



Material Safety Data Sheet

PROGRASS SC HERBICIDE

MSDS Number: 102000013443

MSDS Version 1.1

Revision Date: 02/18/2008

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name PROGRASS SC HERBICIDE
MSDS Number 102000013443
EPA Registration No. 432-1462

Bayer Environmental Science
 2 T.W. Alexander Drive
 Research Triangle PK, NC 27709
 USA

For MEDICAL, TRANSPORTATION or other EMERGENCY call: 1-800-334-7577 (24 hours/day)
 For Product Information call: 1-800-331-2867

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

| <u>Hazardous Component Name</u> | <u>CAS-No.</u> | <u>Average % by Weight</u> |
|---------------------------------|----------------|----------------------------|
| Ethofumesate | 26225-79-6 | 42.00 |
| 1,2-Propanediol | 57-55-6 | 6.75 |
| Sodium lignosulphonate | 8061-51-6 | 1.26 |

SECTION 3. HAZARDS IDENTIFICATION

NOTE: Please refer to Section 11 for detailed toxicological information.

Emergency Overview Caution! Harmful if swallowed, inhaled or absorbed through the skin. Avoid contact with skin, eyes and clothing. Avoid inhalation of vapour or mist.

Physical State liquid suspension

Odor characteristic

Appearance brown

Routes of Exposure Eye contact, Skin Absorption, Ingestion, Inhalation

Immediate Effects

Eye May cause mild irritation to eyes. Avoid contact with eyes.

Skin Harmful if absorbed through skin. Avoid contact with skin and clothing.

Ingestion Harmful if swallowed. Do not take internally.

Inhalation Harmful if inhaled. Avoid inhalation of vapour or mist.



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Chronic or Delayed Long-Term This product or its components may have target organ effects.

Potential Environmental Effect Toxic to fish.

SECTION 4. FIRST AID MEASURES

General When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

Eye 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 physician or poison control center immediately.

Skin Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Call a physician or poison control center immediately.

Ingestion Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person.

Inhalation Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.

Notes to Physician
Signs and Symptoms
 Local:
 To date no symptoms are known.
 Systemic:
 To date no symptoms are known.

Treatment There is no specific antidote. Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.

SECTION 5. FIRE FIGHTING MEASURES

Flash point No flash point - Determination conducted up to the boiling point.

Fire and Explosion Hazards Dangerous gases are evolved in the event of a fire.

Suitable Extinguishing Media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.



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Fire Fighting Instructions

Keep out of smoke. Fight fire from upwind position. Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat. Do not allow run-off from fire fighting to enter drains or water courses.

Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

Methods for Cleaning Up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.

Additional Advice

Use personal protective equipment. Do not allow to enter soil, waterways or waste water canal.

SECTION 7. HANDLING AND STORAGE

Handling Procedures

No specific precautions required when handling unopened packs/containers; follow relevant manual handling advice. Use only in area provided with appropriate exhaust ventilation.

Storing Procedures

Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

Protect from freezing. Keep away from direct sunlight.

Work/Hygienic Procedures

Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.

Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Protection

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash



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PPE separately from other laundry.

Follow all label instructions. Train employees in safe use of the product.

Eye/Face Protection Tightly fitting safety goggles

Hand Protection Chemical resistant nitrile rubber gloves

Body Protection Wear long-sleeved shirt and long pants and shoes plus socks.

Respiratory Protection When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.

Exposure Limits

| | | | | |
|-----------------|------------|----------|--------|----------|
| 1,2-Propanediol | 57-55-6 | WEEL | TWA | 10 mg/m3 |
| | | TX ESL | ST ESL | 20 ug/m3 |
| | | TX ESL | ST ESL | 500 ppm |
| | | TX ESL | AN ESL | 2 ug/m3 |
| | | TX ESL | AN ESL | 50 ppm |
| Ethofumesate | 26225-79-6 | OES BCS* | | 10 mg/m3 |

*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|-----------------------|---|
| Appearance | brown |
| Physical State | liquid suspension |
| Odor | characteristic |
| pH | 6.0 - 7.5 (100 %) at 23 °C |
| Density | approx. 1.13 g/cm ³ at 20 °C |
| Viscosity | 13,000 - 19,000 mPa.s at 20 °C |

SECTION 10. STABILITY AND REACTIVITY

| | |
|----------------------------|--|
| Conditions to Avoid | Extremes of temperature and direct sunlight. |
| Hazardous Reactions | No hazardous reactions when stored and handled according to prescribed instructions. Stable under recommended storage conditions. |



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SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity data have been bridged from another SC formulation containing a slightly higher percentage of the active ingredient, ethofumesate. The non-acute information pertains to the technical-grade active ingredient.

