

TIGRIS SULFEN ELITE

SAFETY DATA SHEET

EMERGENCY CALL: 1-800-424-9300 (CHEMTREC)

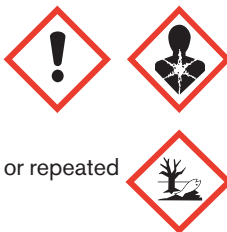
1. IDENTIFICATION

PRODUCT NAME: Tigris Sulfen Elite
DESCRIPTION: Liquid herbicide
EPA REG. NO.: 92647-7
COMPANY IDENTIFICATION: Tigris, LLC
1204 Village Market Place #173 Morrisville, NC 27560

2. HAZARD IDENTIFICATION

WARNING

May be harmful if swallowed (H303)
Causes eye irritation (H320)
Causes mild skin irritation (H316)
May cause an allergic skin reaction (H317)
May cause damage to organs through prolonged or repeated exposure (H373)
Suspected of causing cancer (H351)
Combustible liquid (H227)
Very toxic to aquatic life with long lasting effects (H400+H410)



HAZARD CLASSIFICATION

Health Hazards	Category	Physical Hazards	Category
Acute toxicity, oral	5	Flammable liquids	4
Serious eye damage / eye irritation	2B		
Skin corrosion / irritation	3	Environmental Hazards	Category
Sensitization, skin	1, 1A, 1B	Hazardous to the aquatic environment, acute	1
Specific target organ toxicity, repeated exposure	2	Hazardous to the aquatic environment, chronic	1
Carcinogenicity	2		

HAZARDS NOT REQUIRING CLASSIFICATION

None.

PRECAUTIONARY STATEMENTS

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. (P201+P202)
Keep away from head, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210)
Do not breath mist/vapors/spray. (P260)
Wash hands and skin thoroughly after handling. (P264)
Contaminated work clothing should not be allowed out of the workplace. Take off contaminated clothing and wash it before reuse. (P272+P362+P364)
Wear protective gloves / protective clothing. Refer to Section 8 for specific PPE requirements. (P280)
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 or attention. Refer to Section 4 for additional medical information. (P305+P351+P338+P337+P313)
IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. Refer to Section 4 for additional medical information. (P302+P352+P333+P313)
Specific treatment. (See Section 4 for additional medical information). (P321)

IF exposed or concerned: Get medical advice or attention. (P308+P313)
Avoid release to the environment not in accordance with the product label. Collect spillage. (P273+P391)
Store locked up in a well-ventilated place. Keep cool. (P405+P403+P235)
Dispose of contents / container in accordance with local regulations. Refer to the product label for specific disposal instructions. (P501)

3. COMPOSITION / INFORMATION ON INGREDIENTS

Common Name	Chemical Name	CAS #	Composition
S-metolachlor	(S)-2-chloro-N-(2-ethyl-6-methylphenyl)-N-(1-methoxypropan-2-yl)acetamide	87392-12-9	66-70%
Sulfentrazone	N-[2,4-dichloro-5-[4-(difluoromethyl)-4,5-dihydro-3-methyl-5-oxo-1H-1,2,4-triazol-1-yl]phenyl]methanesulfonamide	122836-35-5	7-8%

4. FIRST AID MEASURES

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For chemical emergency: spill, leak, fire, exposure or accident, call CHEMTREC: **1-800-424-9300**.
IF SWALLOWED: Call a 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 control center or doctor. Do not give anything by mouth to an unconscious person.
IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
IF ON SKIN OR CLOTHING: 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.

5. FIREFIGHTING MEASURES

Flash Point: 89°C (191°F)
Fire and Explosion Hazards: Combustible liquid.
Extinguishing Medium: Fog, foam, dry chemical, or carbon dioxide (CO₂).
Fire Fighting Equipment: Firefighters should be equipped with self-contained positive pressure breathing apparatus and full bunker gear.
Fire Fighting Instructions: Evacuate area of all unnecessary personnel and fight fire from a safe distance upwind. Contain contaminated water / firefighting water; do not allow to enter drains or waterways. Use foam or dry chemical fire extinguishing systems to prevent environmental damage from excessive water runoff.
Hazardous Combustion Products: Normal combustion forms carbon dioxide, water vapor and may product oxides of nitrogen. Incomplete combustion can product carbon monoxide.
NFPA Ratings: Health – 2 / Flammability – 2 / Reactivity - 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Isolate area and keep unnecessary and unprotected personnel from entering. Wear suitable personal protective clothing and equipment as described in Section 8 of this document.

