

**MATERIAL SAFETY DATA SHEET**

Agricultural Products Group  
P.O.Box 13528,  
Research Triangle Park, NC 27709  
(919) 547-2000

**EMERGENCY TELEPHONE NUMBERS:**

**BASF Corporation: 1 (800) 832-HELP**

**CHEMTREC: 1 (800) 424-9300**

**Product No.: 58A035**

**Pendulum AquaCap™**

**Date Prepared: 8/14/2002 Date Revised: 6/23/2004**

**SECTION I**

**Trade Name: Pendulum AquaCap™**

**Chemical Name: N-(1-ethylpropyl)-3,4-dimethyl-2,6-dinitrobenzenamine**

**Synonyms: Pendimethalin CS 455 G/L; BAS 455 H, AC 92 ,553, Formula: C13 H19 N3 O4  
Pendulum 3.8 CS**

**Chemical Family: Dinitroaniline**

**Mol Wt: 281.3**

**SECTION II - INGREDIENTS**

COMPONENT	CAS NO.	%	PEL/TLV - SOURCE
*Pendimethalin	40487-42-1	38.7	3 mg/m3 [BASF recommended]
*Ethylene dichloride	107-06-2	(0.42)	1 ppm (TWA) [OSHA] 2 ppm (STEL) [OSHA]
Inerts	N/A	61.3	None established

**SARA Title III Section 313: \*Listed**

**SECTION III - PHYSICAL DATA**

**BOILING/MELTING POINT@760mm Hg: N/D pH: 7 - 9 (neat formulation)**

**VAPOR PRESSURE mmHg @ 20°C: N/D**

**SPECIFIC GRAVITY OR BULK DENSITY: 1.165 - 1.185 g/mL 9.71 - 9.88 lb/gal**

**SOLUBILITY IN WATER: N/D**

**APPEARANCE: Orange-yellow opaque liquid ODOR: Woody INTENSITY: Mild**

**SECTION IV - FIRE AND EXPLOSION DATA**

**FLASH POINT (TEST METHOD): N/D (Aqueous) AUTOIGNITION TEMP: N/D**

**FLAMMABILITY LIMITS IN AIR (% BY VOL): LOWER: N/D UPPER: N/D**

**NFPA 704 HAZARD CODES**

**HEALTH: 1 FLAMMABLE: 1 INSTABILITY: 0 OTHER: N/R**

**NFPA 30 STORAGE CLASSIFICATION: N/R**

**EXTINGUISHING MEDIUM Use water fog, foam, CO(2), or dry chemical extinguishing media.**

**SPECIAL FIREFIGHTING PROCEDURES Firefighters should be equipped with self-contained breathing apparatus and turnout gear.**

**UNUSUAL FIRE EXPLOSION HAZARDS None known.**

**SELECT ACRONYM KEY**

N/A - Not available; N/D - Not determined; N/R - Not rated; N/E - Not established

**SECTION V - HEALTH DATA****TOXICOLOGICAL TEST DATA:**

Data for formulated product:

Rat, Oral LD50 &gt; 5000 mg/kg

Rat, Dermal LD50 &gt; 5000 mg/kg

Rat, Inhalation LC50 (4 hr) &gt; 5.2 mg/L

Rat, Inhalation LC50 (1 hr calculated) &gt; 20.8 mg/L

Rabbit, Eye Irritation - Non- to slightly irritating

Rabbit, Skin Irritation - Non- to slightly irritating

Guinea pig, Dermal Sensitizer - Not a sensitizer

The US EPA has classified pendimethalin an oncogenicity rating of "low c" (possible human carcinogen).

A marked depression in body weight gain and statistically significant increase in benign thyroid proliferative lesions were observed at the highest dose tested (5000 ppm) in the lifetime (24 month) rat study.

**OSHA, NTP, or IARC Carcinogen:** Ethylene dichloride listed - IARC - Possibly carcinogenic to humans; NTP - Reasonably anticipated to be a human carcinogen**EFFECTS OF OVEREXPOSURE:****See Product Label and Directions For Use for additional precautionary statements.**

Avoid contact with skin, eyes or clothing.

Wash thoroughly with soap and water after handling.

Existing medical conditions aggravated by this product:

None known.

**FIRST AID PROCEDURES**

- If in eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
- If swallowed:** 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 by a poison control center or doctor. Do not give anything to an unconscious person.
- If on skin or clothing:** 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.
- If inhaled:** Move person 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 advice.
- Note to physician:** There is no specific antidote for exposure to this material.
- Note:** Pendimethalin is a strongly orange-red compound - virtually an aniline dye. Cases have been described of orange-yellow coloration of urine following heavy exposure of workers to the dust of pendimethalin. Despite its structure as both a nitro-compound and aromatic amine, exposure to pendimethalin is NOT associated with methemoglobinemia.
- Note:** Have the product container or label with you when calling a poison control center or doctor or going for treatment.

