

**MATERIAL SAFETY DATA SHEET**

Agricultural Products Group  
P.O.Box 13528,  
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(919) 547-2000

**EMERGENCY TELEPHONE NUMBERS:**

BASF Corporation: 1 (800) 832-HELP

CHEMTREC: 1 (800) 424-9300

Product No.: 579616 Avenge® wild oat herbicide

Date Prepared: 7/28/2000 Date Revised: 6/6/2002

**SECTION I**

<b>Trade Name:</b> Avenge® wild oat herbicide
<b>Chemical Name:</b> 1,2-dimethyl-3,5-diphenyl-1H-pyrazolium methyl sulfate
<b>Synonyms:</b> Difenzoquat methyl sulfate; CL84, 777; Avenge 2ASU <b>Formula:</b> C(18) H(20) N(2) O(4) S
<b>Chemical Family:</b> pyrazolium salt <b>Mol Wt:</b> 360.4

**SECTION II - INGREDIENTS**

COMPONENT	CAS NO.	%	PEL/TLV - SOURCE
Difenzoquat methyl sulfate	43222-48-6	31.2	1.2 mg/m(3) - BASF recommended
Inerts	N/A	68.8	None established
including ethylene dichloride (EDC)*	107-06-2	(0.07)	10 ppm TWA - ACGIH

SARA Title III Section 313: \* Listed

**SECTION III - PHYSICAL DATA**

<b>BOILING/MELTING POINT@760mm Hg:</b> = > 212° F	<b>pH:</b> 4
<b>VAPOR PRESSURE mmHg @ 20°C:</b> 24 @ 25° C	
<b>SPECIFIC GRAVITY OR BULK DENSITY:</b> 1.112 @ 25° C	
<b>SOLUBILITY IN WATER:</b> Completely miscible	
<b>APPEARANCE:</b> Clear, slightly yellow liquid	<b>ODOR:</b> Odorless <b>INTENSITY:</b>

**SECTION IV - FIRE AND EXPLOSION DATA**

<b>FLASH POINT (TEST METHOD):</b> 217 °F SFCC	<b>AUTOIGNITION TEMP:</b> N/D
<b>FLAMMABILITY LIMITS IN AIR (% BY VOL):</b>	<b>LOWER:</b> N/D <b>UPPER:</b> N/D
<b>NFPA 704 HAZARD CODES</b>	
<b>HEALTH:</b> N/R	<b>FLAMMABLE:</b> N/R <b>INSTABILITY:</b> N/R <b>OTHER:</b> N/R
<b>NFPA 30 STORAGE CLASSIFICATION:</b> Class IIIB	

<b>EXTINGUISHING MEDIUM</b>	Use water fog, foam, CO(2), or dry chemical extinguishing media.
<b>SPECIAL FIREFIGHTING PROCEDURES</b>	Firefighters should be equipped with self-contained breathing apparatus and turnout gear.
<b>UNUSUAL FIRE EXPLOSION HAZARDS</b>	See Section X - Additional Information - for thermal decomposition products.

**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 Avenge Technical, active ingredient:  
 Rat (male), Oral LD50 = 863 mg/kg  
 Rat (female), Oral LD50 = 912 mg/kg  
 Rabbit, Dermal LD50 (combined sexes) > 2028 mg/kg  
 Rat, Inhalation LC50 (4 hr) - Not available  
 Rat, Inhalation LC50 (1 hr calculated) - Not available  
 Rabbit, Eye Irritation - Irreversible irritation  
 Rabbit, Skin Irritation - Mildly irritating  
 Guinea pig, Dermal Sensitizer - Not available

**OSHA, NTP, or IARC Carcinogen:** EDC is IARC listed as a Group 2B Carcinogen (possibly carcinogenic to humans) and NTP listed as reasonably anticipated to be a human carcinogen.

**EFFECTS OF OVEREXPOSURE:**

**See Product Label and Directions For Use for additional precautionary statements.**

DANGER!

CORROSIVE. Causes irreversible eye damage. May be fatal if absorbed through the skin.

DO NOT get in eyes, on skin, or on clothing. Harmful if swallowed or inhaled.

Avoid breathing spray mist.

Existing medical conditions aggravated by this product:

None known.

**FIRST AID PROCEDURES**

**If in eyes:** Hold eyelids open and flush with a steady, gentle stream of water for 15 minutes. Get medical attention.

**If swallowed:** Call a doctor or get medical attention. Do not induce vomiting. Drink promptly a large quantity of milk, egg whites, gelatin solution, or if these are not available, drink large quantities of water. Avoid alcohol.

**If on skin:** Wash with plenty of soap and water. Get medical attention.

**If inhaled:** Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

**Note to physician:** Probable mucosal damage may contraindicate the use of gastric lavage. There is no specific antidote for exposure to this material. There is some evidence from animal studies that physostigmine sulfate, used in conjunction with norepinephrine, by injection, may be beneficial in the treatment of acute intoxication by AVENGE, following accidental ingestion.

**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:** Stable at 45°C for at least 3 months; pH will rise from acidic to alkaline.

**CONDITIONS TO AVOID:** Store in original container in cool, dry, well ventilated place away from ignition sources, heat or flame.

**CHEMICAL INCOMPATIBILITY:** Contact with aluminum may generate hydrogen; oxidizing agents.

**HAZARDOUS DECOMPOSITION PRODUCTS:** See Section X - Additional Information

**HAZARDOUS POLYMERIZATION:** Does not occur.

**CONDITIONS TO AVOID:** Does not polymerize.

**CORROSIVE TO METAL:** No

**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:**

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**

See the product label for information regarding environmental toxicity.

**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): Not applicable**

**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):**

None

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

None

**RQ(lbs):** Not applicable**D.O.T. HAZARD CLASSIFICATION (CFR 172.101-102):****PRIMARY**

None

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

None

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

None

**POISON CONSTITUENT  
(49CFR172.203(K)):****BILL OF LADING DESCRIPTION**

Compounds, tree or weed killing, (herbicides), NOIBN

This product is not regulated by the Department of Transportation. EDC is not present in the product at a concentration that is regulated by DOT. (See 49 CFR 171.8).

**CC NO.:** Not applicable**UN/NA CODE:** Not applicable**SECTION X - ADDITIONAL INFORMATION****Avenge® wild oat herbicide****SECTION VI - REACTIVITY DATA: Hazardous Decomposition Products**

Thermal decomposition may produce 1-methyl-3,5-diphenyl pyrazole, methyl hydrogen sulfate, dimethyl sulfate, methanol, sulfuric acid, and oxides of carbon, nitrogen, and sulfur.

**EPA Reg. No. 241-266****KEEP OUT OF REACH OF CHILDREN****DANGER/PELIGRO****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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