Environmental Precautions: Prevent material from entering public sewer systems or any waterways. Do not flush to drain or soil. Contain contaminated water.

Spill Cleanup: Clean up spill immediately. Dike to prevent runoff. Absorb with sand, cat litter, or commercial clay and transfer to containers for later disposal. Clean and neutralize spill area, tools and equipment by washing with bleach water and soap. Absorb rinsate and add to the collected waste. Waste must be classified and labeled prior to recycling or disposal. Dispose of waste as indicated in Section 13.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin or clothing. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove personal protective equipment (PPE) immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Storage: Store product in original container only, away from other pesticides, fertilizer, food or feed. Do not use or store around the home. Avoid storage below 32°F. Product that has been frozen should be thawed and recirculated prior to its use. Store in a cool, dry place and avoid excess heat.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash station and a safety shower.

Protective Clothing: Applicators, and other handlers must wear: coveralls over short-sleeved shirt and shorts, chemical-resistant gloves made of any waterproof material, and chemical-resistant footwear plus socks. If cleaning equipment, mixing or loading, must also wear chemical-resistant apron.

General: Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product. Do not reuse them. 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	dark amber liquid
Odor:	mildly sweet
Melting/freezing point:	not available
Boiling point/Boiling range:	not available
Flammability:	not available
Flammability limits (upper/lower):	not available
Flash point:	89°C (191°F)
Auto-ignition temperature:	not available
Decomposition temperature:	not available
pH:	5.01 (1% aq.)
Kinematic viscosity:	55.1 cP @ 25°C 26.7 cP @ 39°C
Solubility:	Dispersible in H ₂ O
Partition coefficient:	not available
Vapor pressure:	not available
Density:	1.115 g/cm ³ (25°C) 1.095 g/cm ³ (39°C)
Relative vapor density:	not available
Particle characteristics:	not available

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Heat and open flame.

CHEMICAL STABILITY: Stable under normal use and storage conditions.

INCOMPATIBILITY WITH OTHER MATERIALS: None known.

HAZARDOUS DECOMPOSITION PRODUCTS: None known.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

Information presented below is from testing done on an identical or substantially similar product:

ORAL TOXICITY (rat LD₅₀): 3129 mg/kg

DERMAL TOXICITY (rat LD₅₀): > 5,000 mg/kg

INHALATION TOXICITY (rat LC₅₀): > 2.02 mg/L (4-hour)

EYE IRRITATION: Moderately irritating

SKIN IRRITATION: Moderately irritating

SKIN SENSITIZATION: Guinea pig – positive contact sensitizer

CARCINOGENICITY:

NTP: Not listed

IARC: Group 2B – suspected of causing cancer (proprietary inert)

EPA: Group C – possible human carcinogen (S-metolachlor);

Group E – evidence of non-carcinogenicity to humans (sulfentrazone)

MUTAGENIC TOXICITY: No evidence of mutagenic effects for the active ingredients or other components.

REPRODUCTIVE TOXICITY: No evidence of fertility or reproductive effects for the active ingredient S-metolachlor. Some evidence of offspring toxicity in animal studies using sulfentrazone.

TERATOGENICITY: No evidence of teratogenic effects for the active ingredient S-metolachlor. Some developmental toxicity demonstrated in animal studies using sulfentrazone.

OTHER TOXICITY: May cause damage to organs (liver, hematopoietic system) through prolonged or repeated exposure. Symptoms of over-exposure may be headache, dizziness, tiredness, nausea and vomiting.

12. ECOLOGICAL INFORMATION

This pesticide is toxic to freshwater and estuarine/marine invertebrates. It is practically non-toxic to birds and highly toxic to aquatic plants.

