

Material Safety Data Sheet

RootX

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Company Name & Address: General Chemical Company
P.O. Box 7626
1705 Salem Industrial Drive, N.E.
Salem, Oregon 97303

Emergency Telephone: 800-424-9300 (Chemtrec) or 800-844-4974

Date Prepared: January 1st 2005 **Common Name (used on label):** RootX

Chemical Name: 2,6-dichlorobenzonitrile **Chemical Family:** Benzonitrile

Formula: Proprietary Mixture **EPA Reg. No.:** 68464-1

SECTION 2 - HAZARDOUS INGREDIENTS/COMPOSITION

| Hazardous Component: | %/Wt.: | CAS #: | TLV* (Units): |
|--|---------------|---------------|-----------------------------------|
| 2,6-dichlorobenzonitrile (dichlobenil) | 0.55% | 1194-65-6 | Not Established |
| Silica, Crystalline Quartz | >11.00% | 14464-46-1 | 10 mg/m ³ (respirable) |
| Sulfamic Acid | >40.00% | 5329-14-6 | 15 mg/m ³ (respirable) |

*TLV: Threshold Limit Value recommended by the American conference of Governmental Industrial Hygienists.

SECTION 3 - PHYSICAL DATA

Boiling Point: 270°C (dichlobenil) **Density:** 2.18 kg/L³

Vapor Pressure: 0.088 Pa @ 20°C (dichlobenil) **Solubility:** Disperses with H₂O

Percent Volatile by Volume: Not determined **Vapor Density:** Not determined

Evaporation Rate: Not determined **Physical State:** Solid (Wettable Powder)

Appearance & Odor: White to light brown with a slight aromatic odor.

SECTION 4 - FIRE AND EXPLOSION DATA

Flash Point: .216°C (420°F) **Flammable Limits in Air (%/Volume):** **Lower -** Not Determined
Upper - Not Determined

Auto Ignition Temperature: .527°C (980°F)

Extinguishing Media: Water spray, foam or dry chemical

Unusual Fire & Explosion Hazards: Decomposition may form explosive dust-air mixtures; carbon dioxide and water vapor.

Special Fire Fighting Procedures: As with any fire, wear self-contained breathing apparatus pressure demand, MSHA/NIOSH approved (or equivalent) and full protective gear. Keep upwind. Isolate hazard area. Avoid inhalation of smoke and fumes. Use water, dry chemical or foam to reduce fumes. Do not touch spilled material. If possible, move containers from area. Extinguish only if flow can be stopped. Use flooding amounts of water as a fog. Cool containers with flooding amounts of water from as far a distance as possible. Avoid breathing vapors.

SECTION 5 - HEALTH INFORMATION

Primary Routes of Exposure: Inhalation, eye and skin contact.

Signs and Symptoms of Exposure -

Acute Overexposure: Other than the possibility of slight to moderate eye irritation, no other acute health hazards have been identified. Chronic inhalation may cause lung irritation to individuals with respiratory problems. Individuals with respiratory problems should avoid inhalation exposure.

Chronic Overexposure: In studies with laboratory animals, virtually pure grade (96%+) dichlobenil had a developmental toxicity No Observable Effect Level ("NOEL") of 20 mg/kg/day. For reproductive toxicity, (96%+) dichlobenil had a reproductive toxicity NOEL of 17.5 mg/kg/day. Analysis of chronic feeding studies in rats and mice with dichlobenil resulted in the conclusion that dichlobenil's potential to induce carcinogenicity in experimental animals is low and that the likelihood of carcinogenic effects in humans is nonexistent or extremely low. Long-term feeding studies, conducted at exaggerated dose levels, resulted in increased kidney and liver weights. An overall absence of genotoxicity has been demonstrated in mutagenicity testing on dichlobenil.

Repeated overexposure to crystalline silica (a naturally occurring component of sand and inorganic soils) for extended periods has caused acute silicosis. IARC has classified crystalline silica, inhaled in the form of quartz or cristobalite from occupational sources as a carcinogen to humans (group 1). NTP has classified crystalline silica (quartz, cristobalite and tridymite) as "reasonably anticipated to be carcinogenic".

