

## EMERGENCY

FOR CHEMICAL EMERGENCY: SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT CALL  
CHEMTREC - DAY or NIGHT - (800) 424-9300

Product Name: **AB NAVIGATE** EPA Reg. No. 228-378-8959

## SECTION I - GENERAL INFORMATION

Manufacturer's Name: APPLIED BIOCHEMISTS  
W175 N11163 Stonewood Drive  
Suite 234  
Germantown, WI 53022-4799  
(800) 558-5106

Trade Name & Synonyms: **AB NAVIGATE**  
Chemical Name & Synonyms: 2,4-D: 2,4-DICHLOROPHENOXYACETIC ACID, BUTOXYETHYL ESTER

Generic Description: AQUATIC HERBICIDE

Formula:  $C_{12}H_{18}Cl_2O_4$

D.O.T. Proper Shipping Name: Not Regulated  
U.N. or N.A. Identification #: Not Regulated  
D.O.T. Hazard Class: Not Applicable  
D.O.T. Emergency Response Guide: Not Assigned

Hazardous Mat'ls ID System Values (HMIS): Health -1 Flammability -1 Reactivity -0 Personal Protection -F  
Nat'l Fire Protection Assn. (NFPA 704M): Health -1 Flammability -1 Reactivity -0 Specific Hazard: None

## SECTION II - HAZARDOUS INGREDIENTS

Hazardous Component(s)	CAS#	PEL	TLV
2,4-Dichlorophenoxyacetate			
Acid, Butoxyethyl Ester	1929-73-3	10 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>
Crystalline Silica	14808-60-7	0.1 mg/m <sup>3</sup>	0.1 mg/m <sup>3</sup>

Ingredients listed in this section have been determined to be hazardous as defined in 29 CFR 1910.1200. Materials determined to be health hazards are listed if they comprise 1% or more of the composition. Materials identified as carcinogens are listed if they comprise 0.1% or more of the composition. Information on proprietary materials is available as provided in 29 CFR 1910.1200 (i) (1).

## SECTION III - PHYSICAL DATA

Boiling Point (F): NOT KNOWN Specific Gravity (water = 1): NOT KNOWN  
Vapor Pressure (mm Hg): NOT KNOWN % Volatile (by Volume): NOT DETERMINED  
Vapor Density (air = 1): NOT KNOWN Evaporation Rate: (Ether = 1) < 1  
Melting Point (F): NOT KNOWN  
Solubility in Water: INSOLUBLE  
Appearance & Odor: GRAY/TAN GRANULES WITH MILD PHENOLIC ODOR.

## SECTION IV - FIRE &amp; EXPLOSION DATA

Flash Point (F): NOT FLAMMABLE Method:  
Extinguishing Media: CO<sub>2</sub>, WATER, DRY CHEMICAL OR FOAM TO FIGHT FIRES IN WHICH THIS PRODUCT IS INVOLVED.  
Special Fire Fighting Procedures: WEAR APPROVED SELF-CONTAINED BREATHING APPARATUS. DIKE TO PREVENT CONTAMINATION OF WATER SOURCES.  
Unusual Fire & Explosion Hazards: THERMAL DECOMPOSITION PRODUCTS INCLUDE OXIDES OF CARBON, SULFUR DIOXIDES AND HYDROCHLORIC ACID.

## SECTION V - REACTIVITY DATA

Stability -        Unstable   X   Stable  
Conditions to Avoid: NONE KNOWN  
Incompatibility (Materials to Avoid): ACIDS, BASES, OXIDIZERS.  
Hazardous Decomposition Products: THERMAL DECOMPOSITION PRODUCTS INCLUDE OXIDES OF CARBON, SULFUR DIOXIDES AND HYDROCHLORIC ACID.  
Hazardous Polymerization:        Will Occur   X   Will Not Occur  
Conditions to Avoid: NONE

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**SECTION VI - HEALTH HAZARD DATA**  
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Acute Health Hazards: LD<sub>50(Rat)</sub> >2000 mg/Kg

Chronic Health Hazards: THIS PRODUCT CONTAINS CLAY. IARC HAS CLASSIFIED CRYSTALLINE SILICA (A COMPONENT OF CLAY) AS A PROBABLE HUMAN CARCINOGEN. PROLONGED CONTACT MAY CAUSE LIVER DAMAGE, KIDNEY DAMAGE, CHRONIC MUSCLE DAMAGE.

