

**SAFETY DATA SHEET
TOMAHAWK 4**

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name: Tomahawk 4
EPA Registration No.: 33270-18
Unity#: 1611926
Product Type: Herbicide
Active Ingredient: Glyphosate: N-(phosphonomethyl)glycine, isopropylamine salt
Manufacturer/Registrant: Winfield Solutions, LLC
P.O. Box 64589
St. Paul, MN 55164-0589

FOR MEDICAL EMERGENCIES: Contact 1-877-424-7452

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC 1-800-424-9300

FOR Non-Emergency Business Inquiries: 1-855-494-6343 Mon – Fri 8am – 5pm (CST)

SECTION 2. HAZARDS IDENTIFICATION

THE FOLLOWING HAZARDS ARE IDENTIFIED ACCORDING TO OSHA HCS CLASSIFICATION (29 CFR 1910.1200).

Hazard Classifications:

Acute Inhalation Toxicity: Category 4

Eye Damage/Irritation: Category 2B

Skin Irritation: Category: 2

Signal Word: WARNING

Pictograms:



Hazard Statements:

- Harmful if inhaled
- Cause eye irritation
- Causes skin irritation

Precautionary Statements:

- Avoid breathing dust, mist, vapor or spray. Use in a well-ventilated area. If inhaled, remove victim to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell.
- Wash hands and face thoroughly after handling. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: get medical advice/ attention.
- Wash hands and face thoroughly after handling. Wear protective gloves. If on skin: wash with plenty of water. If skin irritation occurs, get medical advice/attention. Take off contaminated clothing and wash it before reuse.

Contact Chemtrec for emergency medical treatment at 1- 800-424-9300.

Storage and Disposal: See Section 7 and 13.

Other Hazards: See Section 11 and 12.

SECTION 3. COMPOSITION, INFORMATION ON INGREDIENTS

<u>Chemical Ingredients:</u>	<u>CAS No.</u>	<u>Percentage (%) by Weight:</u>
Glyphosate isopropylamine salt	38641-94-0	41%

SECTION 4. FIRST AID MEASURES

- If in Eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
- If Inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.
- If Swallowed:** Do not give any liquid to the person. 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.

Have the product container or label with you when calling a poison control center or doctor, or when going for treatment.

Emergency Telephone Number: (800) 424-9300 CHEMTREC (transportation and spills)
(877) 424-7452 (human and animal health)

SECTION 5. FIRE FIGHTING MEASURES

Flash Point: NA (not flammable)

Flammable Limits (LFL & UFL): Not established

Extinguishing Media: Use dry foam, dry chemical, carbon dioxide, or water spray when fighting fires involving this material. Minimize the use of water to avoid environmental contamination.

Unusual Fire and Explosion Hazards: Thermal decomposition during a fire can produce fumes and irritating gases.

Special Fire Fighting procedures: Evacuate the area and fight fire upwind from a safe distance to avoid hazardous vapors and decomposition products. Dike and collect water used to fight fire to prevent environmental damage due to run off.

Fire Fighting Equipment: Self-contained breathing apparatus with full face-piece. Equipment should be thoroughly decontaminated after use.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Steps to be Taken if Material is Released or Spilled: Wear protective clothing as described in Section 8 of this SDS. Absorb liquid with material such as clay, sand, sawdust, or dirt. Sweep up and place in a suitable container for disposal and label the contents. Area can be washed down with a suitable solution of bleach or soda ash and an appropriate alcohol (methanol, ethanol, or isopropanol). Follow this by washing with a strong soap and water solution. Absorb any excess liquid as indicated above, and add to the disposal container. Keep product, contaminated materials and wash water out of streams and sewers. Wash exposed body areas thoroughly after handling.

SECTION 7. HANDLING AND STORAGE

HANDLING: Do not contaminate water, food or feed by storage or disposal. Wash hands after handling, and before eating, drinking, chewing gum, using tobacco, or using the toilet. Wear proper safety equipment specified in Section 8 when mixing, loading or otherwise handling this product. Spray solutions of this product should be mixed, stored and applied using only stainless steel, aluminum, fiberglass, plastic or plastic-lined steel containers.

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.

STORAGE: Keep container closed to prevent spills and contamination. Keep in original containers, tightly closed, and out of reach of children and animals. Keep away from food, feedstuff and water supplies. Containers should be stored in a cool, dry, well-ventilated area and away from heat. Do not allow product to freeze. Compatible storage materials include stainless steel, aluminum, fiberglass, plastic, and glass lined containers. Incompatible storage materials include galvanized steel and unlined mild steel.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION, PACKAGING AND USE OF THIS PRODUCT.
FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

Skin Protection: Wear protective clothing: long-sleeved shirts and pants, shoes plus socks and chemical-resistant gloves. Always refer to the label of the pesticide(s) in the tank mix and follow the most restrictive requirements.

Eye Protection: Wear protective eyewear.

Respiratory Protection: Proper ventilation is required when handling or using this product to keep exposure to airborne contaminants below the exposure limit.

Personal Protective Equipment (PPE): Follow manufacturer's instructions for cleaning/maintaining PPE. If not such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

User Safety Recommendations:

Users should:

- Wash hands thoroughly after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Engineering Controls: Refer to product label. Provide general and/or local exhaust ventilation to control airborne levels below the exposure guideline. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.

