

MATERIAL SAFETY DATA SHEET



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

KERB* 50W HERBICIDE

Effective Date: 24-Apr-06
Product Code: 79788
MSDS: 007723

1. PRODUCT AND COMPANY IDENTIFICATION:

PRODUCT: Kerb* 50W Herbicide

COMPANY IDENTIFICATION:

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

2. HAZARDOUS IDENTIFICATIONS:

EMERGENCY OVERVIEW

Off-white solid with no odor. May cause eye and skin irritation. Toxic to aquatic organisms.

EMERGENCY PHONE NUMBER: 800-992-5994

3. COMPOSITION/INFORMATION ON INGREDIENTS:

Pronamide (Propyzamide)	CAS # 023950-58-5	51%
Balance, Total, Including		49%
Crystalline Silica	CAS # 014808-60-7	

4. FIRST AID:

EYE: Hold eyes 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 eyes. Call a poison control center or doctor for treatment advice.

SKIN: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

INGESTION: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Never give anything by mouth to an unconscious person.

INHALATION: Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, and then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call a poison control center or doctor for treatment advice.

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

AUTO-IGNITION TEMPERATURE: 802°F (428°C)

FLAMMABLE LIMITS:

LFL: 0.175 oz/ft³ (175.193 g/M³)

UFL: Not determined

EXTINGUISHING MEDIA: Use the following extinguishing media when fighting fires involving this material: carbon dioxide, dry chemical, water spray or foam.

FIRE & EXPLOSION HAZARDS: Pesticide particulates can become airborne. Combustion generates toxic fumes of the following: hydrogen chloride, nitrogen oxides and/or carbon oxides. Dusts at sufficient concentrations can form explosive mixtures with air. The minimum ignition temperature is 977°F (525°C) for a dust cloud and 302°F (150°C) for a dust layer.

FIRE-FIGHTING EQUIPMENT: Wear self-contained breathing apparatus (pressure-demand NIOSH approved or equivalent) and full protective gear.

SPECIAL PROCEDURES: Contain run-off. Remain upwind. Avoid breathing smoke. Use water spray to cool containers exposed to fire.

6. ACCIDENTAL RELEASE MEASURES:

ACTION TO TAKE FOR SPILLS/LEAKS: Sweep up small spills and place in a suitable container for disposal. Keep dusts to a minimum. Keep spills and cleaning run-off out of municipal sewers and open bodies of water. Report large spills to Dow AgroSciences at 800-992-5994. If exposed to material during clean-up operations, remove all contaminated clothing promptly. Wash all exposed skin areas with soap and water immediately after exposure. Thoroughly launder clothing before reuse. Do not take clothing home to be laundered.

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7. HANDLING AND STORAGE:

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

HANDLING: Do not handle material near food, feed or drinking water. Avoid high concentrations of dust in air and accumulation of dust on equipment. An airborne dust of this material can create a dust explosion. When handling and processing this material local exhaust ventilation may be required to control dust and reduce exposure to vapors. To prevent dust explosions employ bonding and grounding for operations capable of generating static electricity. Protect all equipment from explosions by following the guidelines in NFPA 68 and 69. For electrical equipment follow local codes and electrical classification NFPA-70 (the National Electrical Code), Class II, Division 2, Group G. Store product in original container.

STORAGE: Do not store this material near food, feed or drinking water. For products sold in water soluble packets the minimum recommended storage temperature 34°F (0°C) and the maximum storage temperature is 122°F (50°C). Store in a dry area. Store out of direct sunlight in a cool place. Store in a well-ventilated area. Keep container tightly closed when not in use.

OTHER: Completely empty bag into application equipment. Dispose empty bag in a sanitary landfill As allowed by state and local authorities.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

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

EXPOSURE GUIDELINE(S):

Pronamide (Propyzamide): Dow AgroSciences Industrial Hygiene Guide is 0.1 mg/M³ TWA.
Clay: The ACGIH TLV is 2 mg/M³, respirable, A4; the OSHA PEL is 15 mg/M³ total dust and 5 mg/M³ respirable fraction.

Silica, crystalline: ACGIH TLV is 0.1 mg/M³ (respirable) for tripoli and fused silica, 0.05 mg/M³ (respirable) for cristobalite, tridymite, and quartz. Quartz has an A2 designation. OSHA PEL is (30 mg/M³)/(%SiO₂+2) total dust, (250 mppcf)/(%SiO₂+5) or (10 mg/M³)/(%SiO₂+2) respirable for quartz, tripoli, and fused silica; the value for cristobalite and tridymite is 1/2 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: 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. If respiratory irritation is experienced, use a NIOSH approved air-purifying respirator.

