

Tenkoz Inc.

Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

1.1. Product identifier

Buccaneer® 5 Extra Herbicide

1.1.1. Chemical name

Not applicable.

1.1.2. Synonyms

None.

1.1.3. EPA Reg. No.

55467-15

1.2. Product use

Herbicide

1.3. Company

Tenkoz Inc., 1725 Windward Concourse, Suite 410, Alpharetta, GA, 30005

Telephone: (770) 343-8509

E-mail:

1.4. Emergency numbers

FOR MEDICAL EMERGENCY - Day or Night: (800) 424-9300

2. HAZARDS IDENTIFICATION

2.1. Classification

OSHA Hazard Communication Standard, 29 CFR 1910.1200

Eye damage/irritation - Category 2B

2.2. Label elements

2.2.1. Signal word

CAUTION

2.2.2. Hazard pictogram/pictograms



2.2.3. Hazard statement/statements

HEALTH HAZARDS:

Eye irritation Category 2B

ENVIRONMENTAL HAZARDS:

Hazardous to aquatic environment, acute Category 2

Hazardous to aquatic environment, chronic Category 2

2.2.4. Precautionary statement/statements

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 attention.

Collect spillage.

Dispose of contents in accordance with local, state and federal regulations.

2.3. Appearance and odor (colour/odor/form)

Transparent greenish/yellow, odorless, liquid

2.4. 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	53.8
Other ingredients		46.2

Trade secret composition.

4. FIRST AID MEASURES

Use personal protection recommended in section 8.

4.1. Description of first aid measures

4.1.1. 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.

4.1.2. 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.

4.1.3. Inhalation: If inhaled, move person to fresh air. If person is not breathing, call emergency number or ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advice.

4.1.4. 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 center or doctor. Do not give anything by mouth to an unconscious person.

4.2. Most important symptoms and effects, both acute and delayed

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

4.2.2. Skin contact, short term: Not expected to produce significant adverse effects when recommended use instructions are followed.

4.2.3. Inhalation, short term: Harmful by inhalation.

4.2.4. Single ingestion: Harmful if swallowed. Causes gastrointestinal tract irritation.

4.3. Indication of any immediate medical attention and special treatment needed

4.3.1. Advice to doctors: This product is not an inhibitor of cholinesterase.

4.3.2. Antidote: Treatment with atropine and oximes is not indicated.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

5.1.1. Recommended: For large fires: foam or water spray. For small fires: dry chemical or carbon dioxide

5.2. Special hazards

5.2.1. Unusual fire and explosion hazards: This product reacts with galvanized steel or unlined steel (except stainless steel) to produce hydrogen gas that may form a highly combustible gas mixture which could flash or explode. Minimise use of water to prevent environmental contamination. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later. Environmental precautions: see section 6.

5.2.2. Hazardous products of combustion: Carbon monoxide (CO), nitrogen oxides (NO_x), phosphorus oxides (P_xO_y)

5.3. Fire fighting equipment: Self-contained breathing apparatus. Equipment should be thoroughly decontaminated after use.

5.4. Flash point: Does not flash.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions

Use personal protection recommended in section 8.

6.2. Environmental precautions

SMALL QUANTITIES: Low environmental hazard.

LARGE QUANTITIES: Minimise spread. Contain spillage with sand bags or other means. Keep out of drains, sewers, ditches and water ways.

6.3. Methods for cleaning up

SMALL QUANTITIES: Absorb small spills on sand, vermiculite or other inert absorbent. Place contaminated material in appropriate container for disposal.

LARGE QUANTITIES: 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.

Do not allow washwaters to enter waterways.

Large spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.

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. Users should:

Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

Remove clothing immediately if product gets inside, then wash thoroughly and put on clean clothing.

7.1 Precautions for safe handling

Avoid contact with eyes, skin and clothing. Avoid breathing spray mist. Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Spray solutions of this product should be mixed, stored and applied using only stainless steel, aluminum, fiberglass, plastic or plastic-lined 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.

7.2. Conditions for safe storage

Compatible materials for storage: stainless steel, fibreglass, plastic, glass lining.

STORE ABOVE 10 F (-12 C) TO KEEP PRODUCT FROM CRYSTALLIZING. Crystals will settle to the bottom. If allowed to crystallize, place in a warm room 68 F (20 C) for several days to redissolve and shake, roll or agitate to mix well before using.

Incompatible materials for storage: galvanized steel, unlined mild steel. Do not contaminate water, foodstuff, feed or seed by storage or disposal.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Airborne exposure limits

Components	Exposure Guidelines
Isopropylamine salt of glyphosate	No specific occupational exposure limit has been established.
Other ingredients	No specific occupational exposure limit has been established.

