

## Material Safety Data Sheet



Emergency Phone: 617-636-4400  
General Phone: 1-800-352-6776

EPA Reg. Number: 62719-136  
Effective Date: April 29, 1994  
Product Code: 20163  
MSDS Number: 004011  
DowElanco • Indianapolis, IN 46268

# XL\* 2G Herbicide

## 1. INGREDIENTS:

(% w/w, unless otherwise noted)

N-Butyl-N-ethyl-alpha,alpha,alpha-trifluoro-2,6-dinitro-p-toluidine (Benefin) CAS# 001861-40-1 .....	1%
3,5-dinitro-N4,N4-dipropylsulfanilamido (Oryzalin) . . . CAS# 019044-88-3 .....	1%
Other Ingredients, total, including: .....	98%
Clay . . . CAS# 008031-18-3	
Crystalline silica (In clay) CAS# 014808-60-7	

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). In addition, other substances not 'Hazardous' per this OSHA Standard may be listed. Where proprietary ingredient shows, the identity may be made available as provided in this standard.

## 2. PHYSICAL DATA:

**BOILING POINT:** Not applicable  
**VAPOR PRESSURE:** Not applicable  
**VAPOR DENSITY:** Not applicable  
**SOLUBILITY IN WATER:** Not soluble in water  
**SPECIFIC GRAVITY:** Not applicable  
**APPEARANCE:** Light yellow-orange free flowing granule  
**ODOR:** Slight aromatic odor  
**pH:** (aqueous 50/50) 7.5 to 8.5

## 3. FIRE AND EXPLOSION HAZARD DATA:

**FLASH POINT:** Not applicable  
**METHOD USED:** Not applicable  
**FLAMMABLE LIMITS:**  
LFL: Not applicable  
UFL: Not applicable  
**AUTO-IGNITION TEMPERATURE:** Not applicable  
**EXTINGUISHING MEDIA:** Use water, CO2 or dry chemicals.  
**FIRE AND EXPLOSION HAZARDS:** If product is involved in fire, toxic, irritating fumes may be formed.  
**FIRE-FIGHTING EQUIPMENT:** Use full protective equipment and wear positive-pressure, self-contained breathing apparatus.

## 4. REACTIVITY DATA:

**STABILITY:** (CONDITIONS TO AVOID) Stable under normal storage conditions.

**INCOMPATIBILITY:** (SPECIFIC MATERIALS TO AVOID) None known

**HAZARDOUS DECOMPOSITION PRODUCTS:** Oxides of nitrogen and other toxic, irritating vapors may be formed if product is involved in fire.

**HAZARDOUS POLYMERIZATION:** Does not occur.

## 5. ENVIRONMENTAL AND DISPOSAL INFORMATION:

**ENVIRONMENTAL DATA:** 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 washwaters.

**ACTION TO TAKE FOR SPILLS:** Contain and sweep up material of small spills and dispose as waste. Large spills report to CHEMTREC and DowElanco for assistance. Prevent runoff.

**DISPOSAL METHOD:** Do not contaminate water, food or feed by storage or disposal. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility in accordance with applicable regulations.

## 6. HEALTH HAZARD DATA:

**EYE:** May cause moderate irritation with moderate temporary corneal injury.

**SKIN CONTACT:** Prolonged exposure may cause slight skin irritation. Did not cause allergic skin reactions when tested on guinea pigs.

**SKIN ABSORPTION:** A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts. The LD50 for skin absorption in rabbits is greater than 2000 mg/kg.

**INGESTION:** Single dose oral toxicity is low. The oral LD50 for rats is greater than 3750 mg/kg. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; swallowing amounts larger than that may cause injury.

**INHALATION:** Vapors are unlikely due to physical properties. Dust may cause irritation to upper respiratory tract. Exposure to high concentrations of crystalline silica may cause lung injury (crystalline silica is naturally present in the clay used in this product).

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### SYSTEMIC (OTHER TARGET ORGAN) EFFECTS:

Repeated large oral doses of the active ingredients in animals caused liver, kidney, bladder, spleen, and/or blood effects. Repeated excessive exposure (by inhalation) to crystalline silica, which occurs naturally in clay, may affect lung function and cause silicosis, a progressive and disabling disease of the lungs.

**CANCER INFORMATION:** This mixture contains crystalline silica, which is listed as a potential carcinogen for hazard communication purposes under OSHA Standard 29 CFR 1910.1200. It is listed by IARC and NTP.

Benfen did not cause cancer in long-term animal studies.