Carcinogenicity (pure dichlobenil): NTP - No IARC - N0 OSHA - No EPA - Possible

Carcinogenicity (crystalline silica): NTP - Anticipated IARC - Yes

Medical Conditions Aggravated by Exposure: None currently known for RootX.

Medical Conditions Aggravated by Overexposure: Slight to moderate eye irritation.

Toxicology Information for RootX: Acute Oral LD₅₀ = >5,000 mg/kg; Acute Dermal LD₅₀ = >2,000 mg/kg; Acute Inhalation LC₅₀ = > 2 mg/liter; Acute Eye Irritation = slightly to moderately irritating; Acute Dermal Irritation = None to slight irritation; Dermal Sensitization = Not a dermal sensitizer.

Acute studies with RootX place the product in EPA categories III & IV - slight acute toxicity to virtually non-toxic.

First Aid Procedures: If Swallowed - Call a poison control center or doctor immediately for advice. Have a person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person. **If On Skin** - If on skin or clothing, take off contaminated clothing. Rinse immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice. **If Inhaled** - Move victim 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 poison control center or doctor for further treatment. **If In Eyes** - 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 eye. Call a poison control center or doctor for treatment advice.

Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsions may be needed.

Worker Exposure: The EPA requirements for concern exist when the MOE (Margin of Exposure) are less than 100 for dermal exposure and 300 for inhalation exposure. An analysis of the exposure associated with the use of RootX demonstrate the dermal and inhalation MOE to be between 38,050 and 253,664. Thus, the use of RootX according to labeled use directions far exceed the MOE concerns established by EPA for dichlobenil.

SECTION 6 - REACTIVITY DATA

Stability: Stable at ambient temperatures and pressures. **Conditions to Avoid:** Strong alkalis.

Polymerization: Will not occur.

Hazardous Decomposition Products: Thermal decomposition or unscheduled contact between both components of RootX may cause build-up of Carbon Dioxide.

SECTION 7 - SPILL OR LEAK PROCEDURES

Storage: Do not contaminate water, food or food by storage or disposal. Store in a cool, dry place. Do not store with propagative structures such as seed, bulbs, tubers, nursery stock, etc., or with food or feed products or high alkali materials.

Spills: Vacuum up to avoid creating dust. Transfer into secure disposable containers. Use personal protective equipment as outlined in Section 8. Reportable quantity for spills of RootX is 9,000 pounds.

Disposal: Wastes resulting from the use of this product may be disposed of on site according to labeled use directions, or at a Federal, state and local waste approved facility. For normal use and container/pesticide disposal, please refer to the product labeling for proper disposal.

Environmental Information: For terrestrial uses, do not use near a well or where drinking water is stored. Do not apply directly to water (except as specified on the label) or 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, wash water or rinsate.

Tests on Bluegill sunfish, Rainbow trout, and Large-mouth bass demonstrate the LC₅₀ values to be between 15 and 30 ppm. Adult Quail LC₅₀ value = 1,000 ppm. These data indicate that dichlobenil is not toxic to aquatic and avian species.

SECTION 8 - PERSONAL PROTECTION INFORMATION

Respiratory Protection: Dust mask. **Gloves:** Rubber (impervious) gloves.

Eye Protection: Chemical resistant splash goggles, safety glasses or full-face shield (for spill or leak cleanups).

Ventilation: General of local exhaust to maintain exposure below established TLV limits.

Other Protective Clothing: Long-sleeved shirt, long-pants, shoes & socks and for spill clean-ups, a chemical resistant apron is recommended.

SECTION 9 - OTHER INFORMATION

Hygiene: As with any pesticidal product, always wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Always clean and maintain personal protective equipment.

National Fire Protective Association Ratings (Rating level: 4 = Extreme; 3 = High; 2 = Moderate; 1 = Slight; 0 = Minimum).

NFPA Health: 1 NFPA Flammability: 0 Reactivity Hazards: 1

U.S. Environmental Protection Agency:

SARA 313 - Yes

Other:

Proposition 65 - Yes