8.2. Engineering controls: Have eye wash facilities immediately available at locations where eye contact can occur.

8.3. Recommendations for personal protective equipment

8.3.1. Eye protection: To avoid contact with eyes, wear chemical goggles. An emergency eyewash or water supply should be readily accessible to the work area.

8.3.2. Skin protection: To avoid contact with skin, wear long pants, long-sleeved shirt, socks and shoes. Users should remove PPE (Personal Protective Equipment) immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

8.3.3. Respiratory protection: Not normally required. If vapors or mists exceed acceptable levels, wear NIOSH approved air-purifying respirator with cartridges/canisters approved for use against pesticides.

Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material: 1) do not store, use and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored; 2) wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics or using the toilet.

9. PHYSICAL AND CHEMICAL PROPERTIES

These physical 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.

Colour/colour range:	Transparent greenish/yellow - brown
Odour:	Slight
Form:	Liquid
Physical form changes (melting, boiling, etc.):	

Melting point:	Not applicable.
Boiling point:	No data.
Flash point:	Does not flash.
Explosive properties:	No explosive properties unless improperly stored (see section 5 & 7)
Auto ignition temperature:	443 °C
Self-accelerating decomposition temperature (SADT):	No data.
Oxidizing properties:	No data.
Specific gravity:	1.1655 20 °C / 20 °C
Vapour pressure:	No significant volatility; aqueous solution.
Vapour density:	Not applicable.
Evaporation rate:	No data.
Dynamic viscosity:	No data.
Kinematic viscosity:	No data.
Density:	1.1655 g/cm3 @ 20 °C
Solubility:	Water: Soluble
pH:	4.7
Partition coefficient:	log Pow: < -3.2 @ 25 °C (glyphosate)

10. STABILITY AND REACTIVITY

10.1. Reactivity

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

10.2. Stability

Stable under normal conditions of handling and storage.

10.3. Possibility of hazardous reactions

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

10.4. Incompatible materials

Galvanised steel; unlined mild steel

11. TOXICOLOGICAL INFORMATION

This section is intended for use by toxicologists and other health professionals.

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: Slightly toxic and slightly irritating based on toxicity studies.

Inhalation, short term: Low inhalation toxicity.

Single ingestion: Slightly toxic based on toxicity studies. No significant adverse health effects are expected to develop if only small amounts (less than a mouthful) are swallowed. Causes gastrointestinal tract irritation.

Similar formulation

Acute oral toxicity

Rat, LD50 (limit test): > 5,000 mg/kg

Acute dermal toxicity

Rat, LD50 (limit test): > 5,000 mg/kg

Acute inhalation toxicity

Rat: 4-hr LC50: >2.05mg/l (no mortality at highest dose tested)

Eye irritation

Rabbit: Moderately irritating (MMTS=18.0)

Skin irritation

Rabbit: Non-irritating (PDII=1.7)

Skin sensitization

Guinea pig: Not a contact sensitizer in guinea pigs following repeated skin exposure.

N-(phosphonomethyl)glycine; {glyphosate acid}

Genotoxicity

Glyphosate has produced no genetic changes in a variety of standard tests using animals and animal or bacterial cells.

Carcinogenicity/Chronic Health Effects

Prolonged overexposure to glyphosate may cause effects to the liver. EPA has given glyphosate a Group E classification (evidence of non-carcinogenicity in humans). Canada PMRA has classified glyphosate as non-carcinogenic. In 2015 IARC classified glyphosate as a probable human carcinogen Group 2A based on limited human evidence and some evidence in animals.

Reproductive/Developmental Toxicity

Reproductive effects in rats only in the presence of significant maternal toxicity. In animal studies, glyphosate did not cause birth defects in animals; other effects were seen in the fetus only at doses which caused toxic effects to the mother.

