

# MATERIAL SAFETY DATA SHEET



Emergency Phone: 800-992-5994  
Dow AgroSciences LLC  
Indianapolis, IN 46268

Effective Date: 21-Apr-09  
Product Code: 114121

## POWERFLEX\* HERBICIDE

### 1. PRODUCT AND COMPANY IDENTIFICATION:

**PRODUCT:** Powerflex\* Herbicide

#### COMPANY IDENTIFICATION:

Dow AgroSciences LLC  
9330 Zionsville Road  
Indianapolis, IN 46268-1189

### 2. HAZARDOUS IDENTIFICATIONS:

#### EMERGENCY OVERVIEW

Tan granule with a musty odor. May cause eye irritation and/or corneal injury. Toxic to fish and aquatic invertebrates.

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

### 3. COMPOSITION/INFORMATION ON INGREDIENTS:

Pyroxsulam	CAS # 422556-08-9	7.5%
Balance, Total, Including		92.5%
Crystalline Silica	CAS # 014808-60-7	
Titanium dioxide	CAS # 013463-67-7	

### 4. FIRST AID:

**EYE:** Flush eyes with plenty of water; remove contact lenses, after the first 1-2 minutes and then continue flushing for several minutes. Only mechanical effects expected. If effects occur, consult a physician, preferably an ophthalmologist.

**SKIN:** Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before reuse. Dispose of items, which cannot be decontaminated, including leather articles such as shoes, belts and watchbands.

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

**INHALATION:** Move person to fresh air; if effects occur, consult a physician.

**NOTE TO PHYSICIAN:** No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

### 5. FIRE FIGHTING MEASURES:

**FLASH POINT:** Not applicable (granule)

**METHOD USED:** Not applicable

#### FLAMMABLE LIMITS

LFL: Not determined

UFL: Not determined

**EXTINGUISHING MEDIA:** Foam, CO<sub>2</sub>, or Dry chemical

**FIRE AND EXPLOSION HAZARDS:** Foam fire extinguishing system is preferred because uncontrolled water can spread possible contamination. Toxic irritating gases may be formed under fire conditions.

**FIRE-FIGHTING EQUIPMENT:** Use positive-pressure, self-contained breathing apparatus and full protective equipment.

### 6. ACCIDENTAL RELEASE MEASURES:

**ACTION TO TAKE FOR SPILLS:** Sweep up small spills and place in a container for disposal. Wash exposed body areas thoroughly with soap and water after handling. Report large spills to Dow AgroSciences at 800-992-5994.

### 7. HANDLING AND STORAGE:

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:** Keep out of reach of children. Do not swallow. Avoid contact with eyes, skin, and clothing. Avoid breathing vapors and spray mist. Handle concentrate in ventilated area. Wash thoroughly with soap and water after handling and before eating, chewing gum, using tobacco, using the toilet or smoking. Keep away from food, feedstuffs, and water supplies. Store in original container in a dry, well-ventilated area.

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### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

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

#### EXPOSURE GUIDELINES:

Titanium Dioxide: ACGIH TLV is 5 mg/M<sup>3</sup> (respirable) and 10 mg/M<sup>3</sup> TWA. OSHA PEL is 15 mg/M<sup>3</sup> (total dust). Silica, crystalline: ACGIH TLV is 0.1 mg/M<sup>3</sup> (respirable) for tripoli, and fused silica, 0.05 mg/M<sup>3</sup> (respirable) for cristobalite, tridymite, and quartz. Quartz has an A2 designation. OSHA PEL is (30 mg/M<sup>3</sup>)/(%SiO<sub>2</sub>+2) total dust, (250 mppcf)/(%SiO<sub>2</sub>+5) or (10 mg/M<sup>3</sup>)/(%SiO<sub>2</sub>+2) respirable for quartz, tripoli, and fused silica; the value for cristobalite and tridymite is ½ the value calculated from the respirable dust formula for quartz.

**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:

**EYE/FACE PROTECTION:** Use safety glasses. If there is a potential for exposure to particles, which could cause eye discomfort, wear chemical goggles.