Thyroid follicular cell tumors noted in rats given oral doses of oryzalin were considered to represent a unique response of this species to p-substituted aminobenzene sulfonamides. Benign skin and adnexal tumors were seen in treated rats as well, and may also have been secondary to thyroid effects.

**TERATOLOGY (BIRTH DEFECTS):** Oryzalin did not cause birth defects in animal tests; other fetal effects occurred only at doses toxic to the mother.

**REPRODUCTIVE EFFECTS:** Benfen and oryzalin did not interfere with reproduction in animal studies.

**MUTAGENICITY (EFFECTS ON GENETIC MATERIAL):** Animal mutagenicity studies were negative for both benfen and oryzalin. For crystalline silica, in-vitro mutagenicity studies were negative in some cases and positive in other cases.

**PRIMARY ROUTES OF ENTRY:** Skin and Inhalation.

### 7. FIRST AID:

**EYES:** Flush eyes with plenty of water. Get medical attention if irritation develops.

**SKIN:** Wash with plenty of soap and water. Get medical attention if irritation develops.

**INGESTION:** Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

**INHALATION:** If discomfort occurs, move individual to fresh air. Get medical attention if breathing difficulty occurs. If not breathing, provide cardiopulmonary resuscitation assistance (mouth-to-mouth) and call a physician.

**NOTE TO PHYSICIAN:** No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.

**MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:** No corroborative information is available that would establish the aggravation of a medical condition by exposure to XL 2G. Animal studies indicate that benfen may be a potential contact sensitizer, but this has not been shown to occur under normal conditions of use. Highly allergic individuals should take special precautions to avoid skin contact with XL 2G or breathing of dust.

### B. HANDLING PRECAUTIONS:

**EXPOSURE GUIDELINE(S):** PEL and TLV not established for benfen and oryzalin.

For crystalline silica: ACGIH TLV and OSHA PEL are 0.1 mg/m<sup>3</sup> (respirable) for quartz, tripoli, and fused silica; 0.05 mg/m<sup>3</sup> (respirable) for cristobalite and tridymite.

PELs are in accord with those recommended by OSHA, as in the 1989 revision of PELs.

**VENTILATION:** Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

**RESPIRATORY PROTECTION:** Atmospheric levels should be maintained below the exposure guidelines. When respiratory protection is required for certain operations, use an approved air-purifying respirator. In dusty atmospheres, use an approved dust respirator.

**SKIN PROTECTION:** For handling prior to end-use of this product, use gloves impervious to this material when prolonged or frequently-repeated contact could occur.

For handling relative to end-use of this product, the Worker Protection Standard of 1993 requires that applicators and other handlers must wear long-sleeved shirt and long pants; waterproof gloves; and shoes and socks.

Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Follow manufacturer's instructions for cleaning/maintaining personal protective equipment (PPE). If there are no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**EYE PROTECTION:** Use safety glasses. Applicators and other end-use handlers must wear protective eyewear.

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### 9. ADDITIONAL INFORMATION:

**SPECIAL PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:** Keep out of reach of children. Causes eye irritation. Harmful if swallowed, inhaled, or absorbed through the skin. Avoid breathing dust. Avoid contact with skin, eyes, and clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

Store in original container only.

Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

For handling relative to end-use of this product, read the product label for further information concerning the use of personal protective equipment (PPE) under the Worker Protection Standard of 1993.

MSDS STATUS: Revised sections 1,3,4,5,6,7,8,9, and rgsheet.

**STATE RIGHT-TO-KNOW:** The following product components are cited on certain state lists as mentioned. Non-listed components may be shown in Section 1 of the MSDS.

Chemical name	CAS Number	List
Crystalline silica	014808-60-7	NJ3, PA1

NJ3=New Jersey Workplace Hazardous Substance (present at greater than or equal to 1.0%).  
PA1=Pennsylvania Hazardous Substance (present at greater than or equal to 1.0%).

### NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) RATINGS:

Category	Rating
Health	2
Flammability	1
Reactivity	0

### REGULATORY INFORMATION:

(Not meant to be all-inclusive—selected regulations represented).

**NOTICE:** The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations. See MSD Sheet for health and safety information.

**SARA HAZARD CATEGORY:** This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

- An immediate health hazard
- A delayed health hazard

### TOXIC SUBSTANCES CONTROL ACT (TSCA):

All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

### OSHA HAZARD COMMUNICATION STANDARD:

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

The information herein is given in good faith, but no warranty, express or implied, is made. Consult DowElanco for further information.