12. ECOLOGICAL INFORMATION

Data on Glyphosate IPA

96-hour LC50 Rainbow trout: >1000 mg/l
48-hour EC50 Daphnia: 930 mg/l
72-hour ErC50 Algae: 166 mg/l

Data on Glyphosate Acid

96-hour LC50 Bluegill: 120 mg/l
96-hour LC50 Rainbow trout: 786 mg/l
48-hour EC50 Daphnia: 780 mg/l
96-hour EC50 Diatoms: 1.3 mg/l
14-day EC50 Duckweed: 25.5 mg/l
72-hour EC50 Algae: 450 mg/l
Bobwhite Quail Acute Oral LD50: >3,851 mg/kg
Bobwhite Quail 5-day Dietary LC50: >4,640 ppm
Mallard Duck 5-day Dietary LC50: >4,640 ppm

Environmental Fate:

In the environment glyphosate adsorbs strongly to soil and is expected to be immobile in soil. Glyphosate is readily degraded by soil microbes to AMPA (aminomethyl phosphonic acid) that is further degraded to carbon dioxide. Glyphosate and AMPA are unlikely to enter ground water due to their strong adsorptive characteristics. Terrestrially-applied glyphosate has the potential to move into surface waters through soil erosion because it may be adsorbed to soil particles suspended in the runoff. Aquatic applications registered for certain formulations may also result in glyphosate entering surface waters. Complete degradation is slow, but dissipation in water is rapid because glyphosate is bound in sediments and has low biological availability to aquatic organisms. These characteristics suggest a low potential for bioconcentration in aquatic organisms and this has been verified by laboratory investigations of glyphosate bioconcentration in numerous marine and freshwater organisms with and without soil. The maximum whole body bioconcentration factors for fish were observed to be less than 1X. Bioconcentration factors for sediment dwelling mollusks and crayfish tended to be slightly higher, but were always less than 10X. In addition, any residues accumulated in organisms were rapidly eliminated.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

13.1.1. Product

Wastes resulting from 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 vapors and product residue. Observe all labeled safeguards until container is cleaned, reconditioned or destroyed.

13.1.2. Container

13.1.2.1 Non-refillable containers: Do not reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

13.1.2.1 Refillable containers: Refill this container with glyphosate only. Do not reuse this container for any other purpose.

When this container is empty, replace the cap and seal all openings that have been made during usage and return the container to the point of purchase, or to an alternate location designated by the manufacturer at the time of purchase of this product. If not returned, clean the empty container and offer for recycling, if available.

Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the re-filler.

To clean the container before final disposal, empty the remaining contents from the container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or re-circulate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing process two more times.
If the container cannot be refilled, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

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.

14.1. US Dept. of Transportation (DOT) Hazardous Materials Regulations (49 CFR Parts 105-180)

Non Regulated

14.2. IMDG Code

Non Regulated

14.3. IATA/ICAO

Non Regulated

15. REGULATORY INFORMATION

15.1. Environmental Protection Agency

15.1.1. TSCA Inventory

Exempt

15.1.2. SARA Title III Rules

Section 311/312 Hazard Categories: Acute Health, Chronic Health

Section 302 Extremely Hazardous Substances: Not applicable.

Section 313 Toxic Chemical(s): Not applicable.

15.1.3. CERCLA Reportable quantity

Not applicable.

15.1.4. RCRA Waste Code

Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

15.1.5. Federal Insecticide, Fungicide, 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 moderate eye irritation. Harmful if swallowed or inhaled. Avoid contact with eyes, skin or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling.

15.1.6 State Information

Other State regulations may apply. Check individual state requirements.

California Proposition 65:  **ATTENTION.** This product can expose you to chemicals including glyphosate which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

16. OTHER INFORMATION

The information given here is not necessarily exhaustive but is representative of relevant, reliable data. Follow all local/regional/national/international regulations. Please consult supplier if further information is needed.

	Health	Flammability	Instability	Additional Markings
NFPA Hazard Rating	1	1	0	
0 = Minimal hazard, 1 = Slight hazard, 2 = Moderate hazard, 3 = Serious hazard, 4 = Severe hazard				

Full denomination of most frequently used acronyms. BCF (Bioconcentration Factor), BOD (Biochemical Oxygen Demand), COD (Chemical Oxygen Demand), EC50 (50% effect concentration), ED50 (50% effect dose), I.M. (intramuscular), I.P. (intraperitoneal), I.V. (intravenous), Koc (Soil adsorption coefficient), LC50 (50% lethality concentration), LD50 (50% lethality dose), LDLo (Lower limit of lethal dosage), LEL (Lower Explosion Limit), 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), NOAEC (No Observed Adverse Effect Concentration), NOAEL (No Observed Adverse Effect Level), NOEC (No Observed Effect Concentration), NOEL (No Observed Effect Level), OEL (Occupational Exposure Limit), PEL (Permissible Exposure Limit), PII (Primary Irritation Index), Pow (Partition coefficient n-octanol/water), S.C. (subcutaneous), STEL (Short-Term Exposure Limit), TLV-C (Threshold Limit Value-Ceiling), TLV-TWA (Threshold Limit Value - Time Weighted Average), UEL (Upper Explosion Limit)

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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. 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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