vermiculite or other appropriate material. Vacuum, scoop, or sweep up material and place in a container for disposal. Do not place spilled material back in original container.
Other Information:	None known

SECTION 7: HANDLING AND STORAGE

Handling: RECOMMENDATIONS ARE FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS. PESTICIDE APPLICATORS AND WORKERS must refer to the pesticide product label and Directions for Use attached to the product for Agricultural Use Requirements in accordance with the EPA Worker Protection Standard 40 CFR part 170. Ensure adequate ventilation. Immediately clean up spills that occur during handling. Keep containers closed when not in use. Practice good hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Storage: Store in cool, dry areas away from children, feed and food products and sources of heat. Store in original container with lid tightly closed. Store above 25°F (-5°C). If crystallized, warm to 80-90°F and re-dissolve by shaking container before using product. **See pesticide product label for additional storage information.**

Minimum Storage Temperature: 25°F

Other Precautions: Consult Federal, state and local laws and regulations pertaining to storage.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Component:	OSHA PEL	ACGIH TLV	NIOSH REL
No components have exposure guidelines			

NOTE TO END USERS: PERSONAL PROTECTIVE EQUIPMENT (PPE) AND CLOTHING LISTED IN THIS SECTION IS FOR MANUFACTURING, COMMERCIAL BLENDING AND PACKAGING WORKERS. APPLICATORS AND HANDLERS SHOULD REFER TO THE PESTICIDE PRODUCT LABEL FOR PROPER PERSONAL PROTECTIVE EQUIPMENT (PPE) AND CLOTHING.

Respiratory Protection: Wear respiratory protection if inadequate ventilation. Wear a NIOSH-certified (or equivalent) TC23C Chemical/Mechanical type filter system to remove a combination of particles, gas and vapors.

Engineering Controls: Local Exhaust: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs or other specified exposure limits. Local exhaust ventilation is preferred.

Protective Gloves: Wear chemical resistant gloves.

Eye Protection: Wear chemical goggles or safety glasses and full-face shield. Contact lenses are not eye protective devices. An emergency eyewash or water supply should be readily accessible to the work area.

Other Protective Clothing or Equipment: Wear long sleeve shirt, long pants and shoes plus socks to prevent skin exposure.

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

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid	Specific Gravity (H₂O=1):	1.15 – 1.21 (typical)
Vapor Pressure (mm Hg):	Not determined	Density (lbs/gallon):	9.6 – 10.1 lbs/gallon
Vapor Density (Air=1):	Not determined	Melting Point/Freezing Point:	Not determined
Solubility in Water (wt %):	Emulsifies	Boiling Point/Range:	Not determined
Viscosity:	Not determined	pH:	4.4 – 5.1
Appearance and odor:	Clear pale yellow to amber liquid with no to slight amine odor.	Flash Point:	Does not flash

SECTION 10: STABILITY AND REACTIVITY

Reactivity: None known

Chemical Stability: Product is stable at ambient temperature and pressure, under normal storage and handling conditions.

Possibility of Hazardous Reactions: Will not occur

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

Incompatible Materials: Strong oxidizers or bases, mild and galvanized steel.

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

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Eye Effects: Causes moderate eye irritation (rabbit)
Skin Effects: Short-term contact with skin may cause mild irritation. Prolonged contact with skin may lead to swelling, redness and blistering. LD50 >5,000 mg/kg (male rat). Product is not a sensitizer.
Acute Inhalation Effects: LC50 >2.5 mg/L (rat)
Acute Oral Effects: LD50 >5,000 mg/kg (rat)
Specific Target Organ Toxicity: None known

CHRONIC TOXICITY

Carcinogenicity: The United States Environmental Protection Agency (EPA) has given glyphosate a Group E classification (evidence of non-carcinogenicity in humans). The Canadian Pest Management Regulatory Agency (PMRA) has classified glyphosate as unlikely to pose a human cancer risk. The European Food Safety Authority (EFSA) has classified glyphosate as unlikely to pose a carcinogenic hazard to humans. In 2015, the International Agency for Cancer Research (IARC) classified glyphosate as a probable human carcinogen Group 2A based on limited human evidence and sufficient evidence in animals.
Mutagenicity: None known
Teratogenicity: None known
Reproductive Toxicity: None known

POTENTIAL HEALTH EFFECTS:

Eyes: May cause moderate eye irritation.
Skin: Short-term contact with skin may cause mild irritation. Prolonged contact with skin may lead to swelling, redness and blistering.
Inhalation: Inhalation of mist may cause mild irritation of the upper respiratory tract.
Ingestion: Ingestion may cause irritation of the digestive tract and lead to colitis.

