



Issuing Date 07-Jul-2009

Revision Date 18-Jan-2012

Revision Number 1

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY/UNDERTAKING

Product Name TAE Buffer, 50X
Product Code(s) K915
Recommended Use For Further Manufacturing Use Only
Not for Human or Animal Drug Use

Company
AMRESKO, LLC
6681 Cochran Road
Solon, Ohio 44139

Emergency Telephone Number Chemtrec 1-800-424-9300

Company Phone Number 1-800-448-4442
E-mail Address info@amresco-inc.com

2. HAZARDS IDENTIFICATION

GHS - Classification

Classification Skin Sensitizer 1 Respiratory Sensitizer 1 Skin Irritant 2 Eye Irritant 2

Signal Word Danger



Hazard Statements H317 - May cause an allergic skin reaction H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled H315 - Causes skin irritation H319 - Causes serious eye irritation H335 - May cause respiratory irritation

Precautionary Statements P261 - Avoid breathing dust/fume/gas/mist/vapors/spray P280 - Wear protective gloves/protective clothing/eye protection/face protection P302+ P352 - IF ON SKIN: Wash with plenty of soap and water P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	EC No.	REACH Reg. No.	CAS-No	Weight %	Classification
Tris (hydroxymethyl)aminomethane	201-064-4	Not available	77-86-1	20-30	Xi;R36/37/38
Glacial acetic acid	EEC No. 200-580-7	Not available	64-19-7	1-10	R10 C; R35
Ethylenediaminetetraacetate, tetrasodium	-	Not available	13235-36-4	.5-5	-

4. FIRST AID MEASURES

Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Skin Contact	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.
Inhalation	Move to fresh air. If breathing becomes difficult, give oxygen.
Ingestion	Clean mouth with water and afterwards drink plenty of water.
Notes to Physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flammable Properties	Not flammable.
Flash Point	Not determined
Suitable Extinguishing Media	Dry chemical, CO2, water spray or regular foam.
Hazardous Combustion Products	Carbon oxides, Nitrogen oxides (NOx).
Explosion Data	
Sensitivity to Mechanical Impact	Not sensitive.
Sensitivity to Static Discharge	Not sensitive.
Protective Equipment and Precautions for Firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Avoid contact with skin, eyes and clothing. Use personal protective equipment. Ensure adequate ventilation.
Methods for Containment	Prevent further leakage or spillage if safe to do so.
Methods for Cleaning Up	Cover with dry lime or soda ash. Pick up and transfer to properly labeled containers. Ventilate area and wash spill site after material pickup is complete.

7. HANDLING AND STORAGE

Handling Handle in accordance with good industrial hygiene and safety practice.
Storage Keep containers tightly closed in a dry, cool and well-ventilated place.
Incompatible Products Strong oxidizing agents. Bases.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Glacial acetic acid 64-19-7	15	TWA: 10 ppm TWA: 25 mg/m ³	IDLH: 50 ppm TWA: 10 ppm TWA: 25 mg/m ³ STEL: 15 ppm STEL: 37 mg/m ³

Engineering Measures Showers
Eyewash stations
Ventilation systems.

Personal Protective Equipment

Eye/Face Protection Safety glasses with side-shields. Avoid contact with eyes.
Skin and Body Protection Wear protective gloves/clothing.
Respiratory Protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance Colorless
Odor No information available
Odor Threshold No information available
Decomposition Temperature °C No information available
Freezing Point No information available
Initial Boiling Point No information available
Physical State Liquid
pH No data available
Flash Point Not determined
Autoignition Temperature No data available
Boiling Point/Range No data available
Melting Point/Range No data available
Flammability Limits in Air **Upper** No data available **Lower** No data available
Explosive Properties No information available
Oxidizing Properties No information available
Evaporation Rate No data available
MMHG @ 37.8 C No data available
Vapor Density No data available
Specific Gravity No data available
Solubility No information available
Partition Coefficient (n-octanol/water) No data available
Viscosity No information available

10. STABILITY AND REACTIVITY

- Stability** Stable under recommended storage conditions.
- Incompatible Products** Strong oxidizing agents. Bases.
- Conditions to Avoid** None known based on information supplied.
- Hazardous Decomposition Products** Carbon oxides. Nitrogen oxides (NOx).
- Hazardous Polymerization** Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

- Product Information** Sensitizer. Causes skin, eye and respiratory tract irritation.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Tris (hydroxymethyl)aminomethane	5900 mg/kg (Rat)		
Glacial acetic acid	3310 mg/kg (Rat)	1060 mg/kg (Rabbit)	11.4 mg/L (Rat) 4 h

Chronic Toxicity

- Chronic Toxicity** No known effect based on information supplied.
- Sensitization** Repeated or prolonged contact may cause allergic reactions in very susceptible persons.
- Target Organ Effects** None known.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic organisms.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Microtox	Daphnia Magna (Water Flea)
Glacial acetic acid		LC50= 79 mg/L Pimephales promelas 96 h LC50= 75 mg/L Lepomis macrochirus 96 h		

13. DISPOSAL CONSIDERATIONS

- Waste Disposal Method** Dispose of material in accordance with all federal, state, and local regulations.
- Contaminated Packaging** Dispose of in accordance with all federal, state and local regulations.

14. TRANSPORT INFORMATION

IATA Not regulated

DOT Not regulated

15. REGULATORY INFORMATION

REACH Title VII Restrictions No information available.

Chemical Name	Dangerous Substances	Organic Solvents	Harmful Substances Whose Names Are to be Indicated on the Label	Pollution Release and Transfer Registry (Class II):	Pollution Release and Transfer Registry (Class I):	Poison and Deleterious Substances Control Law:
Tris (hydroxymethyl)aminomethane	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Glacial acetic acid	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Ethylenediaminetetraacetate, tetrasodium	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Component	ISHA - Harmful Substances Prohibited for Manufacturing, Importing, Transferring, or Supplying	ISHA - Harmful Substances Requiring Permission	Toxic Chemical Classification Listing (TCCL) - Toxic Chemicals	Toxic Release Inventory (TRI) - Group I	Toxic Release Inventory (TRI) - Group II	
Tris (hydroxymethyl)aminomethane 77-86-1 (20-30)	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Glacial acetic acid 64-19-7 (1-10)	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Ethylenediaminetetraacetate, tetrasodium 13235-36-4 (.5-5)	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

International Inventories

TSCA Does not Comply
 EINECS/ELINCS Does not Comply
 ENCS Does not Comply
 IECS Complies
 KECL Does not Comply
 PICCS Complies
 AICS Complies

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act:

Chemical Name	CAS-No	Weight %	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Glacial acetic acid	64-19-7	1-10		Group II		

CERCLA

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
Glacial acetic acid	5000 lb	

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Glacial acetic acid	X		X		X

International Regulations

Mexico - Grade

Chemical Name	Carcinogen Status	Exposure Limits
Glacial acetic acid		Mexico: TWA 10 ppm Mexico: TWA 25 mg/m ³

Canada

WHMIS Hazard Class

D2A Very toxic materials
D2B Toxic materials



16. OTHER INFORMATION

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Revision Note
No information available

Recommended Restrictions No information available

Disclaimer

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS