

MATERIAL SAFETY DATA SHEET

Agricultural Products Group
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EMERGENCY TELEPHONE NUMBERS:

BASF Corporation: 1 (800) 832-HELP

CHEMTREC: 1 (800) 424-9300

Product No.: 559405 Apogee® plant growth regulator

Date Prepared: 10/7/1997 Date Revised: 5/14/2002

SECTION I

Trade Name: Apogee® plant growth regulator	
Chemical Name: Calcium 3-oxido-5-oxo-4-propionylcyclohex-3-enecarboxylate	
Synonyms: prohexadione calcium BAS 125 11 W	Formula: C(10) H(10) O(5) Ca
Chemical Family: Cyclohexanedione	Mol Wt: 250.26

SECTION II - INGREDIENTS

COMPONENT	CAS NO.	%	PEL/TLV - SOURCE
Prohexadione calcium	127277-53-6	27.5	None established
Inerts	N/A	72.5	None established

SARA Title III Section 313: Not Listed

SECTION III - PHYSICAL DATA

BOILING/MELTING POINT@760mm Hg:	>360°C	pH:	6.58 (1% in water)
VAPOR PRESSURE mmHg @ 20°C:	N/D		
SPECIFIC GRAVITY OR BULK DENSITY:	0.622 kg/L		
SOLUBILITY IN WATER:	Dispersible		
APPEARANCE:	Free flowing dark tan granules	ODOR:	Odorless
		INTENSITY:	N/A

SECTION IV - FIRE AND EXPLOSION DATA

FLASH POINT (TEST METHOD):	N/D	AUTOIGNITION TEMP:	**See below
FLAMMABILITY LIMITS IN AIR (% BY VOL):	LOWER: N/D	UPPER:	N/D
NFPA 704 HAZARD CODES			
HEALTH:	1	FLAMMABLE:	3*
		INSTABILITY:	1*
		OTHER:	
NFPA 30 STORAGE CLASSIFICATION:	Not combustible, Class III B		

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	*May form explosive dust/air mixtures. May form explosive mixtures with chlorates, nitrates, strong oxidizers, ammonium nitrite salts. **Exotherm initiation temperatures (Grewer oven): 234° C.

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:**

APOGEE™ plant growth regulator:
 Rat, Oral LD50 > 5000 mg/kg
 Rat, Dermal LD50 > 2000 mg/kg
 Rat, Inhalation LC50 (4 hr) > 5.7 mg/L
 Rabbit, Skin Irritation - Not an irritant
 Rabbit, Eye Irritation - Minimally irritating
 Guinea pig, Sensitization - Not a sensitizer

OSHA, NTP, or IARC Carcinogen: No

EFFECTS OF OVEREXPOSURE:

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

Precautionary Statements:

Hazards to Humans and Domestic Animals

Caution.

Harmful if absorbed through skin. Causes moderate eye irritation.

Avoid contact with skin, eyes or clothing.

For a major component of the formulation (an inert ingredient):

Contact with or inhalation of dusts can cause slight irritation of skin, eyes or respiratory tract.

Breathing airborne dusts may also cause broncho-constriction.

Ingestion can result in irritation of the surface lining of the digestive tract.

For a major component of the formulation (an inert ingredient) - high concentrations (>10 ug/m3) of the suspended component in air may cause an excess risk of asthmatic attacks in susceptible people. Overexposure to this component may aggravate allergies, eye disorders or skin disorders.

Medical conditions aggravated by exposure to this formulation:

None known for this product.

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. Call a poison control center or doctor for treatment advice.

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 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 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: Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-832-HELP for emergency medical treatment information.

SECTION VI - REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID: Avoid contact with incompatible material.

CHEMICAL INCOMPATIBILITY: Acids, bases, oxidizers, metals. Contact with caustic liberates ammonia.

HAZARDOUS DECOMPOSITION PRODUCTS: Toxic fumes of ammonia, SO_x, NO_x, oxides of carbon

HAZARDOUS POLYMERIZATION: No

CONDITIONS TO AVOID: N/A

CORROSIVE TO METAL: Yes (copper, zinc)

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:**Protective Clothing:**

Chemically resistant gloves, long-sleeved shirt, slacks, shoes plus socks.

Eye Protection:

Chemical goggles.

Respiratory Protection:

If dusts are generated, wear a NIOSH approved respirator.

Ventilation:

Use local exhaust to control dusts.

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

For prohexadione calcium:

Bobwhite Quail, Acute Oral LD50 > 2000 mg/kg

Mallard Duck, (8-days diet) Oral LC50 > 5200 ppm

Bobwhite Quail, (8-days diet) Oral LC50 > 5200 ppm

Bluegill Sunfish, (96 hr) LC50 > 100 mg/L

Rainbow Trout, (96 hr) LC50 > 100 mg/L

Daphnia magna, (48 hr) LC50 > 100 mg/L

Honey Bees, Oral LD50 and contact LD50 > 100 ug/bee

SARA 311/312 REPORTING

FIRE: No PRESSURE: No REACTIVITY: No ACUTE: Yes CHRONIC: No TPQ(lbs): 10,000

SPILL AND LEAK PROCEDURES:

Spilled material may be carefully swept up and returned to original container.

In case of large scale spillage regarding this product, call CHEMTREC 800-424-9300.

HAZARDOUS SUBSTANCE SUPERFUND: No RQ(lbs): None

WASTE DISPOSAL METHOD:

Wastes resulting from this product may be disposed of on site or at an approved waste disposal facility. Excess pesticide, spray mixture or rinsate must be handled and disposed of in accordance with federal, state or local procedures. 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: No HAZARDOUS WASTE NUMBER: None

CONTAINER DISPOSAL:

Triple rinse (or equivalent). Then offer recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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

None

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

No

RQ(lbs): None**D.O.T. HAZARD CLASSIFICATION (CFR 172.101-102):****PRIMARY**

None

SECONDARY

None

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

None

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

None

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

None

BILL OF LADING DESCRIPTION

Plant Growth Inhibitor Modifier or Regulator

CC NO.:**UN/NA CODE:** None**SECTION X - ADDITIONAL INFORMATION****Apogee® plant growth regulator**

Product of Japan

EPA Reg. No. 7969-188**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.

BASF Corporation

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