SECTION 12: ECOLOGICAL INFORMATION

ENVIRONMENTAL SUMMARY: 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 or rinsate. **The information presented below is on the technical active ingredient, glyphosate.**

ECOTOXICITY DATA:

Fish Acute and Prolonged Toxicity: Bluegill Sunfish: >24 mg/L (48 hour)
 Rainbow Trout: 140 mg/L (48 hour)
Aquatic Invertebrate Acute Toxicity: *Daphnia magna*: 780 ppm (48 hour)
Aquatic Plant Toxicity: Not determined
Bird Acute and Prolonged Toxicity: Bobwhite quail: Acute LD50 >2,000 mg/kg
Honeybee Toxicity: >100 ug/bee (oral); practically non-toxic

ENVIRONMENTAL EFFECTS:

Soil Absorption/Mobility: Even though technical glyphosate is highly water soluble it appears that parent glyphosate and its degradation product, aminomethyl phosphonic acid (AMPA), have a low potential to move to ground-water due to their strong adsorptive characteristics demonstrated in laboratory and field studies. However, glyphosate does have the potential to contaminate surface waters due to its aquatic use patterns and erosion via transport of residues adsorbed to soil particles suspended in runoff water. If glyphosate were to reach surface water it would be resistant to hydrolysis and aqueous photolysis.
Persistence and degradability: Glyphosate technical is readily degraded by soil microbes to aminomethyl phosphonic acid (AMPA), which is degraded to CO₂, although at a slower rate than parent glyphosate.
Bioaccumulative Potential: Not determined
Other adverse effects: Not determined

SECTION 13: DISPOSAL CONSIDERATIONS

Waste: Dispose of in accordance with applicable Federal, state and local laws and regulations.
Container: Triple rinse and recycle the container or dispose of in accordance with Federal, state and local laws and regulations.
See pesticide product label for full instructions on disposal.
RCRA Characteristics: It is the responsibility of the individual disposing of this product to determine the RCRA classification and hazard status of the waste.

SECTION 14: TRANSPORT INFORMATION

DOT: (Ground)	This product is not regulated by the U.S. Department of Transportation as a hazardous material for ground shipment.
IMDG: (Sea)	Not determined
IATA: (Air)	Not determined
TDG: (Canada)	Not determined

SECTION 15: REGULATORY INFORMATION

TSCA Inventory: This product is exempt from TSCA inventory listing requirements as it is solely for FIFRA regulated use.
SARA Title III Information:
Section 302 - Extremely hazardous substances: None listed
Section 311/312 – Hazard Categories: Immediate (Acute)
Section 313 – The following chemicals are subject to the reporting requirements of Section 313 of Title III, Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372:
 None listed

CERCLA - This product contains the following chemicals which have a reportable quantity (RQ) under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA):
 None listed

EPA Registration 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 moderate eye irritation.
 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.
DOMESTIC ANIMALS: This product is considered to be relatively non-toxic to dogs and other domestic animals; however, ingestion of this product or large amounts of freshly sprayed vegetation may result in temporary gastrointestinal irritation (vomiting, diarrhea, colic, etc.). If such symptoms are observed, provide the animal with plenty of fluids to prevent dehydration. Call a veterinarian if symptoms persist for more than 24 hours.

California Proposition 65: This product does not contain any chemicals known to the state of California to cause cancer and/or reproductive harm.

U.S. State Worker and Community Right-To-Know (RTK) Information (CT, IL, MA, MN, NH, NJ, PA, RI):

Chemical Name	CAS #	State(s)
No components listed		

Canadian Domestic Substances List: Not determined

WHMIS Classification: This product is not registered for use in Canada. WHMIS classification is not determined.

SECTION 16: OTHER

Disclaimer: The information presented herein is based on available data from reliable sources and is correct to the best of WinField Solutions' knowledge. WinField Solutions, LLC makes no warranty, express nor implied, regarding the accuracy of the data or the results obtained from the use of this product. Nothing herein may be construed as recommending any practice or any product in violation of any law or regulations. The user is solely responsible for determining the suitability of any material or product for a specific purpose and for adopting any appropriate safety precautions. We disclaim all liability for injury or damage stemming from any improper use of the material or product described herein.

Revision Date: June 13, 2017
Sections Revised: 2, 11, 16

Supersedes document dated: July 12, 2013