APPLIED BIOCHEMISTS®

MATERIAL SAFETY DATA SHEET

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: **APPLIED BIOCHEMISTS FILTER BLASTER**

1. PRODUCT AND COMPANY IDENTIFICATION

Supplier
Applied Biochemists
1400 Bluegrass Lakes Parkway ,
Alpharetta, GA, 30004
United States

Telephone: +17705215999
Telefax: +17705215959
Web: www.poospacare.com

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

REVISION DATE:	04/28/2011
SUPERCEDES:	04/14/2011
MSDS Number:	000000012555
SYNONYMS:	
CHEMICAL FAMILY:	None
DESCRIPTION / USE	None established
FORMULA:	None established

2. HAZARDS IDENTIFICATION

OSHA Hazard Classification:	**Corrosive to eyes, Moderate skin irritant, Mucous membrane irritant**

Routes of Entry: Eyes Skin Ingestion Inhalation
Chemical Interactions: None known.
Medical Conditions Aggravated: None known.

Human Threshold Response Data

Odor Threshold	Not established for product.
Irritation Threshold	Not established for product.

Hazardous Materials Identification System / National Fire Protection Association Classifications

Hazard Ratings :	Health	Flammability	Physical / Instability	PPI / Special hazard.
HMIS	3	0	0	
NFPA	3	0	0	

Immediate (Acute) Health Effects

Inhalation Toxicity:	Inhalation may cause irritation to the mucous membranes of the respiratory tract. Any irritation would be transient with no permanent damage expected.
Skin Toxicity:	Causes skin irritation. Not expected to be toxic from dermal contact.
Eye Toxicity:	Causes eye burns.
Ingestion Toxicity:	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Not expected to be toxic by ingestion.
Acute Target Organ 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.

Prolonged (Chronic) Health Effects

Carcinogenicity:	This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA.
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 except for effects similar to those experienced from acute exposure.
Skin Contact:	Prolonged or repeated exposure may cause severe irritation.
Skin Absorption:	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 target organ effects from chronic exposure.

Supplemental Health Hazard Information : No additional health information available.

3. COMPOSITION / INFORMATION ON INGREDIENTS

CAS OR CHEMICAL NAME	CAS #	% RANGE
Butoxyethanol	111-76-2	
POLY(OXY-1,2-ETHANEDIYL), .ALPHA.-(NONYLPHENYL)-.	9016-45-9	
ETIDRONIC ACID	2809-21-4	
Citric Acid	77-92-9	

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.

5. FIRE FIGHTING MEASURES

Flammability Summary (OSHA):	Combustible above 93 deg. C / 200 deg. F.
Flammable Properties	
Flash Point:	> 9.35 °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 (CO2), 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.

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.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.

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."

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 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.

Exposure Limit Data

CHEMICAL NAME	CAS #	Name of Limit	Exposure
Butoxyethanol	111-76-2	ACGIH	20 ppm TWA
Butoxyethanol	111-76-2	OSHA Z1	50 ppm TWA 240 mg/m3 TWA
Butoxyethanol	111-76-2	NIOSH-IDLH	700 ppm

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	liquid
Form	No data.
Color:	No data.
Odor:	No data.
Molecular Weight:	None established
Specific Gravity :	1.138 20 °C
pH :	1.0 - 3.0
Boiling Point:	101.7 °C 215 °F
Freezing Point:	not applicable
Melting Point:	not applicable
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:	Not applicable
Evaporation Rate:	1
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, Strong acids, alkalis
Hazardous Decomposition Products:	Carbon oxides, Nitrogen, Aldehydes, Ketones
Decomposition Temperature:	No data

11. TOXICOLOGICAL INFORMATION

Component Animal Toxicology
Oral 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 Toxicology
Dermal 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 Toxicology
Inhalation LC50 value:

Butoxyethanol	LC50	4 h	=	486 ppm	rat male
Butoxyethanol	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

Oral LD50 value:	LD50	Believed to be >	3,700 mg/kg	rat
Dermal LD50 value:	LD50	Believed to be >	1,700 mg/kg	rabbit
Inhalation LC50 value:	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 embryolethality 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.

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 EC50Approximately 120 mg/l

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.

14. TRANSPORT INFORMATION

Land (US DOT):	NOT REGULATED AS A DOT HAZARDOUS MATERIAL
Water (IMDG):	UN3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S., (ETIDRONIC ACID) 8 III Marine Pollutant: No
Air (IATA):	UN3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S., (ETIDRONIC ACID) 8 III
Emergency Response Guide Number:	ERG # 153
Transportation Notes**:**	Product not regulated for ground transport in the USA per exception permitted in 49 CFR 173.154(d).
EMS:	F-A, S-B

15. REGULATORY INFORMATION

UNITED STATES:

Toxic Substances Control Act (TSCA):	The components of this product are listed on the TSCA Inventory of Existing Chemical Substances.
EPA Pesticide Registration Number:	None established
FIFRA Listing of Pesticide Chemicals (40 CFR 180):	Not registered in the US under FIFRA.

Superfund Amendments and Reauthorization Act (SARA) Title III:

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

Health	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	GLYCOL ETHERS Value:
ZUS_SAR302	Reportable quantity	None established

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

ZUS_SAR313	De minimis concentration	Glycol ethers (Non-carcinogenic) Value: 1%

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 I
ETHYLENE GLYCOL MONOBUTYL ETHER

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
2-BUTOXYETHANOL

Clean Air Act Haz. Air Pollutants Section 112:

ZUS_CAAHAP None established

ZUS_CAAHRP None established

CAA AP

US. EPA Hazardous Organic NESHAP (HON) Hazardous Air Pollutants (40 CFR 63.100-.106, Table 2)
04 1999
GLYCOL ETHERS

State Right-to-Know Regulations Status of Ingredients

Pennsylvania:

CAS #	COMPONENT NAME
111-76-2	Butoxyethanol

ZUSPA_RTK

Pennsylvania: Hazardous substance list
1989-08-11
ETHANOL, 2-BUTOXY-

New Jersey:

CAS #	COMPONENT NAME
111-76-2	Butoxyethanol
13598-36-2	Phosphonic Acid

ZUSNJ_RTK

New Jersey Right to Know Hazardous Substance List (RTK-HSL)
2007-03-01
2-BUTOXY ETHANOL ETHYLENE GLYCOL MONOBUTYL ETHER ETHANOL, 2-BUTOXY- BUTYL CELLOSOLVE
Special Health Hazard - Carcinogen

New Jersey Right to Know Hazardous Substance List (RTK-HSL)
2007-03-01
PHOSPHOROUS ACID, ortho PHOSPHONIC ACID
Special Health Hazard - Corrosive

Massachusetts:

CAS #	COMPONENT NAME
111-76-2	Butoxyethanol

ZUSMA_RTK

Massachusetts Right to Know List of Chemicals and Hazard Classifications
1993-04-24
2-BUTOXYETHANOL BUTYL CELLOSOLVE ETHYLENE GLYCOL MONOBUTYL ETHER

California Proposition 65:

CAS #	COMPONENT NAME

ZUSCA_P65 None established

WHMIS Hazard Classification:

Ingredient Disclosure List (WHMIS)
2007-08-24
Threshold limits: 1 Weight percent
80
Citric acid

Ingredient Disclosure List (WHMIS)
2007-08-24
Threshold limits: 1 Weight percent
824
Ethylene glycol monobutyl ether

Ingredient Disclosure List (WHMIS)
2007-08-24
Threshold limits: 1 Weight percent
126
Phosphorous acid

16. OTHER INFORMATION

MSDS REVISION STATUS :
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. .