SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
US OSHA HCS 2024

Revision date 24-June-2026
Revision Number 4

1. Identification

Product identifier

Product Name Preclor™

EPA Reg. No. 1381-291

Recommended use of the chemical and restrictions on use

Recommended use Agricultural Herbicide

Restrictions on use Use only per the approved label

Details of the supplier of the safety data sheet

Supplier Address
Winfield Solutions, LLC
P.O. Box 64589
St. Paul, MN 55164-0589
Non-Emergency Business Inquiries: 1-855-494-6343 Mon – Fri 8am – 5pm (Central Standard Time)

Emergency telephone number

Emergency telephone FOR MEDICAL EMERGENCY: 1-877-424-7452 (24 hrs.)

FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CALL: CHEMTREC 1-800-424-9300 (24 hrs.)

2. Hazard(s) identification

Classification of the substance or mixture

Acute toxicity - Inhalation (Mists)	Category 4
Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 4
Skin sensitization	Category 1B
Reproductive toxicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 2

Hazards not otherwise classified (HNOC)
Not applicable.

Label elements

Warning



Hazard statements
Harmful if inhaled.
Harmful if swallowed.
Harmful in contact with skin.
May cause an allergic skin reaction.
Suspected of damaging fertility or the unborn child.
May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements - Prevention
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves/clothing and eye/face protection.
Contaminated work clothing must not be allowed out of the workplace.
Use only outdoors or in a well-ventilated area.
Do not breathe mist/vapors/spray.
Wash thoroughly with soap and water after handling.
Do not eat, drink or smoke when using this product.

Note: See the product label for further information.

Precautionary Statements - Response
IF EXPOSED OR CONCERNED: Get medical advice/attention.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a poison control center or doctor if you feel unwell.
IF SWALLOWED: Call a poison control center or doctor if you feel unwell. Rinse mouth.
IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs or if you feel unwell: Get medical advice/ attention. Take off contaminated clothing and wash it before reuse.

Note: See Section 4 and the product label for further information.

Precautionary Statements - Storage
Store locked up.

Note: See Section 7 and the product label for additional information.

Precautionary Statements - Disposal
Dispose of contents/container in accordance with Federal, state, and local regulations.

Note: See Section 13 and the product label for further information.

3. Composition/information on ingredients

Substance

Not applicable.

Mixture

Chemical name	CAS No.	Weight-%	Trade secret
Sulfentrazone	122836-35-5	42	
Cloransulam-methyl	147150-35-4	5.3	*
Proprietary Surfactant	Trade secret	3 - 7	*
Toluene	108-88-3	1 - 5	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First-aid measures

Description of first aid measures

General advice Have the product container or label with you when calling a poison control center or doctor, or going for treatment. Show this safety data sheet to the doctor in attendance.

Inhalation 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.

Eye contact Hold eye open and rinse slowly and gently with soap and 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.

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.

Ingestion 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.

Self-protection of the first aider Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Do not breathe vapors or mists. Use personal protective equipment as required. See section 8 for more information.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media High volume water stream as it may scatter and spread fire.

Specific hazards arising from the chemical In the event of fire and/or explosion do not breathe fumes. Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Explosion data
Sensitivity to mechanical impact None.
Sensitivity to static discharge None.

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Do not breath mist, vapors, or spray. Use personal protective equipment as required. Keep people and animals away from and upwind of spill/leak.

Other information Refer to protective measures listed in Section 7 and Section 8.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Soak up with inert (non-combustible) absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Pick up and transfer to properly labeled containers. Clean contaminated objects and areas thoroughly observing environmental regulations. Keep material out of lakes, streams, ponds, and sewer drains.

7. Handling and storage

Precautions for safe handling

Advice on safe 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 EPA worker Protection Standard 40 CFR part 170. Avoid contact with skin, eyes or clothing. Wear personal protective equipment. Ensure adequate ventilation. Do not breathe vapors, mist, or spray. In case of insufficient ventilation, wear suitable respiratory equipment. Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes.

General hygiene considerations

Do not eat, drink or smoke when using this product. 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. Launder work clothing separately from regular household laundry.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep out of the reach of children in a locked area. Do not contaminate water, food or feed by storage or disposal. Store in a cool, dry and well-ventilated area in a manner to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container. Do not mix or allow contact with oxidizing agent. Hazardous chemical reaction may occur.