Signs & Symptoms of Exposure: EYE CONTACT MAY CAUSE TEARING AND REDNESS. MAY CAUSE SLIGHT SKIN IRRITATION. INHALATION OF DUST MAY CAUSE IRRITATION TO RESPIRATORY TRACT. INGESTION MAY CAUSE NAUSEA, VOMITING, ABDOMINAL PAIN, MUSCLE WEAKNESS MYOTONIA, AND A FALL IN BLOOD PRESSURE.

Medical Conditions Generally Aggravated by Exposure: MAY AGGRAVATE EXISTING CHRONIC RESPIRATORY PROBLEMS SUCH AS ASTHMA, EMPHYSEMA, OR BRONCHITIS; CONTACT MAY IRRITATE SKIN DISEASE.

Chemical Listed as Carcinogen or Potential Carcinogen by:

National Toxicology Program:	Yes:	No:	✓
I.A.R.C. Monographs:	Yes:	No:	✓
O.S.H.A.	Yes:	No:	✓

Emergency & First Aid Procedures: FOR PRINCIPLE ROUTE OF ENTRY, SEE APPROPRIATE EMERGENCY PROCEDURES BELOW.

Route of Entry: Inhalation: NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. REMOVE TO FRESH AIR, CONTACT A PHYSICIAN IF NECESSARY.

Eyes: FLUSH WITH FRESH WATER FOR AT LEAST 15 MINUTES. CALL A PHYSICIAN.

Skin: WASH SKIN WITH PLENTY OF SOAP AND WATER. WASH CLOTHES THOROUGHLY BEFORE REUSE.

Ingestion: DRINK 2-3 GLASSES OF MILK OR WATER, INDUCE VOMITING. CALL A PHYSICIAN.

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**SECTION VII - SPILL OR LEAK PROCEDURES**  
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Steps to be Taken in Case Material is Released or Spilled: SWEEP UP AND PLACE IN APPROVED CONTAINERS. DO NOT FLUSH AREA WITH WATER AS IT CAN CAUSE CONTAMINATION OF SEWER SYSTEM.

Waste Disposal Methods: DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. 100 LBS. RESULTS IN A REPORTABLE QUANTITY AS SPECIFIED BY D.O.T.

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**SECTION VIII - SPECIAL PROTECTION AND CONTROL MEASURES**  
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Respiratory Protection (Specify Type): NOT REQUIRED

Ventilation - Local Exhaust: MECHANICAL      Special Exhaust: STAND DOWN WIND WHEN USING.

Mechanical Exhaust:      Other Exhaust:

Protective Equipment - Gloves: PLASTIC OR CHEMICAL RESISTANT

Eye Protection: SAFETY GLASSES OR CHEMICAL GOGGLES

Other Protective Equipment: PROTECTIVE CLOTHING

Work or Hygienic Practices: USE SAFE CHEMICAL HANDLING PROCEDURES SUITABLE FOR THE HAZARDS PRESENTED BY THIS MATERIAL.

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**SECTION IX - SPECIAL PRECAUTIONS**  
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Precautions to be Taken in Handling and Storage: DO NOT SWALLOW, BREATHE DUST, STORE NEAR FOOD, CONTAMINATE WATER FOOD OR FEED, APPLY TO WATERS USED FOR IRRIGATION, AGRICULTURAL SPRAYS, WATERING DAIRY ANIMALS OR DOMESTIC WATER SUPPLIES.

Other Precautions: AVOID DRIFT TO SUSCEPTIBLE PLANTS. AVOID GETTING INTO EYES, ON SKIN OR CLOTHING. **KEEP OUT OF REACH OF CHILDREN**

THESE DATA ARE OFFERED IN GOOD FAITH AS TYPICAL VALUES AND NOT AS A PRODUCT SPECIFICATION. NO WARRANTY, EITHER EXPRESSED OR IMPLIED, IS HEREBY MADE. THE RECOMMENDED INDUSTRIAL HYGIENE AND SAFE HANDLING PROCEDURES ARE BELIEVED TO BE GENERALLY APPLICABLE. HOWEVER, EACH USER SHOULD REVIEW THESE RECOMMENDATIONS IN THE SPECIFIC CONTEXT OF THE INTENDED USE AND DETERMINE WHETHER THEY ARE APPROPRIATE.

DJK

Date of Last Revision:

9/30/99