

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 SDS QUESTIONS & REQUESTS, CALL:	1-800-511-MSDS (OUTSIDE USA: 1-423-780-2347)

PRODUCT NAME: **ROBARB POOL SPECIALTIES CLEAN-A-WAY**

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Supplier Robarb 1400 Bluegrass Lakes Parkway , Alpharetta, GA, 30004 USA	REVISION DATE: 05/26/2015 SUPERCEDES: 04/28/2011
Telephone: +17705215999 Telefax: +17705215959 Web: www.poolspacare.com	MSDS Number: 000000024470 SYNONYMS: CHEMICAL FAMILY: None DESCRIPTION / USE: None established FORMULA: None established


Manufacturer
Advantis Technologies
1200 Bluegrass Lakes Parkway
Alpharetta, GA 30004
United States of America

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Skin irritation	:	Category 2
Serious eye damage	:	Category 1
Specific target organ toxicity - single exposure	:	Category 3 (Respiratory system)

GHS Label element

Hazard pictograms	:	
Signal word	:	Danger
Hazard statements	:	H315 Causes skin irritation. H318 Causes serious eye damage. H335 May cause respiratory irritation.
Precautionary statements	:	Prevention: P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. P264 Wash skin thoroughly after handling. P271 Use only outdoors or in a well-ventilated area. P280 Wear eye protection/ face protection. P280 Wear protective gloves. Response: P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell. P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician. P312 Call a POISON CENTER or doctor/ physician if you feel unwell. P332 + P313 If skin irritation occurs: Get medical advice/ attention. P362 Take off contaminated clothing and wash before reuse. Storage: P403 + P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up. Disposal: P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>CAS OR CHEMICAL NAME</u>	<u>CAS #</u>	<u>% RANGE</u>
Butoxyethanol	111-76-2	3 - 13
POLY(OXY-1,2-ETHANEDIYL), .ALPHA.- (NONYLPHENYL)-.	9016-45-9	0 - 10

ETIDRONIC ACID	2809-21-4	0 - 9
Citric Acid	77-92-9	0 - 7

SECTION 4. FIRST AID MEASURES

Inhalation:	IF INHALED: Remove individual to fresh air. Seek medical attention if breathing becomes difficult or if respiratory irritation develops.
Skin Contact:	IF ON SKIN: Immediately flush skin with plenty of water for 15 minutes. If clothing comes in contact with the product, the clothing should be removed immediately and laundered before re-use. Seek medical attention if irritation develops.
Eye Contact:	IF IN EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Seek medical attention immediately.
Ingestion:	IF SWALLOWED: Call a physician immediately. DO NOT induce vomiting unless directed to do so by a physician. Never give anything by mouth to an unconscious person.

SECTION 5. FIREFIGHTING MEASURES

Flammability Summary (OSHA):	Combustible above 93 deg. C / 200 deg. F.
<u>Flammable Properties</u>	
Flash Point:	> 93.5 °C
Fire / Explosion Hazards:	Material may be ignited if preheated to temperatures above the flash point in the presence of a source of ignition.
Extinguishing Media:	Use dry chemical, water fog, carbon dioxide (CO ₂), or foam.
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.

SECTION 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.
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Spill Mitigation Procedures

Air Release:	Hazardous concentrations in air may be found in local spill area and immediately downwind. Vapors may be suppressed by the use of water fog.
Water Release:	This material is soluble in water. Notify all downstream users of possible contamination. Divert water flow around spill if possible and safe to do so.
Land Release:	Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). After removal, flush contaminated area thoroughly with water. Avoid runoff into storm sewers and ditches which lead to waterways.
Additional Spill Information :	Remove all sources of ignition. Stop source of spill as soon as possible and notify appropriate personnel. Utilize emergency response personal protection equipment prior to the start of any response. Evacuate all non-essential personnel. Dispose of spill residues per guidelines under Section 13, Disposal Consideration.

SECTION 7. HANDLING AND STORAGE

Handling:	Do not take internally. Avoid contact with skin, eyes and clothing. Upon contact with skin or eyes, wash off with water. Avoid breathing mist or vapor.
Storage:	Store in a cool, dry and well ventilated place. Isolate from incompatible materials. Avoid freezing.
Incompatible Materials for Storage:	Refer to Section 10, "Incompatible Materials."

SECTION 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.
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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 with organic vapor cartridge and N95 particulate filter. 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 :	Avoid contact with skin. Impervious gloves
Eye Protection:	Chemical resistant goggles must be worn. Face-shield
Protective Clothing Type:	impervious clothing
General Protective Measures:	Ensure that eyewash stations and safety showers are close to the workstation location.

