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**In Case of Emergency, Call  
1-800-327-8633 (FAST MED)**

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MSDS prepared by:  
Department of Regulatory & Biology Development  
Syngenta Crop Protection Canada, Inc.

For further information contact:  
1-87-SYNGENTA (1-877-964-3682)

## SECTION – 1: PRODUCT IDENTIFICATION

**Product Identifier:** GESAGARD® 480SC HERBICIDE  
**Registration Number:** 24771 (Pest Control Products Act)  
**Chemical Class:** Triazine herbicide.  
**Synonym:** None.

Formulation No.: A8564A

**Active Ingredient (%):** Prometryn (44.4 %)  
**Chemical Name :** 2,4-bis(isopropylamino)-6-(methylthio)-s-triazine  
**Product Use:** Herbicide in a solution concentrate formulation, which is diluted with water and used to control weeds in registered crops. For further details please refer to product label.

CAS No.: 7287-19-6

## SECTION – 2 : COMPOSITION/INFORMATION ON INGREDIENTS

Material	OSHA PEL	ACGIH TLV	Other	NTP/IARC/OSHA Carcinogen	WHMIS†
Ethylene Glycol CAS No. 107-21-1 (≤ 7%)	Not Established	100 mg/m <sup>3</sup> (ceiling) [aerosol]	Not Established	No	Not Established
Glycerol (≤ 5%)	15 mg/m <sup>3</sup> TWA (total); 5 mg/m <sup>3</sup> TWA (respirable)	10 mg/m <sup>3</sup> TWA (total)	Not Established	No	Not Established
Prometryn (44.4 %)	Not Established	Not Established	9 mg/m <sup>3</sup> TWA ***	No	Not Established

\*\*\* Syngenta Occupational Exposure Limit (OEL)

† Material listed in Ingredient Disclosure List under Hazardous Products Act.

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

## SECTION – 3: HAZARDS IDENTIFICATION

### Symptoms of Acute Exposure

May cause eye, skin or respiratory irritation. Low hazard during normal industrial handling.

### Hazardous Decomposition Products

Can decompose at high temperatures forming toxic gases.

### Physical Properties

Appearance: White liquid.

Odour: Paint-like odour.

### **Unusual Fire, Explosion and Reactivity Hazards**

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

### **Potential Health Effects**

**Relevant routes of exposure:** Skin, eyes, mouth, lungs.

**Adverse health effects from exposure to product or ingredients of product:**

May be mildly irritating via ocular, dermal and inhalation (nose & throat) routes. Product is of low toxicity via the ingestion route however, medical attention should be sought. Over-exposure effects may include nausea, vomiting, dizziness, headache, drowsiness, dermatitis. This product may contain ethylene glycol. Severe kidney damage results from swallowing large volumes of ethylene glycol. Ethylene glycol may cause nervous system damage.

## **SECTION – 4: FIRST AID MEASURES**

**IF POISONING IS SUSPECTED, immediately contact the poison information centre, doctor or nearest hospital.** Have the product container, label or Material Safety Data Sheet with you when calling Syngenta, a poison control center or doctor, or going for treatment. Tell the person contacted the complete product name, and the type and amount of exposure. Describe any symptoms and follow the advice given. Call the Syngenta Emergency Line [**1-800-327-8633 (1-800-FASTMED)**], for further information.

**EYE CONTACT:** Flush eyes with clean water, holding eyelids apart for a minimum of 20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call Syngenta, a poison control center or doctor for treatment advice. Obtain medical attention immediately if irritation persists.

**SKIN CONTACT:** Immediately remove contaminated clothing and wash skin, hair and fingernails thoroughly with soap and water. Flush skin with plenty of water for 15-20 minutes. Call Syngenta, a poison control centre or doctor for treatment advice.

**INHALATION:** Move victim to fresh air. If not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call Syngenta, a poison control centre or doctor for treatment advice.

