

SAFETY DATA SHEET

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



1. IDENTIFICATION

PRODUCT NAME: Shieldex 400SC Herbicide
DESCRIPTION: A liquid herbicide.
EPA Reg. No.: 71512-29-88783

COMPANY IDENTIFICATION:

Summit Agro USA, LLC
240 Leigh Farm Road, Suite 215
Durham, NC 27707

2. HAZARD IDENTIFICATION



WARNING

May cause damage to eye, liver, and kidney through prolonged or repeated exposure.



Very toxic to aquatic life with long lasting effects.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Common Name</u>	<u>Chemical Name</u>	<u>CAS #</u>	<u>Composition</u>
Tolpyralate	1-[[1-ethyl-4-[3-(2-methoxyethoxy)-2-methyl-4-(methylsulfonyl)benzoyl]-1H-pyrazol-5-yl]oxy]ethyl methyl carbonate (CA)	1101132-67-5	35.7%

4. FIRST AID MEASURES

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

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 a poison control center or doctor. Do not give anything to an unconscious person.

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.

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 INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advice.

5. FIREFIGHTING MEASURES

Flash Point: None; substance boils and extinguishes flame at 221°F

Flammable Limits (LFL-UFL): Not available

Fire and Explosion Hazards: May decompose under fire conditions emitting gasses and vapors which may be toxic and irritating to the respiratory tract.

Means of Extinction: SMALL FIRE: Use carbon dioxide, foam or dry powder. LARGE FIRE: Use polar resistant foam or water fog. Avoid use of water jet.

Fire Fighting Instructions: Evacuate area and fight fire upwind a safe distance to avoid hazardous vapors and decomposition products. Dike and collect water used to fight fire to prevent environmental damage due to runoff.

Firefighting Equipment: Self-contained breathing apparatus with full firefighting turn-out gear.

Hazardous Combustion Products: nitrous vapors, oxides of sulfur, and carbon monoxide.

NFPA Ratings: Health – 1 / Flammability – 1 / Instability – 0

6. ACCIDENTAL RELEASE MEASURES

Precautionary Measures: Use protective equipment and engineering controls identified in Section 8 of this document.

Containment and Clean-up: Contain spill. Absorb with an inert material and put the spilled material in an appropriate waste disposal container. Wash spillage area with water. Do not allow wash water to enter drains or surface waters. If in bodies of water, immediately discontinue human and animal consumption and contact local competent authorities.

7. HANDLING AND STORAGE

Handling: Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

Storage: Store in original container, in a secure, dry and cool place separate from other fertilizer, food, and feed. Do not contaminate water, food or feed by storage or disposal.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.

Protective Clothing: Long-sleeved shirt and long pants, socks, shoes, and chemical resistant gloves (such as polyethylene, polyvinyl chloride (PVC), or nitrile rubber). Where eye contact is possible, use protective eyewear (such as chemical splash goggles).

General: 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. Always follow the label instructions when handling and using this product. A respirator is not normally required when handling sealed containers. Use effective engineering controls to comply with facility occupational exposure limits. In case of emergency spills, use a NIOSH-approved respirator with an organic vapor (OV) filter and any N, R, P, or HE pre-filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Viscous off-white/yellow liquid

Flash Point: None; substance boils and extinguishes flame at 221°F

pH: 7.33 @ 25°C

Boiling Point: 221°F (105°C)

Density: 1.102 g/mL

Solubility: Not Available

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Avoid contact with heat or open flame.

CHEMICAL STABILITY: This product is stable under normal use and storage conditions.

HAZARDOUS DECOMPOSITION PRODUCTS: May decompose under fire conditions to release vapors or gases which are toxic and irritating to the respiratory tract.

INCOMPATIBILITY WITH OTHER MATERIALS: None known.

POLYMERIZATION: No evidence of polymerization.

11. TOXICOLOGICAL INFORMATION

ACUTE ORAL TOXICITY: Oral LD₅₀ (rat): >2,000 mg/kg

ACUTE DERMAL TOXICITY: Dermal LD₅₀ (rat): > 2,000 mg/kg

ACUTE INHALATION TOXICITY: Inhalation LC₅₀ (rat): > 2.74 mg/L [actual airborne concentration];
> 311 mg/L (nominal) 4 hour(s)

EYE IRRITANT: Essentially non-irritating; Any observed redness subsided within 24 hours in test animals

SKIN IRRITATION: Non-irritating (primary dermal irritation index = 0)

SENSITIZATION: Not a sensitizer

CARCINOGENICITY: Tests on mice and rats exposed to tolpyralate showed no potential for carcinogenicity.