Components with workplace control parameters

Components (CAS-No.)	Value	Control	Basis (Update)
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		parameters	
Butoxyethanol (111-76-2)	TWA	20 ppm	ACGIH (02 2014)

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	liquid
Form	No data.
Color:	No data.
Odor:	No data.
Molecular Weight:	None established
pH :	1.0 - 3.0 ()
Boiling Point:	215.1 °F (101.7 °C)
Melting point/freezing point	No data
Density	Not applicable
Bulk Density:	() no data available
Vapor Pressure:	22.7 hPa
Vapor Density:	0.6
Viscosity:	no data available
Solubility in Water:	soluble in cold water
Partition coefficient n-octanol/water:	No data.
Evaporation Rate:	1
Oxidizing:	None established
Volatiles, % by vol.:	no data available
VOC Content	This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489). This product does not contain any VOC exemptions listed under the U.S. Clean Air Act Section 450.
HAP Content	Not applicable

SECTION 10. STABILITY AND REACTIVITY

Stability and Reactivity Summary:	Stable under normal conditions.
Conditions to Avoid:	Heat, flames and sparks.
Chemical Incompatibility:	Strong oxidizing agents, Strong acids, alkalis
Hazardous Decomposition Products:	Carbon oxides, Nitrogen, Aldehydes, Ketones
Decomposition Temperature:	No data

SECTION 11. TOXICOLOGICAL INFORMATION

Component Animal ToxicologyOral LD50 value:

Butoxyethanol	LD50 = 1,590 mg/kg	Rat
POLY(OXY-1,2-ETHANEDIYL), .ALPHA.- (NONYLPHENYL)-.	LD50 = 4,000 mg/kg	Rat
ETIDRONIC ACID	LD50 = 1,440 mg/kg	Rat
Citric Acid	LD50 = 3,000 mg/kg	Rat

Component Animal ToxicologyDermal LD50 value:

Butoxyethanol	LD50 = 580 mg/kg	Rabbit
POLY(OXY-1,2-ETHANEDIYL), .ALPHA.- (NONYLPHENYL)-.	LD50 > 2,000 mg/kg	Rabbit
ETIDRONIC ACID	LD50 > 4,764 mg/kg	Rabbit
Citric Acid	LD50 Believed to be > 2,000 mg/kg	Rabbit

Component Animal ToxicologyInhalation LC50 value:

Butoxyethanol	LC50 4 h = 486 ppm	Rat male
	LC50 4 h = 450 ppm	Rat female
POLY(OXY-1,2-ETHANEDIYL), .ALPHA.- (NONYLPHENYL)-.	Inhalation LC50	No data
ETIDRONIC ACID		No data
Citric Acid		no data available

Product Animal Toxicity

<u>Oral LD50 value:</u>	LD50 Believed to be > 3,700 mg/kg	Rat
<u>Dermal LD50 value:</u>	LD50 Believed to be > 1,700 mg/kg	Rabbit
<u>Inhalation LC50 value:</u>	no data available	

Skin Irritation: Moderate skin irritant
 Eye Irritation: Corrosive to eyes
 Skin Sensitization: This material is not known or reported to be a skin or respiratory sensitizer.

Acute Toxicity: This product is corrosive to the eyes, moderately irritating to the skin and upon inhalation, may cause irritation to mucous membranes and respiratory tract.

Subchronic / Chronic Toxicity: Not known or reported to cause subchronic or chronic toxicity.

Reproductive and Developmental Toxicity:	Not known or reported to cause reproductive or developmental toxicity.	
Butoxyethanol		High dose levels of this chemical produced maternal toxicity, and embryoletality and fetal malformations.
ETIDRONIC ACID		This product has been tested and was shown not to produce any adverse effects on reproductive function or fetal development when administered to laboratory animals.
Citric Acid		This chemical has been tested in laboratory animals and there was no evidence of reproductive toxicity or teratogenicity.
Mutagenicity:	Not known or reported to be mutagenic.	
Butoxyethanol		This material has been shown to be non-mutagenic in the majority of a battery of assays. Not expected to be a mutagenic hazard.
ETIDRONIC ACID		This chemical has been tested and was shown to be non-mutagenic.
Citric Acid		This product was determined to be non-mutagenic in the Ames assay. It was also shown to be negative in the Dominant lethal assay.
Carcinogenicity:	This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA.	
Butoxyethanol		This material has been classified by the U.S. EPA as a "Group C" carcinogen (Suggestive Human Carcinogen), based on equivocal and limited evidence in laboratory animals. The International Agency for Research on Cancer (IARC) has classified this product or a component of this product as a Group 3 substance, Unclassifiable as to Its Carcinogenicity to Humans.
ETIDRONIC ACID		This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA. Chemicals of similar structure have been shown not to cause cancer in laboratory animals.
Citric Acid		The carcinogenicity has been evaluated through animal study and it was found not to be carcinogenic.