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

9. PHYSICAL AND CHEMICAL PROPERTIES:

COLOR: Off-white

APPEARANCE: Solid

ODOR: None

pH: 7.0 – 10.0

VISCOSITY: Not applicable

SPECIFIC GRAVITY (WATER = 1): 0.20 to 0.25 g/cc (bulk density)

VAPOR DENSITY (AIR = 1): Not applicable

VAPOR PRESSURE: <0.01 mmHg @ 68°F (20°C)

MELTING POINT: 309°F (154°C) - Estimate

BOILING POINT: Not applicable

SOLUBILITY IN WATER: Dispersible

PERCENT VOLATILITY: 0 to 2%

EVAPORATION RATE (BAc = 1): Not applicable

10. STABILITY AND REACTIVITY:

STABILITY: (CONDITIONS TO AVOID) Stable under normal conditions. Avoid temperatures above 302°F (150°C).

INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID) None known.

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HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition may yield the following: hydrogen chloride.

HAZARDOUS POLYMERIZATION: Not known 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: May cause slight temporary eye irritation. Corneal injury is unlikely. Dust may irritate eyes.

SKIN: Brief contact is essentially non-irritating to skin. Prolonged contact may cause slight skin irritation with local redness. Did not cause allergic skin reactions when tested in guinea pigs. Prolonged skin contact is unlikely to result in absorption of harmful amounts. The LD₅₀ for skin absorption is >2000 mg/kg (rats) and >10,000 mg/kg (rabbits).

INGESTION: Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. The oral LD₅₀ for rats is >5000 mg/kg.

INHALATION: Vapors are unlikely due to physical properties. Dust may cause irritation of the upper respiratory tract (nose and throat) and lungs. The aerosol LC₅₀ for rats is >5.0 mg/L for 4 hours.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: For pronamide, in animals, effects have been reported on the following organs: liver, kidney, pituitary, adrenals, thyroid, ovaries, and pancreas. For crystalline silica, in animals, effects have been reported on the following organs: central nervous system, 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: Pronamide has caused cancer in laboratory animals. 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. Crystalline silica has been shown to cause cancer in laboratory animals and humans.

TERATOLOGY (BIRTH DEFECTS): Pronamide did not cause birth defects in laboratory animals. Has been toxic to the fetus in laboratory animals only at doses toxic to the mother.

REPRODUCTIVE EFFECTS: For pronamide, in laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

MUTAGENICITY: For pronamide, in-vitro and animal genetic toxicity studies were negative. For crystalline silica, in-vitro genetic toxicity studies were negative in some cases and positive in other cases.

12. ECOLOGICAL INFORMATION:

ENVIRONMENTAL FATE:

ENVIRONMENTAL TOXICITY:

Based largely or completely on information for this material.

Material is moderately toxic to aquatic organisms on an acute basis (LC₅₀ or EC₅₀ is between 1 and 10 mg/L in the most sensitive species tested).

Based largely or completely on information for pronamide.

Material is highly toxic to aquatic organisms on an acute basis (LC₅₀ or EC₅₀ is between 0.1 and 1 mg/L in the most sensitive species tested).

Material is practically non-toxic to birds on a dietary basis (LC₅₀ is >5000 ppm).

13. DISPOSAL CONSIDERATIONS:

DISPOSAL METHOD: Do not contaminate food, feed, or water by storage or disposal. Wastes are toxic and classified as a RCRA hazardous waste number U192 (40 CFR 261). Improper disposal of excess waste is a violation of federal law. If wastes cannot be used according to the label directions, dispose of in accordance with all applicable local, state or federal requirements. Contact your state pesticide or environmental control agency, or the hazardous waste representative at the nearest EPA regional office for guidance.

14. TRANSPORT INFORMATION:

U.S. DEPARTMENT OF TRANSPORTATION (DOT) INFORMATION:

For all shipments:

This material is not regulated for transportation.

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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
Pronamide	023950-58-5	51%

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

CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986: **WARNING:** This product contains a chemical known to the State of California to cause cancer. The chemical is Pronamide (CAS # 023950-58-5)

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
Crystalline Silica, Quartz	014808-60-7	NJ3 PA1
Pronamide	023950-58-5	NJ1 NJ2 NJ3 PA1 PA3

NJ1=New Jersey Special Health Hazard Substance (present at greater than or equal to 0.1%).
NJ2=New Jersey Environmental Hazardous Substance (present at greater than or equal to 1.0%).
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%).
PA3=Pennsylvania Environmental Hazardous Substance (present at greater than or equal 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:

Health	1
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
Pronamide	023950-58-5	5000 lbs.	51%

RCRA Categorization

USEPA Hazardous Waste # for Pronamide (CAS # 023950-58-5) = U192

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16. OTHER INFORMATION:

MSDS STATUS: Revised Sections: 2, 3, 7, & 11
Reference: DR-0390-7639
Replaces MSDS Dated: 11/26/03
Document Code: D03-855-003
Replaces Document Code: D03-855-002

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