**SECTION VI - REACTIVITY DATA****STABILITY:** Freezes around 15°F and is stable under conditions of freezing and thawing**CONDITIONS TO AVOID:** Store in original container in cool, dry, well ventilated place away from ignition sources, heat or flame.**CHEMICAL INCOMPATIBILITY:** Oxidizing agents.**HAZARDOUS DECOMPOSITION PRODUCTS:** Including but not limited to oxides of carbon and nitrogen**HAZARDOUS POLYMERIZATION:** Does not occur.**CONDITIONS TO AVOID:** Does not polymerize.**CORROSIVE TO METAL:** Mild steel and bras**OXIDIZER:** No

**SECTION VII - PERSONAL PROTECTION**

**PESTICIDE APPLICATORS & WORKERS must refer to the Product Label and Directions For Use attached to the product for Agricultural Use Requirements in accordance with the EPA Worker Protection Standard 40 CFR part 170.**

**RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:****Respiratory Protection:**

Supplied air respirators should be worn if large quantities of mist/dust are generated or prolonged exposure possible.

**Eye Protection:**

Chemical goggles when respirator does not provide eye protection.

**Protective Clothing:**

Chemical resistant gloves and protective clothing as necessary to prevent skin contact.

**Ventilation:**

Whenever possible, engineering controls should be used to minimize the need for personal protective equipment.

**SECTION VIII - ENVIRONMENTAL DATA****ENVIRONMENTAL TOXICITY DATA**

Data for the formulated product:

Honeybee, 48hr Oral LD50 > 86.4 ug/bee

Honeybee, 48hr Contact LD50 > 100 ug/bee

Based on the active ingredient this product will likely be very toxic to fish, aquatic invertebrates, and algae.

**SARA 311/312 REPORTING**

**FIRE:N      PRESSURE:N      REACTIVITY:N      ACUTE:Y      CHRONIC:N      TPQ(lbs): N/R**

**SPILL AND LEAK PROCEDURES:**

In case of large scale spillage of this product, avoid contact, isolate area and keep out animals and unprotected persons. Call CHEMTREC (800 424-9300) or BASF Corporation (800 832-HELP). For a small spill, wear personal protective equipment as specified on the label.

FOR A LIQUID SPILL: Dike and contain the spill with inert material (sand, earth, etc.) and transfer the liquid and solid diking materials to separate containers for disposal.

FOR A SOLID SPILL: Sweep solid into a drum for re-use or disposal. Remove personal protective equipment and decontaminate it prior to re-use.

**HAZARDOUS SUBSTANCE SUPERFUND:      No      RQ(lbs): 100 lbs**

**WASTE DISPOSAL METHOD:**

Pesticide wastes are acutely hazardous. Wastes resulting from this product may be disposed of on site or at an approved waste disposal facility. Improper disposal of excess pesticide, spray mix or rinsate is a violation of federal law. If these wastes cannot be disposed of according to label instructions, contact the state agency responsible for pesticide regulation or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**HAZARDOUS WASTE 40CFR261: Yes**

**HAZARDOUS WASTE NUMBER:D028 (other codes may apply)**

**CONTAINER DISPOSAL:**

FOR PLASTIC CONTAINERS: Triple rinse (or equivalent) and add rinsate to the spray tank. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

FOR BULK CONTAINERS: Reusable containers should be returned to the point of purchase for cleaning and re-filling.

FOR MINIBULK CONTAINERS: Clean all tanks on an approved loading pad so rinsate can be collected and mixed into the spray solution or into a dedicated tank. Using a high pressure sprayer, rinse several times with small volumes of water to minimize rinsate.

**SECTION IX - SHIPPING DATA - PACKAGE AND BULK****D.O.T. PROPER SHIPPING NAME (49CFR172.101-102):**

Less than 2452 gal - None  
> 2452 gal - Environmentally hazardous substances, liquid, N.O.S.

**HAZARDOUS SUBSTANCE  
(49CFR CERCLA LIST):**

Ethylene Dichloride  
**RQ(lbs):** 100 lbs

**D.O.T. HAZARD CLASSIFICATION (CFR 172.101-102):****PRIMARY**

Less than 2452 gal - None >2452 gal - 9

**SECONDARY**

None

**D.O.T. LABELS REQUIRED (49CFR172.101-102):**

Less than 2452 gal - None >2452 gal - 9

**D.O.T. PLACARDS  
REQUIRED (CFR172.504):**

Less than 2452 gal - None  
>2452 gal - 9

**POISON CONSTITUENT  
(49CFR172.203(K)):**

None

**BILL OF LADING DESCRIPTION**

Not regulated by the Department of Transportation in package sizes of less than 2452 gallons.  
Equal to or greater than 2452 gal - RQ, Environmentally hazardous substances, liquid, N.O.S. (ethylene dichloride), 9, UN 3082, PG III, ERG 171

**CC NO.:** Not applicable

**UN/NA CODE:** UN 3082

**SECTION X - ADDITIONAL INFORMATION**

**Pendulum AquaCap™**

**EPA Reg. No. 241-416**

**KEEP OUT OF REACH OF CHILDREN**

**CAUTION**

**Complete Label and Directions For Use are attached to the product.**

**Agricultural Use Requirements**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to supplemental labeling under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

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**DISCLAIMER**

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