

# MATERIAL SAFETY DATA SHEET

## TEAM\* 2G HERBICIDE

Emergency Phone: 800-992-5994  
Southern Agricultural Insecticides Inc  
PO Box 218 Palmetto, FL 34221  
Effective Date: 11/15/00

### 1. PRODUCT AND COMPANY IDENTIFICATION:

**PRODUCT:** Team\* 2G Herbicide

**COMPANY IDENTIFICATION:** Southern Agricultural Insecticides, Inc.

7400 Bayshore Road Rubonia, FL 34220

### 2. COMPOSITION/INFORMATION ON INGREDIENTS:

Benefin: N-Butyl-N-ethyl- CAS# 001861-40-1 1.33%  
alpha,alpha,alpha-trifluoro-

2,6-dinitro-p-toluidine

Trifluralin: alpha,alpha,alpha- CAS# 001582-09-8 0.67%

trifluoro-2,6-dinitro-N,N-

dipropyl-p-toluidine

Inert Ingredients, Total, Including 98.00%

Crystalline Silica 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.

### 3. HAZARDOUS IDENTIFICATIONS:

**EMERGENCY OVERVIEW** Hazardous chemical. Light yellow granule with an aromatic odor. May cause eye irritation and/or corneal injury. May cause skin irritation. LD<sub>50</sub> for skin absorption in rabbits is >5000 mg/kg. Oral LD<sub>50</sub> for rats and mice is >5000 mg/kg. Toxic to aquatic organisms.

**EMERGENCY PHONE NUMBER:** 800-992-5994

**POTENTIAL HEALTH EFFECTS:** This section includes possible adverse effects, which could occur if this material is not handled in the recommended manner.

**EYE:** May cause moderate irritation, which may be slow to heal. May cause moderate corneal injury.

**SKIN:** Prolonged exposure may cause slight skin irritation. A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts.

The LD<sub>50</sub> for skin absorption in rabbits is >5000 mg/kg. Did not cause allergic skin reactions when tested in guinea pigs.

**INGESTION:** Single dose oral toxicity is extremely low. No hazards anticipated from swallowing small amounts incidental to normal handling operations. The oral LD<sub>50</sub> for rats and mice is >5000 mg/kg.

**INHALATION:** Vapors are unlikely due to physical properties.

**SYSTEMIC (OTHER TARGET ORGAN) EFFECTS:** For the major component(s), in animals, effects have been reported on the following organs: blood, kidney, and liver.

Repeated excessive exposure to crystalline silica may cause silicosis, a progressive and disabling disease of the lungs. Some evidence suggests that kidney effects may result from excessive exposures also.

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

CFR Part 1910.1200. No tumors were observed at lower dose levels. A low incidence of urinary tract tumors was seen in only 1 of 5 chronic studies in rats with trifluralin.

Trifluralin is not anticipated to be a carcinogenic risk to man. Benefin has caused tumors in rats only at doses exceeding the maximum tolerated dose.

**TERATOLOGY (BIRTH DEFECTS):** Birth defects are unlikely. Exposures having no adverse effects on the mother should have no effect on the fetus. Trifluralin has been toxic to the fetus in laboratory animals at doses toxic to the mother.

**REPRODUCTIVE EFFECTS:** For the major component(s), in animal studies, has been shown not to interfere with reproduction.

#### **4. FIRST AID:**

**EYES:** Irrigate with flowing water immediately and continuously for 15 minutes. Consult medical personnel.

**SKIN:** Wash off in flowing water or shower.

**INGESTION:** If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

**INHALATION:** No adverse effects anticipated by this route of exposure.

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

#### **5. FIRE FIGHTING MEASURES:**

**FLASH POINT:** Not applicable

**METHOD USED:** Not applicable

**FLAMMABLE LIMITS** LFL: Not applicable UFL: Not applicable

**AUTO-IGNITION TEMPERATURE:** Not applicable

**EXTINGUISHING MEDIA:** If product is involved in fire, use CO<sub>2</sub> or dry chemical.

**FIRE AND EXPLOSION HAZARDS:** Heating beneficial to temperatures above 90°C (194°F) can lead to violent reaction with rapid pressure build-up. If product is involved in fire, noxious, toxic fumes may also be formed.

**FIRE-FIGHTING EQUIPMENT:** Wear full protective clothing and use positive-pressure, self-contained breathing apparatus.

#### **6. ACCIDENTAL RELEASE MEASURES:**

**ACTION TO TAKE FOR SPILLS:** Contain and sweep up material of small spills and dispose as waste. Report large spills to Dow AgroSciences at 800-992-5994. Prevent runoff.

#### **7. HANDLING AND STORAGE:**

##### **PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:**

**HANDLING:** Keep out of reach of children. Harmful if swallowed, inhaled or absorbed through the skin.

Causes eye irritation. May cause allergic reaction in susceptible individuals. Avoid breathing dust and contact with skin, eyes or clothing. Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

**STORAGE:** Store in original container. Avoid elevated temperatures. See product label for handling/storage precautions relative to the end use of this product.