8. Exposure controls/personal protection

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

Control parameters

Exposure Limits

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Toluene 108-88-3	TWA: 20 ppm Ototoxicant - potential to cause hearing disorders	TWA: 200 ppm (vacated) TWA: 100 ppm (vacated) TWA: 375 mg/m^3 (vacated) STEL: 150 ppm (vacated) STEL: 560 mg/m^3 Ceiling: 300 ppm	IDLH: 500 ppm TWA: 100 ppm TWA: 375 mg/m^3 STEL: 150 ppm STEL: 560 mg/m^3

Biological occupational exposure limits

Chemical name	ACGIH
Toluene 108-88-3	0.02 mg/L - blood (Toluene) - prior to last shift of workweek 0.03 mg/L - urine (Toluene) - end of shift 0.3 mg/g creatinine - urine (o-Cresol with hydrolysis) - end of shift

Appropriate engineering controls

Engineering controls

Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Hand protection

Wear chemical-resistant gloves made of barrier laminate, butyl rubber ≥14 mils, nitrile rubber ≥14 mils, neoprene rubber ≥14 mils, polyvinyl chloride (PVC) ≥14 mils, or Viton ≥14 mils.

Skin and Body Protection

Wear long-sleeved shirt, long pants, socks, and shoes.

Respiratory Protection

No protective equipment is needed under normal use conditions. If limits are exceeded or irritation occurs, select NIOSH approved equipment based on actual or potential airborne concentrations.

Hygiene measures	Clean water should be available for washing in case of eye or skin contamination. Do not eat, drink or smoke when using this product. Wash skin prior to eating, drinking, chewing gum or using tobacco. Shower or bathe at the end of working. Remove and wash contaminated clothing before reuse. Launder work clothing separately from regular household laundry.
General information	These recommendations apply to the product as supplied.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Opaque white liquid
Odor	Mildly sweet

Property	Values	Remarks • Method
Melting point / freezing point		No data available
Boiling point (or initial boiling point or boiling range)		No data available
Flammability		No data available
Flammability Limit in Air		
Upper flammability or explosive limits		No data available
Lower flammability or explosive limits		No data available
Flash point		>230.0 °F; >110.0 °C
Autoignition temperature		No data available
Decomposition temperature		No data available
SADT (°C)		No data available
pH		
pH (as aqueous solution)		5 - 6
Kinematic viscosity		No data available
Dynamic viscosity		No data available
Solubility		No data available
Water solubility		No data available
Partition coefficient n-octanol/water (log value)		No data available
Vapor pressure (includes evaporation rate)		No data available
Evaporation rate		No data available
Density and/or relative density		
Bulk density		Not applicable
Liquid Density		10.3 lbs./gal. at 25°C
Relative vapor density		No data available
Particle characteristics		
Particle Size		No data available
Particle Size Distribution		No data available

Other information

Molecular weight	No information available
VOC content	No information available
Softening point	No information available

Information with regard to physical hazard classes

Explosives	
Explosive properties	Based on components in the formulation this product is not anticipated to be explosive.
Oxidizing properties	No information available

Note: 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 specification items.

10. Stability and reactivity

Reactivity	None under normal use conditions.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	Excessive heat.
Incompatible materials	Do not mix or allow contact with oxidizing agent. Hazardous chemical reaction may occur.

11. Toxicological information

Acute Toxicity

Based on product test data

Inhalation LC_{50} (rat) is > 2.05 mg/L (highest attainable concentration). No mortality. Harmful by inhalation.

Eye contact The maximum average irritation score of 2.0, obtained 1 hour after treatment, was used to rate the product as practically non-irritating to eyes.

Skin contact The primary irritation index (PII) of 0.0 out of a possible 8.0 was obtained from observation at 1, 24, 48 and 72 hours, and was used to rate the product as non-irritating to skin. This product is harmful if absorbed through skin (extrapolated from the acute oral toxicity result).

Ingestion The acute oral LD_{50} (rat) is estimated to be 3,129 mg/kg, with 95% confidence interval of 1,750 – 5,000 mg/kg.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Respiratory sensitization No data available

Skin sensitization Caused skin sensitization in mice.

Germ cell mutagenicity Sulfentrazone: Not genotoxic in animal studies.

Carcinogenicity

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Toluene 108-88-3	-	Group 3	-	-

Legend

IARC (International Agency for Research on Cancer)

Group 3 - Not Classifiable as to Carcinogenicity in Humans

Reproductive toxicity Contains toluene a known or suspected reproductive toxin. Suspected of damaging fertility or the unborn child. Classification based on data available for ingredients.

STOT - single exposure No information available.

STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure (neurological effects).

Sulfentrazone: Clinical signs of neurotoxicity in laboratory animals was observed at high dose levels.

Aspiration hazard Not anticipated to be an aspirational hazard based on data available for the ingredients.