**INGESTION:** If swallowed, immediately contact Syngenta, a poison control centre, doctor or nearest hospital for treatment advice. Have person sip a glass of water if able to swallow. Do not give anything by mouth to an unconscious person. Do not induce vomiting unless directed by a physician or a poison control center. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus, rinse mouth and administer water.

**NOTES TO PHYSICIAN:**

There is no specific antidote. If a large amount has been swallowed and emesis has been inadequate, lavage stomach. Treat symptomatically.

**MEDICAL CONDITIONS KNOWN TO BE AGGRAVATED:**

Exposure to ethylene glycol may aggravate existing kidney disease.

## **SECTION – 5: FIRE FIGHTING MEASURES**

**Flash point and method:** > 81 °C (Setaflash CC).

**Upper and lower flammable (explosive) limits in air:** Not available.

**Auto-ignition temperature:** 580 °C.

**Flammability:** Not applicable.

**Hazardous combustion products:** May include carbon monoxide, hydrogen cyanide, acetonitrile, oxides of nitrogen and sulfur.

**Conditions under which flammability could occur:** Temperatures above the flash point. Keep fire exposed containers cool by spraying with water.

**Extinguishing media:** Use foam, carbon dioxide, dry powder, halon extinguishant or water fog or mist, (avoid use of water jet). Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage. Contain run-off water with, for example, temporary earth barriers.

**Sensitivity to explosion by mechanical impact:** No.

**Sensitivity to explosion by static discharge:** No.

## SECTION – 6: ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Make sure all personnel involved in the spill cleanup follow good industrial hygiene practices. A small spill can be handled routinely. Wear suitable protective clothing and eye protection to prevent skin and eye contact. Use adequate ventilation and wear an air-supplied respirator to prevent inhalation.

**Procedures for dealing with release or spill:** Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Sections 7 and 8. Pump or scoop large amounts of liquid into a disposable container. Absorb remaining liquid or smaller spills with clay, sand or vermiculite. Scoop or sweep up material and place into a disposal container. Wash area with detergent and water. Pick up wash liquid with additional absorbent and place into compatible disposal container. On soils, skim off the upper contaminated layer and collect for disposal. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition. Spillages or uncontrolled discharges into watercourses must be alerted to the appropriate regulatory body.

## SECTION – 7: HANDLING AND STORAGE

**Handling practices:** KEEP OUT OF REACH OF CHILDREN and animals. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. After work, rinse gloves and remove protective equipment. Wash hands thoroughly with soap and water after handling, and before eating, tobacco use, drinking, or using the toilet. Wash contaminated clothing before re-use and separate from household laundry. Keep containers closed when not in use. Keep product, wash or rinse water, and contaminated materials out of water, away from crops, and away from access by people, animals and birds.

**Appropriate storage practices/requirements:** Store in original container only in a well-ventilated, cool, dry, secure area. Protect from heat, sparks and flame. Do not expose sealed containers to temperatures above 40 °C and prevent product from freezing. Keep separate from other products to prevent cross contamination. Rotate stock. Clean up spilled material immediately.

**National Fire Code classification:** Not applicable.

## SECTION – 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**Applicable control measures, including engineering controls:** This product is intended for use outdoors where engineering controls are not necessary. If necessary, ensure work areas have ventilation, containment, and procedures sufficient to maintain airborne levels below the TLV. Warehouses, production area, parking lots and waste holding facilities must have adequate containment to prevent environmental contamination. Provide separate shower and eating facilities.

**THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION, PACKAGING AND USE OF THIS PRODUCT.**

**CONSULT THE PRODUCT LABEL FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS.**

### **Personal protective equipment for each exposure route:**

General: Avoid breathing dust, vapours or aerosols. Avoid contact with eye, skin and clothing. Wash thoroughly after handling and before eating, drinking, or handling tobacco.

**INGESTION:** Do not eat, drink, handle tobacco, or apply cosmetics in areas where there is a potential for exposure to this material. Always wash thoroughly after handling.