Exposure Limits: Not established.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear, very pale yellow liquid

Odor: Mild

Odor Threshold: Not available

pH: 4.57 (1% solution)

Flash Point: Not available

Flammability: Not flammable

Density: 1.167 g/cc @ 25°C; 1.165 g/cc @ 41°C

Water Solubility: Not available

Viscosity: 24.1 centipois@25°C; 13.0 centipois @41°C

Flammability (Solid, Gas): Not available

Upper/Lower Flammability/Explosive Limits: Not available

Auto-ignition Temperature: Not available

Explodability: Not available

Solubility: Not available

Partition Coefficient (n-Octanol/Water): Not available

Vapor Pressure: Not available

Vapor Density: Not available

Freezing point: Not available

Boiling Point: Not available

Evaporation Rate: Not available

Decomposition Temperature: Not available

SECTION 10. STABILITY AND REACTIVITY STABILITY:

Stability: Stable under normal use and storage conditions. May decompose if heated.

Conditions and Materials to Avoid: Avoid excessive heat and fire.

Incompatibility: Reacts with galvanized steel or unlined mild steel to produce hydrogen, a highly flammable gas.

Hazardous Polymerization: Will not occur.

Hazardous Decomposition Products: Oxides of carbon, nitrogen and/or phosphorous.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute Toxicity/Irritation Studies (End-Use Product)

Acute oral toxicity:	LD ₅₀ (rat)	5,000 mg/kg
Acute dermal toxicity:	LD ₅₀ (rabbit):	> 5,000 mg/kg
Acute inhalation toxicity:	LC ₅₀ (rat):	2.6 mg/L (4-hr)
Eye irritation:	Cause mild eye irritation; clears in 7 days	
Skin irritation:	Cause mild skin irritating	
Skin Sensitization:	Non-sensitizer	

Primary Routes of Exposure: Inhalation, eye and skin contact.

Toxicological Information (Based on Glyphosate):

Repeated Dose Toxicity: No treatment-related effects observed in animal feeding studies.

Chronic/Subchronic Toxicity: Decrease of body weight gains observed in 2-year animal studies.

Reproductive/Developmental Effects: None observed.

Mutagenicity: Non observed

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.

Target Organs: Eye, liver

SECTION 12. ECOLOGICAL INFORMATION

Environmental Hazards: 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 clean equipment or disposing of equipment washwaters.

Ecotoxicity Information: (Data from a similar formulation)

Rainbow Trout LC₅₀ (flow-through, 96-h): 8.2 mg/L
Bluegill sunfish (flow-through, 96-h) LC₅₀ : 5.8 mg/L
Daphnia magna (48-h) EC₅₀ : 11 mg/L
Green algae (96-h) EC₅₀ : 2.6 mg/L

Avian Toxicity:

Bobwhite quail (5-day) Oral LC₅₀ : >5,620 mg/kg (diet)
Mallard duck (5-day) LC₅₀ : > 5,620 mg/Kg (diet)

Bee Toxicity: Oral/Contact (48-h) LD₅₀ : > 326 µg/bee

Environmental Fate: Atrazine is moderately to highly mobile in soils. It does not absorb strongly to soil particles and has a lengthy soil half-life, it is expected to have a high potential for groundwater contamination, even though it is only moderately soluble in water.

Bioaccumulative Potential: BCF (bluegill sunfish, whole fish): < 1 (No significant bioaccumulation is expected)

DISSIPATION:

Soil, field (half life) - 2 to 174 days
Koc - 884 to 60,000 l/kg
Water, aerobic (half life) - < 7 days

SECTION 13. DISPOSAL CONSIDERATIONS

Pesticide Disposal: Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, state, or local procedures. Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned, or destroyed.

Container Disposal: Refer to product label for container disposal. Dispose of product containers, waste containers, and residues according to local, state and federal health and environmental regulations.

SECTION 14. TRANSPORT INFORMATION

DOT:

Not regulated

IMDG/IMO

Not regulated

ICAO/IATA

Not regulated

SECTION 15. REGULATORY INFORMATION

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 for safety data sheet, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label.

CAUTION Harmful if inhaled. Causes moderate eye irritation. Avoid breathing spray mist. Avoid contact with eyes or clothing.

SARA 311/212 Hazard Categories:

Section 311/312

Acute Health Hazard

Chronic Health Hazard

Section 313 Chemical(s)

1,4-Dioxane (CAS No. 123-9-1); Ethylene oxide (CAS No. 75-21-8)

CERCLA/SARA 302 Reportable Quantity (RQ):

Ethylene Oxide (CAS No. 75-21-8) RQ: 10 lbs. ; 1,4-Dioxane (CAS No. 123-9-1) RQ: 5000 lbs.

RCRA Hazardous Waste Classification (40 CFR 261): Not applicable

TSCA List: The ingredients of this product are listed on the TSCA inventory or are exempt.

CA Proposition 65:

This product contains chemical (Ethylene oxide CAS No. 75-21-8; 1,4-Dioxane CAS No. 123-91-1; Acetaldehyde CAS No. 75-07-0) known to the state of California to cause cancer, birth defects and/or other reproductive harm.

SECTION 16. OTHER INFORMATION

SDS DATE: 1-10-2018.

This information is provided in good faith but without express or implied warranty. The customer assumes all responsibility for safety and use not in accordance with label instructions