**SKIN PROTECTION:** Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly. Items, which cannot be decontaminated, such as shoes, belts and watchbands, should be removed and disposed of properly. Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur.

**RESPIRATORY PROTECTION:** Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations use an approved air-purifying respirator. The following should be effective types of air-purifying respirator.

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

### 9. PHYSICAL AND CHEMICAL PROPERTIES:

**APPEARANCE:** Tan granule  
**ODOR:** Musty  
**DENSITY:** Not applicable

### 10. STABILITY AND REACTIVITY:

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

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

**HAZARDOUS DECOMPOSITION PRODUCTS:** None known.

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

### 11. TOXICOLOGICAL INFORMATION:

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

**EYE:** Solid or dust may cause irritation or corneal injury due to mechanical action.

**SKIN:** Prolonged contact is essentially non-irritating to skin. Prolonged skin contact is unlikely to result in absorption of harmful amounts. The dermal LD<sub>50</sub> for rats is >5000 mg/kg (male and female). Did not cause allergic skin reactions when tested in mice.

**INGESTION:** Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. The oral LD<sub>50</sub> for female rats is >5000 mg/kg.

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

**SYSTEMIC (OTHER TARGET ORGAN) EFFECTS:** For some components, in animals, effects have been reported on the following organs: kidney and liver. Repeated excessive exposure to crystalline silica may cause silicosis, a progressive and disabling disease of the lungs.

**CANCER INFORMATION:** Crystalline silica has been shown to cause cancer in laboratory animals and humans.

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**TERATOLOGY (BIRTH DEFECTS):** No relevant information found.

**REPRODUCTIVE EFFECTS:** No relevant information found.

**MUTAGENICITY:** For the active ingredient, animal genetic toxicity studies were negative.

### 12. ECOLOGICAL INFORMATION:

#### ENVIRONMENTAL FATE:

**MOVEMENT AND PARTITIONING:**  
No relevant information found.

**DEGRADATION & PERSISTENCE:**  
Based largely or completely on data for the major component(s)  
Biodegradation is not applicable.

**ECOTOXICOLOGY:**  
Material is slightly toxic to fish on an acute basis (LC<sub>50</sub> is between 10 and 100 mg/L).  
Material is practically non-toxic to aquatic invertebrates (LC<sub>50</sub> or EC<sub>50</sub> is >100 mg/L).

### 13. DISPOSAL CONSIDERATIONS:

**DISPOSAL METHOD:** If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws and regulations.

### 14. TRANSPORT INFORMATION:

**DOT Non-Bulk**  
NOT REGULATED

**DOT Bulk**  
NOT REGULATED

#### IMDG

**Proper Shipping Name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

**Technical Name:** CLOQUINTOCET-MEXYL AND PYROXSULAM

**Hazard Class:** 9 **ID Number:** UN3077 **Packing Group:** PG III

**EMS Number:** F-A,S-F

**Marine pollutant.:** Yes

**ICAO/IATA**  
NOT REGULATED

#### Additional Information

Marine Pollutant (Cloquintocet-mexyl, Pyroxsulam)

### 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:** To the best of our knowledge, this product contains no chemical subject to SARA Title III Section 313 supplier notification requirements.

**SARA HAZARD CATEGORY:** This product has been reviewed according to the EPA "Hazard Categories" promulgated under Section 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

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**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.

**CALIFORNIA PROPOSITION 65:** The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986:

This product contains a chemical(s) known to the State of California to cause cancer. The chemical is crystalline silica.

**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
Crystalline Silica	014808-60-7	NJ3 PA1
Titanium Dioxide	013463-67-7	NJ3 PA1

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

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

**COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA, or SUPERFUND):** To the best of our knowledge, this product contains no chemical subject to reporting under CERCLA.

### 16. OTHER INFORMATION:

**MSDS STATUS:** Revised Sections: 14  
Reference: DR-0389-6455  
Replaces RSSDS Dated: 22-Feb-06  
Document Code: D03-364-002  
Replaces Document Code: D03-364-001

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