#### **8. EXPOSURE CONTROLS/PERSONAL PROTECTION:**

These precautions are suggested for conditions where a potential for exposure exists. Emergency conditions may require additional precautions.

**EXPOSURE GUIDELINES:** Crystalline Silica: ACGIH TLV is 0.05 mg/M<sub>3</sub>

for quartz, tripoli, and fused silica; 0.05 mg/M<sub>3</sub>

(respirable) for cristobalite and tridymite. OSHA PEL is 10/%SiO<sub>2</sub> + 2 mg/M<sub>3</sub>

(respirable) for quartz, tripoli, and fused silica; ½ the value calculated from the respirable dust

formula for quartz for cristobalite and tridymite. PELs are in accord with those recommended by OSHA, as in the 1989 revision of PELs.

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

#### **RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:**

**RESPIRATORY PROTECTION:** No respiratory protection should be needed. In dusty atmospheres, use a NIOSH approved dust respirator.

**SKIN PROTECTION:** Use gloves impervious to this material when prolonged or frequently repeated contact could occur.

**EYE PROTECTION:** Use chemical goggles.

**APPLICATORS AND ALL OTHER HANDLERS:** Refer to the product label for personal protective clothing and equipment.

## **9. PHYSICAL AND CHEMICAL PROPERTIES:**

**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 free-flowing granule

**ODOR:** Slight aromatic odor

**pH:** (aqueous 50/50) 7.5 to 8.5

## **10. STABILITY AND REACTIVITY:**

**STABILITY:** (CONDITIONS TO AVOID)(NOTE: The following information is based on data for benefin technical): Avoid elevated temperatures. Under normal handling and storage conditions, avoid heating above 90°C (194°F). Heating to temperatures above 90°C can lead to violent reaction with rapid pressure buildup.

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

**HAZARDOUS DECOMPOSITION PRODUCTS:** Combustion may produce toxic fumes, such as oxides of nitrogen, carbon monoxide, and unidentified organic compounds.

**HAZARDOUS POLYMERIZATION:** Not known to occur.

## **11. TOXICOLOGICAL INFORMATION:**

**MUTAGENICITY (EFFECTS ON GENETIC MATERIAL):** Crystalline silica was negative in some animal mutagenicity studies and positive in others. For trifluralin: in-vitro mutagenicity studies were negative and animal mutagenicity studies were predominantly negative. For benefin: in-vitro and animal mutagenicity studies were negative.

## **12. ECOLOGICAL INFORMATION:**

### **ENVIRONMENTAL FATE:**

**MOVEMENT & PARTITIONING:** Based largely or completely on information for benefin. Bioconcentration potential is high (BCF is >3000 or Log Pow between 5 and 7).

Expected to be relatively immobile in soil (Koc is >5000).

Based largely or completely on information for trifluralin.

Bioconcentration potential is moderate (BCF is between 100 and 3000 or Log Pow between 3 and 5).

Potential for mobility in soil is slight (Koc is between 2000 and 5000).

### **DEGRADATION & PERSISTENCE:**

Based largely or completely on information for benefin. Degradation is expected in the soil environment within days to weeks. Based largely or completely on information for trifluralin.

Based on the stringent test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

### **ECOTOXICOLOGY:**

Based largely or completely on information for benefin and trifluralin.

Material is very highly toxic to aquatic organisms on an acute basis (Lc50/EC50 is <0.1 mg/L in most sensitive species).

## **13. DISPOSAL CONSIDERATIONS:**

**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 at an approved waste disposal facility in accordance with applicable local, state and federal regulations.

## **14. TRANSPORT INFORMATION:**

For DOT regulatory information, if required, consult transportation regulations, product-shipping papers, or contact your Dow AgroSciences representative.

## **15. REGULATORY INFORMATION:**

**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.

## U.S. REGULATIONS

**SARA 313 INFORMATION:** This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

### CHEMICAL NAME CAS NUMBER CONCENTRATION

Benefluralin 001861-40-1 1.33%

**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.

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

### CHEMICAL NAME CAS NUMBER LIST

Benefluralin 001861-40-1 PA1

Crystalline Silica 014808-60-7 NJ3 PA1

NJ3=New Jersey Workplace Hazardous Substance (present at > or = 1.0%).

PA1=Pennsylvania Hazardous Substance (present at > or = to 1.0%).

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

## NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

### RATINGS:

#### Category Rating

Health 2

Flammability 1

Reactivity 0

## COMPREHENSIVE ENVIRONMENTAL RESPONSE

**COMPENSATION AND LIABILITY ACT (CERCLA, or SUPERFUND):** This product contains the following substance(s) listed as "Hazardous Substances" under CERCLA, which may require reporting of releases:

### Chemical Name CAS# RQ % in Product

Trifluralin 001582-09-8 10 0.67%

## 16. OTHER INFORMATION:

**MSDS STATUS:** New Company Name & Phone Number

Reference: DR-0335-8187

Replaces MSDS Dated: 10/14/96

The Information Herein Is Given In Good Faith, But No Warranty, Express or Implied, Is Made. Consult Dow AgroSciences for Further Information.