**EYES:** Where eye contact is likely, use chemical splash goggles. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

**SKIN:** Where contact is likely, wear chemical-resistant (such as nitrile or butyl) gloves, coveralls, socks and chemical-resistant footwear. For overhead exposure, wear chemical-resistant headgear.

**INHALATION:** A respirator is not normally required when handling this substance. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below exposure limits. A NIOSH-certified combination air-purifying respirator with an N, P or R 95 or HE class filter and an organic vapor cartridge may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air-purifying respirators is limited. Use a pressure demand atmosphere-supplying respirator if there is any potential for uncontrolled release, exposure levels are not known, or under any other circumstances where air-purifying respirators may not provide adequate protection.

## SECTION – 9: PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** White liquid.

**Formulation Type:** Suspension concentrate.

**Odour:** Paint-like.

**pH:** 7.5 (1% aqueous solution @ 20 °C).

**Vapour pressure and reference temperature:**  $1.24 \times 10^{-6}$  mmHg @ 25 °C (Prometryn Technical).

**Vapour density:** Not available.

**Boiling point:**  $105 \pm 5$  °C.

**Melting point:** Not available.

**Freezing point:** Not available.

**Specific gravity or density:** 1.08 g/cm<sup>3</sup> @ 20 °C.

**Evaporation Rate:** Not available.

**Water/oil partition coefficient:** Not available.

**Odour threshold:** Not available.

**Viscosity:** 544 cps.

**Solubility in Water:** 33 mg/L @ 22 °C (Prometryn Technical).

## SECTION – 10: STABILITY AND REACTIVITY

**Chemical stability:** Stable under normal use and storage conditions.

**Conditions to avoid:** Strong acids and bases, strong oxidizers.

**Incompatibility with other materials:** None known.

**Hazardous decomposition products:** Can decompose at high temperatures forming toxic gases.

**Hazardous polymerization:** Will not occur.

## SECTION – 11: TOXICOLOGICAL INFORMATION

### Acute toxicity/Irritation Studies (Finished Product):

Ingestion:	<u>Practically Non-Toxic</u> Oral (LD50 Rat):	> 5,050 mg/kg body weight
Dermal:	<u>Slightly Toxic</u> Dermal (LD50 Rabbit):	> 2,020 mg/kg body weight
Inhalation:	<u>Practically Non-Toxic</u> Inhalation (LC50 Rat):	> 2.34 mg/L air - 4 hours
Eye Contact:	<u>Mildly Irritating (Rabbit)</u>	
Skin Contact:	<u>Slightly Irritating (Rabbit)</u>	
Skin Sensitization:	<u>Not a Sensitizer (Guinea Pig)</u>	

### **Neurotoxicity**

Prometryn Technical: Not available at this time.

### **Reproductive/Developmental Effects**

Prometryn Technical: None observed.

### **Chronic/Subchronic Toxicity Studies**

Prometryn Technical: Liver, kidney and bone marrow changes at highest dose (dogs); kidney effects (rats).

### **Carcinogenicity**

Prometryn Technical: None observed.

**Other Toxicity Information:**

None.

**Toxicity of Other Components**

The acute toxicity test results reported in Section 11, above, for the finished product take into account any acute hazards related to the “other components” in the formulation.

**Ethylene Glycol:**

GESAGARD 480 SC contains ethylene glycol which has been shown to produce dose-related teratogenic effects in rats and mice. There is, however, no information suggesting that ethylene glycol has caused birth defects in humans. Ethylene glycol has been shown to produce dose-related teratogenic effects in rats and mice. Exposure to high concentrations of mists or aerosols may result in effects on the hematopoietic system and central nervous system with headache, dizziness and drowsiness. Severe kidney damage results from swallowing large amounts of ethylene glycol.

**Glycerol:**

Repeated or prolonged exposure to concentrated solutions may result in dermatitis.

**Other materials that show synergistic toxic effects together with the product:** None known.

**Target Organs**

Active Ingredient

Prometryn Technical: Liver, kidney, skin, bone marrow.