Other adverse effects No information available.

Interactive effects No information available.

12. Ecological information

No product specific data available.

This pesticide is toxic to 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.

Non-Target Organism Advisory: This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated area. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift.

Groundwater Advisory: Cloransulam-methyl is known to leach through soil into groundwater under certain conditions as a result of label use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. DO NOT use on coarse soils classified as sand which have less than 1% organic matter.

Surface Water Advisory: Sulfentrazone can contaminate surface water through spray drift. Under some conditions, sulfentrazone 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 overlying 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 overlying tile drainage systems that drain to surface waters.

13. Disposal considerations

Disposal methods

Waste from residues/unused products	Wastes resulting from the use of this product must be disposed of on site or at an approved disposal facility. Do not contaminate water, food or feed by disposal.
Contaminated packaging	Do not reuse empty containers. Prior to disposal, triple rinse (or equivalent) the container, adding rinse water to spray tank. Do not contaminate water, food, or feed by disposal. See the product label for further details on how to properly triple rinse.
California Hazardous Waste Status	This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. Transport information

DOT

This material is not a hazardous material as defined by the U.S. Department of Transportation at 49 CFR Parts 100 through 185.

IATA

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
IATA Technical Name	Sulfentrazone, Cloransulam-methyl
Transport hazard class(es)	9
Packing group	III
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Sulfentrazone, Cloransulam-methyl), 9, III
Special Provisions	A97, A158, A197, A215
ERG Code	9L

IMDG

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Technical Name	Sulfentrazone, Cloransulam-methyl
Transport hazard class(es)	9
Packing group	III
Marine pollutant	M
Marine pollutant	Sulfentrazone, Cloransulam-methyl
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Sulfentrazone, Cloransulam-methyl), 9, III, Marine pollutant
Special Provisions	274, 335, 969 F-A S-F

15. Regulatory information

International Inventories
TSCA: Exempt (Pesticide)
Contact the manufacturer for information pertaining to other international Inventories.

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Toluene - 108-88-3	1.0

SARA 311/312 Hazard Categories
Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Toluene 108-88-3	1000 lb	X	X	X

CAA (Clean Air Act)
This product contains the following substances which are regulated pollutants to the Clean Air Act (CAA).

Chemical name	Hazardous air pollutants (HAPs)	Ozone-depleting substances (ODS)
Toluene 108-88-3	Present	-

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	Reportable Quantity (RQ)
Toluene 108-88-3	1000 lb	-	RQ 1000 lb final RQ RQ 454 kg final RQ

US State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals:.

Chemical name	California Proposition 65
Toluene - 108-88-3	Developmental

Methanol - 67-56-1	Developmental
Methylene chloride - 75-09-2	Carcinogen
1,4-Dioxane - 123-91-1	Carcinogen
Styrene - 100-42-5	Carcinogen
Ethylene glycol - 107-21-1	Developmental
Acetaldehyde - 75-07-0	Carcinogen
Ethylene oxide - 75-21-8	Carcinogen Developmental Female Reproductive Male Reproductive
Propylene oxide - 75-56-9	Carcinogen

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Propylene glycol 57-55-6	X	-	X
Toluene 108-88-3	X	X	X
Methanol 67-56-1	X	X	X
Glycerin 56-81-5	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number: 1381-291

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 required on the pesticide label:

Signal Word: CAUTION

Human Hazard Statements
Harmful if swallowed or absorbed through skin. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. 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.

Environmental Hazards
This pesticide is toxic to 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.

Non-Target Organism Advisory: This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated area. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift.

Groundwater Advisory: Cloransulam-methyl is known to leach through soil into groundwater under certain conditions as a result of label use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. DO NOT use on coarse soils classified as sand which have less than 1% organic matter.

Surface Water Advisory: Sulfentrazone can contaminate surface water through spray drift. Under some conditions, sulfentrazone 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 overlying 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 overlying tile drainage systems that drain to surface waters.

Physical and Chemical Hazards
DO NOT mix or allow coming in contact with oxidizing agent. Hazardous chemical reaction may occur.

16. Other information

NFPA	**Health hazards** 2	**Flammability** 0	**Instability** 0	**Special hazards** -
HMIS	**Health hazards** 2 *	**Flammability** 0	**Physical hazards** 0	**Personal protection** -

Chronic Hazard Star Legend ** = Chronic Health Hazard*

Key or legend to abbreviations and acronyms used in the safety data sheet

Revision date	24-June-2026
Supersedes	02-April-2025, 14-Nov-2024, 18-Nov-2024
Revision Note	SDS sections updated: All

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet