

FOR ANY EMERGENCY, 24 HOURS / 7 DAYS, CALL: 1-800-654-6911 (OUTSIDE
USA: 1-423-780-2970)
FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTREC®: 1-800-424-9300 (OUTSIDE
USA: 1-703-527-3887)
FOR ALL MSDS QUESTIONS & REQUESTS, CALL: 1-800-511-MSDS (OUTSIDE
USA: 1-423-780-2347)

PRODUCT NAME: AB HARPOON GRANULAR AQUATIC HERBICIDE
EPA Registration Number: 8959-55

1. PRODUCT AND COMPANY IDENTIFICATION

Advantis Technologies
1400 Bluegrass Lakes Parkway
Alpharetta, GA 30004
United States of America

REVISION DATE: 07/06/2011
SUPERCEDES:
MSDS Number: 000000012771
SYNONYMS:
CHEMICAL FAMILY: None
DESCRIPTION / USE: None established
FORMULA: None established

2. HAZARDS IDENTIFICATION

OSHA Hazard Classification:	Eye irritant, Possible cancer hazard
--------------------------------	---

Routes of Entry: Inhalation, skin, eyes, ingestion
Chemical Interactions: No known interactions
Medical Conditions Aggravated: No data available

Human Threshold Response Data

Odor Threshold Not established.
Irritation Threshold Not established.

Hazardous Materials Identification System / National Fire Protection Association Classifications

<u>Hazard Ratings :</u>	<u>Health</u>	<u>Flammability</u>	<u>Physical / Instability</u>	<u>PPI / Special hazard.</u>
HMIS	2*	0	0	
NFPA	2	0	0	

Immediate (Acute) Health Effects

Inhalation Toxicity:	Not expected to be toxic by inhalation. Inhalation of dust may cause mucous membrane and lung irritation with symptoms of coughing and choking.
Skin Toxicity:	This material is expected to be slightly irritating. Not expected to be absorbed through the skin.
Eye Toxicity:	May cause severe irritation, consisting of redness, swelling, and mucous membrane discharge to the conjunctiva. Visual impairment with corneal damage may occur.
Ingestion Toxicity:	Ingestion may cause irritation of the gastrointestinal tract and gastrointestinal discomfort with any or all of the following symptoms: nausea, vomiting or diarrhea. Not expected to be toxic by ingestion.
Acute Target Organ Toxicity:	There are no known or reported target organ effects from acute exposure.

Prolonged (Chronic) Health Effects

Carcinogenicity:	The International Agency for Research on Cancer (IARC) has classified a component or components of this product as a Group 1 substance, Carcinogenic to Humans.
Reproductive and Developmental Toxicity:	Not known or reported to cause reproductive or developmental toxicity.
Inhalation:	There are no known or reported effects from chronic exposure.
Skin Contact:	There are no known or reported effects from chronic exposure.
Ingestion:	There are no known or reported effects from chronic ingestion except for effects similar to those experienced from single exposure.
Sensitization:	This material is not known or reported to be a skin or respiratory sensitizer.
Chronic Target Organ Toxicity:	There are no known or reported effects to humans from repeated exposure to this product.
Supplemental Health Hazard Information :	No additional health information available.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<u>CAS OR CHEMICAL NAME</u>	<u>CAS #</u>	<u>% RANGE</u>
QUARTZ (SIO2)	14808-60-7	
CRISTOBALITE (SIO2)	14464-46-1	
copper ethylenediamine complex	13426-91-0	>=

4. FIRST AID MEASURES

General Advice:	Call a poison control center or doctor for treatment advice. For 24-hour emergency medical assistance, call Arch Chemical Emergency Action Network at 1-800-654-6911. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.
Inhalation:	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.
Skin Contact:	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.
Eye Contact:	IF IN EYES: Hold eye 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.
Ingestion:	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 do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

5. FIRE FIGHTING MEASURES

Flammability Summary (OSHA): The product is not flammable., Not combustible., Not explosive, The substance or mixture is not classified as pyrophoric.

Flammable Properties

Fire / Explosion Hazards: Will not burn

Extinguishing Media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Fire Fighting Instructions: Use water spray to cool unopened containers. In case of fire, use normal fire-fighting equipment and the personal protective equipment recommended in Section 8 to include a NIOSH approved self-contained breathing apparatus.

Hazardous Combustion Products: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

6. ACCIDENTAL RELEASE MEASURES

Personal Protection for Emergency Situations: Use the personal protective equipment recommended in Section 8 and a NIOSH approved self-contained breathing apparatus.

Spill Mitigation Procedures

Air Release: Hazardous concentrations in air may be found in local spill area and immediately downwind.

Water Release: If the product contaminates rivers and lakes or drains inform respective authorities.

Land Release: Sweep up and shovel into suitable containers for disposal. Avoid creating dust.

Additional Spill Information : Remove all sources of ignition. Prevent further leakage or spillage if safe to do so. Use personal protective equipment as required. Evacuate personnel to safe areas.

7. HANDLING AND STORAGE

Handling: Do not take internally. Avoid contact with skin, eyes and clothing. Avoid breathing dust.

Storage: Store in a cool, dry and well ventilated place. Isolate from incompatible materials. Keep container closed when not in use. Avoid creating dusts.

Incompatible Materials for Storage: Refer to Section 10, "Incompatible Materials."

Do Not Store At temperatures Above: 35 °C

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Ventilation: Local exhaust ventilation or other engineering controls are normally required when handling or using this product to keep airborne exposures below the TLV, PEL or other recommended exposure limit.

Protective Equipment for Routine Use of Product

Respiratory Protection : Wear a NIOSH approved respirator if levels above the exposure limits are possible., A NIOSH approved air purifying respirator equipped with combination organic vapor and P100 prefilter. Air purifying respirators should not be used in oxygen deficient or IDLH atmospheres or if exposure concentrations exceed ten (10) times the published limit.

Skin Protection : Impervious gloves Butyl rubber Neoprene

Eye Protection: Use chemical goggles.

Protective Clothing Type: impervious clothing, Butyl rubber, Neoprene

General Protective Measures: Use only in an area equipped with a safety shower.

Exposure Limit Data

<u>CHEMICAL NAME</u>	<u>CAS #</u>	<u>Name of Limit</u>	<u>Exposure</u>
QUARTZ (SiO ₂)	14808-60-7	OSHA Z3	8-hour time weighted average
QUARTZ (SiO ₂)	14808-60-7	OSHA Z3	8-hour time weighted average
QUARTZ (SiO ₂)	14808-60-7	OSHA Z3	8-hour time weighted average
QUARTZ (SiO ₂)	14808-60-7	ACGIH	0.025 mg/m ³ TWA respirable dust fraction Respirable fraction; see Appendix C, paragraph C.
QUARTZ (SiO ₂)	14808-60-7	ACGIH	0.025 mg/m ³ TWA Respirable fraction
QUARTZ (SiO ₂)	14808-60-7	OSHA Z1	
QUARTZ (SiO ₂)	14808-60-7	NIOSH-IDLH	25 mg/m ³
QUARTZ (SiO ₂)	14808-60-7	NIOSH-IDLH	50 mg/m ³

**MATERIAL SAFETY
DATA SHEET**

CRISTOBALITE (SIO ₂)	14464-46-1	OSHA Z3	250 million particles per cubic foot TWA respirable Use ½ the value calculated from the count or mass formulae for quartz., The percentage of crystalline silica in the formula is the amount determined from airborne samples, except in those instances in which other methods have been shown to be applicable., division by %SiO ₂ +5
CRISTOBALITE (SIO ₂)	14464-46-1	OSHA Z3	10 mg/m ³ TWA respirable Use ½ the value calculated from the count or mass formulae for quartz., Both concentration and percent quartz for the application of this limit are to be determined from the fraction passing a size-selector with the following characteristics: Aerodynamic diameter (unit density sphere): 2; Percent passing selector: 90 Aerodynamic diameter (unit density sphere): 2,5; Percent passing selector: 75 Aerodynamic diameter (unit density sphere): 3,5; Percent passing selector: 50 Aerodynamic diameter (unit density sphere): 5,0; Percent passing selector: 25 Aerodynamic diameter (unit density sphere): 10; Percent passing selector: 0 The measurements under this note refer to the use of an AEC (now NRC) instrument. The respirable fraction of coal dust is determined with an MRE; the figure corresponding to that of 2.4 mg/m ³ in the table for coal dust is 4.5 mg/m ³ ., division by %SiO ₂ +2

CRISTOBALITE (SiO ₂)	14464-46-1	OSHA Z3	30 mg/m ³ TWA Total dust Use ½ the value calculated from the count or mass formulae for quartz., division by %SiO ₂ +2
CRISTOBALITE (SiO ₂)	14464-46-1	ACGIH	0.025 mg/m ³ TWA respirable dust fraction Respirable fraction; see Appendix C, paragraph C.
CRISTOBALITE (SiO ₂)	14464-46-1	ACGIH	0.025 mg/m ³ TWA Respirable fraction
CRISTOBALITE (SiO ₂)	14464-46-1	OSHA Z3	
CRISTOBALITE (SiO ₂)	14464-46-1	OSHA Z1	

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	solid
Form	No data.
Color:	purple
Odor:	Slight amine
Molecular Weight:	None established
Specific Gravity :	no data available
pH :	not applicable
Boiling Point:	not applicable
Freezing Point:	no data available
Melting Point:	no data available
Density:	no data available
Bulk Density:	783 - 824 kg/m ³
Vapor Pressure:	no data available
Vapor Density:	not applicable
Viscosity:	no data available
Solubility in Water:	no data available
Partition coefficient n- octanol/water:	Not applicable
Evaporation Rate:	not applicable
Oxidizing:	None established
Volatiles, % by vol.:	no data available
VOC Content	no data available
HAP Content	Not applicable

10. STABILITY AND REACTIVITY

Stability and Reactivity Summary: Stable under normal conditions.
 Conditions to Avoid: Heat, flames and sparks.
 Chemical Incompatibility: Strong oxidizing agents, Acids, chlorinated compounds
 Hazardous Decomposition Products: Risk of decomposition.
 Decomposition Temperature: 200 °C

11. TOXICOLOGICAL INFORMATION

Product Animal Toxicity

Oral LD50 value: 3,129 mg/kg rat
Dermal LD50 value: > 5,000 mg/kg rat
Inhalation LC50 value: No data.
 Skin Irritation: Slight Skin Irritant
 Eye Irritation: Severe eye irritant
 Skin Sensitization: Not a Skin Sensitizer

Subchronic / Chronic Toxicity: There are no known or reported effects from chronic exposure.

Reproductive and Developmental Toxicity: Not known or reported to cause reproductive or developmental toxicity.

Mutagenicity: Not known or reported to be mutagenic.

Carcinogenicity: The International Agency for Research on Cancer (IARC) has classified a component or components of this product as a Group 1 substance, Carcinogenic to Humans.

QUARTZ (SiO ₂)	The International Agency for Research on Cancer (IARC) has classified this product or a component of this product as a Group 1 substance, Carcinogenic to Humans.
CRISTOBALITE (SiO ₂)	The International Agency for Research on Cancer (IARC) has classified this product or a component of this product as a Group 1 substance, Carcinogenic to Humans.

12. ECOLOGICAL INFORMATION

Overview: No ecological information available.

13. DISPOSAL CONSIDERATIONS

CARE MUST BE TAKEN TO PREVENT ENVIRONMENTAL CONTAMINATION FROM THE USE OF THE MATERIAL. THE USER OF THE MATERIAL HAS THE RESPONSIBILITY TO DISPOSE OF UNUSED MATERIAL, RESIDUES AND CONTAINERS IN COMPLIANCE WITH ALL RELEVANT LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS REGARDING TREATMENT, STORAGE AND DISPOSAL FOR HAZARDOUS AND NONHAZARDOUS WASTES.

Waste Disposal Summary : As a nonhazardous solid waste it should be disposed of in accordance with local, state and federal regulations.

Potential US EPA Waste Codes : not applicable

14. TRANSPORT INFORMATION

Land (US DOT): UN3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(COPPER ETHYLENEDIAMINE COMPLEX) 9 III

Water (IMDG): UN3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.,
(COPPER ETHYLENEDIAMINE COMPLEX) 9 III MARINE POLLUTANT

Air (IATA): UN3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.,
(COPPER ETHYLENEDIAMINE COMPLEX) 9 III

Emergency Response Guide Number: ERG # 171

Transportation Notes: Material is not regulated for ground transportation within the US if shipped in non-bulk packages. Material is not regulated as a marine pollutant for ground, rail car, or aircraft transportation within the USA if shipped in non bulk packages per marine pollutant exception 49 CFR 171.4(c).

EMS: F-A, S-F

15. REGULATORY INFORMATION

UNITED STATES:

Toxic Substances Control Act (TSCA): This is an EPA registered pesticide.
EPA Pesticide Registration Number: 8959-55

FIFRA Listing of Pesticide Chemicals (40 CFR 180): This product is regulated under the Federal Insecticide, Fungicide and Rodenticide Act. It must be used for purposes consistent with its labeling.

Superfund Amendments and Reauthorization Act (SARA) Title III:

Hazard Categories Sections 311 / 312 (40 CFR 370.2):

Health Delayed (Chronic) Health Hazard, Immediate (Acute) Health Hazard
Physical None

Emergency Planning & Community Right to Know (40 CFR 355, App. A):

Extremely Hazardous Substance Section 302 - Threshold Planning Quantity:

ZUS_SAR302 TPQ (threshold planning quantity) None established

Reportable Quantity (49 CFR 172.101, Appendix):

ZUS_CERCLA Reportable quantity Ethylenediamine
Value: 5,000lbs
COPPER AND COMPOUNDS
Value:

ZUS_SAR302 Reportable quantity Ethylenediamine
Value: 5,000lbs

Supplier Notification Requirements (40 CFR 372.45), 313 Reportable Components

ZUS_SAR313 De minimis concentration None established

Clean Air Act Toxic ARP Section 112r:

CAA 112R None established

Clean Air Act Socmi:

HON SOC

US. EPA Hazardous Organic NESHAP (HON) Synthetic Organic Chemicals (40 CFR 63.100-.106, Table 1)

07 1999

Group II

ETHYLENEDIAMINE

Clean Air Act VOC Section 111:

CAA 111

US. EPA Clean Air Act (CAA) Section 111 SOCMI Intermediate or Final Volatile Organic Compounds (40 CFR 60.489)

01 1996

ETHYLENEDIAMINE

Clean Air Act Haz. Air Pollutants Section 112:

ZUS_CAAHAP None established

ZUS_CAAHRP None established

CAA AP None established

State Right-to-Know Regulations Status of Ingredients

Pennsylvania:

CAS #	COMPONENT NAME
107-15-3	1,2-ETHANEDIAMINE
7758-99-8	Copper Sulfate pentahydrate

ZUSPA_RTK

Pennsylvania: Hazardous substance list

1989-08-11

1,2-ETHANEDIAMINE

Environmental hazard

Pennsylvania: Hazardous substance list

1990-01-01

COPPER COMPOUNDS

Environmental hazard, hazardous substance

New Jersey:

**MATERIAL SAFETY
DATA SHEET**

CAS #	COMPONENT NAME
107-15-3	1,2-ETHANEDIAMINE
7758-99-8	Copper Sulfate pentahydrate

ZUSNJ_RTK

New Jersey Right to Know Hazardous Substance List (RTK-HSL)

2007-03-01

ETHYLENEDIAMINE 1,2-ETHANEDIAMINE

Special Health Hazard - Corrosive

New Jersey Right to Know Hazardous Substance List (RTK-HSL)

1989-12-01

COPPER compounds

hazardous substance

Massachusetts:

CAS #	COMPONENT NAME
107-15-3	1,2-ETHANEDIAMINE

ZUSMA_RTK

Massachusetts Right to Know List of Chemicals and Hazard Classifications

1993-04-24

ETHYLENEDIAMINE 1,2-DIAMINOETHANE

Extraordinarily hazardous

California Proposition 65:

CAS #	COMPONENT NAME
-------	----------------

ZUSCA_P65

None established

WHMIS Hazard Classification:

Ingredient Disclosure List (WHMIS)

1988-01-20

Threshold limits: 1 Weight percent

1403

SILICA, CRYSTALLINE, CRISTOBALITE

Ingredient Disclosure List (WHMIS)

2007-08-24

Threshold limits: 1 Weight percent

1490

Silica, crystalline, cristobalite

Ingredient Disclosure List (WHMIS)

2007-08-24

Threshold limits: 0.1 Weight percent

859

Ethylene diamine

Ingredient Disclosure List (WHMIS)

1988-01-20

Threshold limits: 1 Weight percent

1404

SILICA, CRYSTALLINE, QUARTZ

Ingredient Disclosure List (WHMIS)

2007-08-24

Threshold limits: 1 Weight percent

1491

Silica, crystalline, quartz

Ingredient Disclosure List (WHMIS)

1988-01-20

Threshold limits: 1 Weight percent

431

COPPER COMPOUNDS, N.O.S.

16. OTHER INFORMATION

MSDS REVISION STATUS :

Major References : Available upon request.

THIS MATERIAL SAFETY DATA SHEET (MSDS) HAS BEEN PREPARED IN COMPLIANCE WITH THE FEDERAL OSHA HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200. THE INFORMATION IN THIS MSDS SHOULD BE PROVIDED TO ALL WHO WILL USE, HANDLE, STORE, TRANSPORT, OR OTHERWISE BE EXPOSED TO THIS PRODUCT. THIS INFORMATION HAS BEEN PREPARED FOR THE GUIDANCE OF PLANT ENGINEERING, OPERATIONS AND MANAGEMENT AND FOR PERSONS WORKING WITH OR HANDLING THIS PRODUCT. ARCH CHEMICALS BELIEVES THIS INFORMATION TO BE RELIABLE AND UP TO DATE AS OF THE DATE OF PUBLICATION BUT, MAKES NO WARRANTY THAT IT IS. ADDITIONALLY, IF THIS MSDS IS MORE THAN THREE YEARS OLD, YOU SHOULD CONTACT ARCH CHEMICALS MSDS CONTROL AT THE PHONE NUMBER ON THE FRONT PAGE TO MAKE CERTAIN THAT THIS DOCUMENT IS CURRENT. .