ACGIH: Not listed

IARC: Not listed

NTP: Not listed

OSHA: Not listed

MUTAGENIC DATA: No evidence of mutagenic effects during.

TARGET ORGAN EFFECTS:

Ocular opacity was observed in rats and dogs at exposure levels ranging from 50 – 2000 ppm of tolpyralate. Systemic effects to liver and kidneys were seen at extremely high doses of 2000 ppm or greater.

12. ECOLOGICAL INFORMATION

Tolpyralate is practically non-toxic to birds, fish and aquatic invertebrates. Tolpyralate is highly toxic to terrestrial and aquatic plants.

Tolpyralate degrades rapidly in soil, with half-life values ranging from 0.5 – 2.6 days in field conditions. Hydrolysis is dependent on pH, with increasing pH causing faster degradation. Hydrolysis @ 25°C: DT₅₀ = 311 days @ pH 4, 31 days @ pH 7, 8.5 hours @ pH 9. The potential for tolpyralate to bioaccumulate is extremely low (Log P_{ow} = 1.9). Tolpyralate shows high to very high mobility in various soils under laboratory conditions, but field dissipation studies show limited downward movement through soil leaching.

The following is for the active ingredient, Tolpyralate:

AQUATIC TOXICITY

Fish (Rainbow Trout) 96-hour LC₅₀ > 1000 mg/L

Invertebrate (*Daphnia magna*) 48-hour EC₅₀ > 1000 mg/L

Algae (*Pseudokirchneriella subcapitata*) 96-hour ErC₅₀ > 1000 mg/L

Aquatic plant (*Lemna gibba*) 7-day ErC₅₀: > 244 µg a.i./L; NOEC = 1.02 µg a.i./L

OTHER TOXICITY

Bobwhite Quail Acute LD₅₀ > 2000 mg/kg body weight (practically non-toxic)

Mallard Duck Acute LD₅₀ > 2250 mg/kg body weight (practically non-toxic)

Sub-Acute Dietary Bird LD₅₀ > 5000 ppm in diet for both Quail and Mallard

13. DISPOSAL CONSIDERATIONS

Do not contaminate water, food or feed by disposal.

WASTE 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. Proper disposal procedures depend on the size and composition of the product container, so follow the disposal directions on the product label which are specific to the container.

14. TRANSPORT INFORMATION

US DOT:

Containers < 119 Gallons (450 Liters) shipped by land:

CLASS 9. Not regulated when shipped in non-bulk packaging by highway or rail.

Containers ≥ 119 Gallons (450 Liters) shipped by land:

DOT Shipping Name: UN3082, Environmentally Hazardous Substance, Liquid, N.O.S. (Tolpyralate), PG III, Class 9
DOT Emergency Response Guide: 171

IMDG (shipments by vessel):

UN3082, Environmentally Hazardous Substance, Liquid, N.O.S. (Tolpyralate), PG III, Class 9

IATA (shipments by air):

UN3082, Environmentally Hazardous Substance, Liquid, N.O.S. (Tolpyralate), PG III, Class 9

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 (FIFRA). FIFRA requirements differ from the OSHA 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 by FIFRA on the pesticide label:

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful, if swallowed or absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse. 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 disposing of equipment rinse water. Do not apply where/when conditions could favor runoff.

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 disposing of equipment rinse water. Do not apply where/when conditions could favor runoff.

GROUND WATER ADVISORY

Tolpyralate has properties and characteristics associated with chemicals detected in groundwater. Tolpyralate may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

SURFACE WATER ADVISORY

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having high potential for reaching surface water via runoff for several months or more after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of tolypyralate from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.

15. REGULATORY INFORMATION (CONT.)

SARA Title III – Section 302 Extremely Hazardous Substances

Not Listed

SARA Title III – Section 311/312 Hazard Categories

Immediate

SARA Title III – Section 313 Reportable Ingredients

Not Listed

CERCLA –

Not Listed

CALIFORNIA PROP 65 STATUS –

This product does not contain any chemicals known to the state of California to cause cancer or 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

REFER TO THE PRODUCT LABEL FOR TERMS AND CONDITIONS OF USE

Warranty Disclaimer

To the extent consistent with applicable law, all such risks shall be assumed by the buyer. Summit Agro USA LLC warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the Directions for Use, subject to the inherent risks referred to above. SUMMIT AGRO USA LLC MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, SUMMIT AGRO USA LLC AND THE SELLER DISCLAIM ANY LIABILITY FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

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