Acute Oral Toxicity rat: LD50: > 2,100 mg/kg

Acute Dermal Toxicity rat: LD50: > 4,100 mg/kg

Acute Inhalation Toxicity no data available
 Low toxicity is expected for this formulated product as indicated by the LC50 of the technical grade active ingredient, ethofumesate (4HR Dust: Rat: >4 mg/L).

Skin Irritation rabbit: No skin irritation.

Eye Irritation rabbit: Minimally irritating.

Sensitization guinea pig: Non-sensitizing.

Chronic Toxicity Ethofumesate caused decreased body weight gains and/or liver effects in chronic studies in rats and dogs.

Assessment Carcinogenicity

Ethofumesate has been classified by EPA as "not likely to be carcinogenic to humans" based on the lack of carcinogenicity in mice, the lack of convincing evidence for carcinogenicity in the rat, and no evidence of genotoxicity.

- ACGIH**
None.
- NTP**
None.
- IARC**
None.
- OSHA**
None.

Reproductive & Developmental Toxicity REPRODUCTION: Ethofumesate demonstrated no adverse effects on reproduction in a three-generation rat study.

DEVELOPMENTAL TOXICITY: Ethofumesate was not a developmental toxicant in rats. In rabbits, developmental effects (e.g. incomplete ossifications) were observed at a non-maternally toxic dose. No malformations were observed even at the highest dose.

Neurotoxicity Ethofumesate was not a neurotoxicant in a subchronic neurotoxicity screening study in rats. In addition, ethofumesate has not demonstrated the potential to cause neurotoxicity in standard toxicity studies using mice, rats, rabbits and dogs.



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Mutagenicity Ethofumesate was not mutagenic or genotoxic in a battery of in vitro and in vivo mutagenicity studies.

SECTION 12. ECOLOGICAL INFORMATION

Environmental Precautions 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 from treated areas may be hazardous to aquatic organisms in adjacent sites. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Apply this product as specified on the label.

SECTION 13. DISPOSAL CONSIDERATIONS

General Disposal Guidance Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Disposal Do not re-use empty containers. Triple rinse containers. Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill or incineration, or if allowed by State and Local authorities, by burning. If burned, stay out of smoke.

SECTION 14. TRANSPORT INFORMATION

DOT CLASSIFICATION:
Not regulated for Domestic Surface Shipment

IMDG CLASSIFICATION:
UN3082, Environmentally Hazardous Substances, Liquid, N.O.S. (Ethofumesate), 9, PG III, Marine Pollutant

FREIGHT CLASSIFICATION:
Compounds, Tree or Weedkilling, N.O.I., other than poison, having a density of 20 lbs. or greater per cubic foot

SECTION 15. REGULATORY INFORMATION

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US Federal Regulations

TSCA list

1,2-Propanediol 57-55-6
Sodium lignosulphonate 8061-51-6

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)
None.

SARA Title III - Section 302 - Notification and Information
None.

SARA Title III - Section 313 - Toxic Chemical Release Reporting
None.

US States Regulatory Reporting

CA Prop65

This product does not contain any substances known to the State of California to cause cancer.

This product does not contain any substances known to the State of California to cause reproductive harm.

US State Right-To-Know Ingredients

1,2-Propanediol 57-55-6 MN, RI

Canadian Regulations

Canadian Domestic Substance List

1,2-Propanediol 57-55-6
Sodium lignosulphonate 8061-51-6

Environmental

CERCLA

None.

Clean Water Section 307 Priority Pollutants

None.

Safe Drinking Water Act Maximum Contaminant Levels

None.

SECTION 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

Health - 1 Flammability - 0 Reactivity - 0 Others - none

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason to Revise: Updated Section 14: Transport Information. Updated Section 8: Exposure Controls / Personal Protection.

Revision Date: 02/18/2008

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