The following information is for the active ingredient, S-metolachlor:

Bluegill: (96h LC₅₀): 3.2 mg/L

Duckweed (14d EC₅₀): 0.021 mg/L

Daphnia Magna: (48h EC₅₀) 26 mg/L, (NOAEC) 0.1 mg/L

Green Algae (120h EC₅₀): 0.008 mg/L

Fathead Minnow (30d NOAEC): 0.03 mg/L

Duck/Quail: (LD₅₀) > 2194 mg/kg, (LC₅₀): > 4912 mg/kg

Bee (contact LD₅₀): > 85 µg/bee

The following information is for the active ingredient, sulfentrazone:

Bluegill: (96h LC₅₀) 93.8 mg/L

Aquatic plant (120h EC₅₀): 0.03 mg/L

Daphnia Magna: (48h EC₅₀) 60.4 mg/L, (NOAEC) 0.2 mg/L

Saltwater mysid (LC₅₀): 1.0 mg/L

Quail: (LD₅₀) > 2250 mg/kg, (LC₅₀): > 5620 mg/kg

Bee: (contact LD₅₀) > 200 µg/bee

(oral LD₅₀): > 25.1 µg/bee

13. DISPOSAL CONSIDERATIONS

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. See container labeling for complete disposal instructions.



14. TRANSPORT INFORMATION

UN Number:	UN3082
Proper Shipping Name:	Environmentally hazardous substance, liquid, N.O.S. (contains S-metolachlor, sulfentrazone)
Transport Hazard Class:	9
Packing Group:	III
Hazard Zone:	A
Marine Pollutant:	Yes ¹
Hazardous Substance RQ:	None
Labels / Placards:	US-DOT: Class 9 Environmentally Hazardous Substance ² IMDG, IATA: Class 9 Environmentally Hazardous Substance ³
Emergency Guide:	171 (NAERG – North American Emergency Response Guide)
¹ Marine Pollutant Note:	Ground-only shipments are excluded from Marine Pollutant labeling requirements as per 49CFR§172.101 Appendix B(4). For any shipments involving all or part of the transport by vessel, the shipment must be classified as a Marine Pollutant unless a limited quantity exemption applies (see note 3 below).
² US-DOT Note:	Not regulated for “ground only” shipments.
³ IMDG / IATA Note:	Not regulated when shipped in single or inner packaging ≤ 1.3 gal (5 L).

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

FIFRA –

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. The following is the hazard information as required on the pesticide label:

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION. Harmful if swallowed. Avoid contact with skin, eyes or clothing. Causes moderate eye irritation. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals.

See inside label booklet for additional precautionary statements.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and marine/estuarine invertebrates. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to terrestrial and aquatic plants in neighboring areas. Do not contaminate water when disposing of equipment wash waters or rinsate.

Groundwater Advisory:

The active ingredients in this product are known to leach through soil and into groundwater under certain conditions as a result of agricultural use. Use of this product in areas where soils are permeable, particularly where the water table is shallow, may result in

groundwater contamination.

Surface Water Advisory:

This product can contaminate surface water through spray drift. Under some conditions, this product may also have a high potential for runoff into surface water (primarily via dissolution in runoff water), for several to many months post-application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas overlaying extremely shallow groundwater, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas over-lying tile drainage systems that drain to surface waters.

PHYSICAL/CHEMICAL HAZARDS

Do not use or store near heat or open flame.

All pesticides are governed under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). The regulatory information presented below is pertinent only when this product is handled outside of the normal use and application as a pesticide. This product is excluded from listing requirements under EPA/TSCA.

SARA Title III – Section 302 Extremely Hazardous Substances
Not listed

SARA Title III – Section 311/312 Hazard Categories
Immediate, Delayed, Fire

SARA Title III – Section 312 Threshold Planning Quantity
The threshold planning quantity (TPQ) for this product treated as a mixture is 10,000 lbs. This product contains no ingredients with a TPQ of less than 10,000 lbs.

SARA Title III – Section 313 Reportable Ingredients
None

CERCLA Reportable Quantity (RQ) –
Not listed

CALIFORNIA PROP 65 STATUS –

This product does not contain any chemical known to the State of California to cause cancer or other reproductive harm.

CANADA –

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

16. OTHER INFORMATION

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.

To the extent consistent with applicable law, neither Tigris, LLC nor Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF TIGRIS, LLC AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF TIGRIS, LLC OR SELLER, THE REPLACEMENT OF THE PRODUCT.

SDS Version: 1.0

Effective Date: 05/08/2018