SECTION 12. ECOLOGICAL INFORMATION

Overview: Practically non- toxic to fish and other aquatic organisms.

Ecological Toxicity Values - Product:

- EC50 Believed to be approximately 1,100 mg/l (calculated)

Ecological Toxicity Values for: Butoxyethanol

Lepomis macrochirus (Bluegill sunfish)	- static test 96 h LC50 = 1,490 mg/l
Brine shrimp	- static test 24 h LC50= 1,000 mg/l
Daphnia magna (Water flea)	- static test 48 h EC50> 1,000 mg/l
Crangon crangon (shrimp)	- 48 h LC50= 800 mg/l

Ecological Toxicity Values for: ETIDRONIC ACID

Bluegill	- 96 h LC50 = 868 mg/l
Rainbow trout (Salmo gairdneri),	- 96 h LC50 = 368 mg/l
Channel Catfish (Ictalurus punctatus rafinesque),	- 96 h LC50 = 695 mg/l
Sheepshead minnow	- 96 h LC50 = 2,180 mg/l
Daphnia magna,	- 48 h EC50= 527 mg/l
Grass shrimp	- 96 h LC50= 1,770 mg/l
Oyster Shell Deposition	- 96 h EC50= 89 mg/l
Mallard duck	- Oral LD50 > 2,510 mg/kg
Bobwhite quail	- Oral LD50 > 2,510 mg/kg

Ecological Toxicity Values for: Citric Acid

Lepomis macrochirus (Bluegill sunfish)	- (static). 96 h LC50 = 1,516 mg/l
Daphnia magna (Water flea)	- 72 h EC50 Approximately 120 mg/l

SECTION 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 : If this product becomes a waste, it meets the criteria of a hazardous waste as defined under 40 CFR 261 and would have the following EPA hazardous waste number: D002.

Disposal Methods : As a hazardous liquid waste it must be disposed of in accordance with local, state and federal regulations.

SECTION 14. TRANSPORT INFORMATION

DOT

Not dangerous goods

TDG

UN number : 3265
 Description of the goods : CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
 (Etidronic acid)
 Class : 8
 Packing group : III
 Labels : 8

IATA

UN number : 3265
 Description of the goods : Corrosive liquid, acidic, organic, n.o.s.
 (Etidronic acid)
 Class : 8
 Packing group : III
 Labels : 8
 Packing instruction (cargo aircraft) : 856
 Packing instruction (passenger aircraft) : 852
 Packing instruction (passenger aircraft) : Y841

IMDG-CODE

UN number : 3265
 Description of the goods : CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
 (Etidronic acid)
 Class : 8
 Packing group : III
 Labels : 8
 EmS Number 1 : F-A
 EmS Number 2 : S-B

SECTION 15. REGULATORY INFORMATION**EPCRA - Emergency Planning and Community Right-to-Know Act****SARA 302**

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313

The following components are subject to reporting levels established by SARA Title III, Section 313:

Poly(oxy-1,2-ethanediyl),
.alpha.-
(nonylphenyl)-
.omega.-hydroxy-

9016-45-9

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations**Massachusetts Right To Know**

2-Butoxyethanol	111-76-2
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Pennsylvania Right To Know

2-Butoxyethanol	111-76-2
Poly(oxy-1,2-ethanediyl), .alpha.-(nonylphenyl)- .omega.-hydroxy-	9016-45-9
Etidronic acid	2809-21-4

New Jersey Right To Know

2-Butoxyethanol	111-76-2
Poly(oxy-1,2-ethanediyl), .alpha.-(nonylphenyl)- .omega.-hydroxy-	9016-45-9
Etidronic acid	2809-21-4
Citric acid	77-92-9

California Prop 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

TSCA : The components of this product are listed on the TSCA Inventory of Existing Chemical Substances.

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

SECTION 16. OTHER INFORMATION

SECTIONS REVISED: 5
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. .