Inert Ingredients

Ethylene Glycol: Blood, kidneys and CNS.

Glycerin: Skin.

**SECTION – 12: ECOLOGICAL INFORMATION**

**Summary of Effects**

GESAGARD 480SC is a solution concentrate herbicide formulation that is diluted with water and applied as a spray for the control various weeds in potatoes, peas and celery. The active ingredient, prometryn, is practically nontoxic to birds and insects (bees), but is slightly to moderately toxic to fish and aquatic invertebrates (water flea).

**Eco-Acute Toxicity**

Prometryn Technical:

Bees LC <sub>50</sub> /EC <sub>50</sub>	> 97 µg/bee
Invertebrates ( <i>Daphnia magna</i> ) 48-hour LC <sub>50</sub> /EC <sub>50</sub>	18.6 ppm
Fish (Rainbow Trout) LC <sub>50</sub> /EC <sub>50</sub>	2.9 ppm
Fish (Bluegill) LC <sub>50</sub> /EC <sub>50</sub>	10 ppm
Birds (8-day dietary - Bobwhite Quail) LC <sub>50</sub> /EC <sub>50</sub>	> 5,000 ppm
Birds (8-day dietary - Mallard Duck) LC <sub>50</sub> /EC <sub>50</sub>	> 42,766 ppm

**Eco-Chronic Toxicity**

Prometryn Technical:

Fish (Fathead minnow) Early Life Stage MATC	1.06 mg/L
Invertebrate ( <i>Daphnia Magna</i> ) Life Cycle MATC	1.4 mg/L
Mallard Reproduction NOEC	500 ppm
Bobwhite Reproduction NOEC	50 ppm

**Environmental Fate**

The active ingredient, prometryn, and low bioaccumulation potential, moderate persistence in soil (half-life of 1-3 months) and water with moderate soil mobility. The main route of degradation is by microbial degradation and formation of bound residues.. For GESAGARD, the bulk material sinks in water (after 24 hours).

## SECTION – 13: DISPOSAL CONSIDERATIONS

**Waste disposal information:** Do not reuse empty containers. Empty container retains product residue. Triple rinse, or equivalent, empty container, return rinse water to dilution mixture, and dispose of dilution mixture as a hazardous waste if it cannot be disposed of by use according to label instructions. Dispose of empty containers in accordance with local regulations. Consult provincial environment ministry for advice on waste disposal. Industrial/commercial waste may be handled at licensed facilities only. Waste shipments must be securely packaged and properly labelled. Only licensed carriers may be used, and proper documents must accompany the shipment.

## SECTION – 14 : TRANSPORT INFORMATION

**Shipping information such as shipping classification:**

TRANSPORTATION OF DANGEROUS GOODS CLASSIFICATION - ROAD/RAIL  
Not Regulated.

## SECTION – 15: REGULATORY INFORMATION

**WHMIS classification for product:** Exempt

**A statement that the MSDS has been prepared to meet WHMIS requirements, except for use of the 16 headings.**

This MSDS has been prepared in accordance with WHMIS requirements, but the data are presented under 16 headings.

Other regulations; restrictions and prohibitions

Pest Control Products (PCP) Act Registration No.: 24771

## SECTION – 16: OTHER INFORMATION

The information contained herein is offered only as a guide to the handling of this specific material and has been prepared in good faith by technically knowledgeable personnel. It is not intended to be all-inclusive and the manner and conditions of use and handling may involve other and additional considerations. No warranty of any kind is given or implied and Syngenta will not be liable for any damages, losses, injuries or consequential damages which may result from the use of or reliance on any information contained herein. This Material Safety Data Sheet is valid for three years. This product is under the jurisdiction of the Pest Control Products Act and is exempt from the requirements for a WHMIS compliant MSDS. Hazardous properties of all ingredients have been considered in the preparation of this MSDS. Read the entire MSDS for the complete hazard evaluation of this product.

Prepared by: Syngenta Crop Protection Canada, Inc.  
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