



ALDON CORPORATION

MATERIAL SAFETY DATA SHEET

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MSDS No. TT 283
Effective Date February 22, 1999

SECTION I NAME 24 HOUR EMERGENCY ASSISTANCE

Product	TRIS-BORATE-EDTA BUFFER	 <p>CHEMTREC 800-424-9300 Day 716-226-6177</p> <p>NFPA HAZARD RATING</p> <table border="1"> <tr> <td>LEAST</td> <td>SLIGHT</td> <td>MODERATE</td> <td>HIGH</td> <td>EXTREME</td> </tr> <tr> <td>0</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table> <p>HMIS *</p> <table border="1"> <tr> <td>Health</td> <td>2</td> </tr> <tr> <td>Fire</td> <td>0</td> </tr> <tr> <td>Reactivity</td> <td>0</td> </tr> </table>	LEAST	SLIGHT	MODERATE	HIGH	EXTREME	0	1	2	3	4	Health	2	Fire	0	Reactivity	0
LEAST	SLIGHT		MODERATE	HIGH	EXTREME													
0	1		2	3	4													
Health	2																	
Fire	0																	
Reactivity	0																	
Chemical Synonyms	TBE Buffer																	
Formula	Mixture																	
Unit Size	up to 500 g																	
C.A.S. No.	Mixture.																	

SECTION II INGREDIENTS OF MIXTURES

Principal Component(s)	%	TLV Units
Tris Tromethamine: (CAS No. 77-86-1)	66.3%	None established.
Boric Acid: (CAS No. 10043-35-3)	32.1%	None established.
EDTA (Ethylenediamine tetraacetic acid): (CAS No. 60-00-0)	4.3%	None established.

CAUTION! MAY BE HARMFUL IF SWALLOWED.

SECTION III PHYSICAL DATA

Melting Point (°F)	N/A	Specific Gravity (H ₂ O = 1)	N/A
Boiling Point (°F)	N/A	Percent Volatile by Volume (%)	N/A
Vapor Pressure (mm Hg)	N/A	Evaporation Rate (=1)	N/A
Vapor Density (Air=1)	N/A		
Solubility in Water	Complete.		
Appearance & Odor	White crystalline solid; no odor.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	Non-flammable.	Flammable Limits in Air % by Volume	N/A	Lower	Upper
Extinguisher Media	Use any media suitable for extinguishing supporting fire.				

SPECIAL FIREFIGHTING PROCEDURES

If involved in a fire situation, wear a NIOSH/MSHA-approved self-contained breathing apparatus and protective clothing to prevent skin and eye contact.

UNUSUAL FIRE AND EXPLOSION HAZARDS

When heated to decomposition, emits toxic fumes of oxides of nitrogen (NO_x), carbon dioxide and/or carbon monoxide.

D.O.T. **NON-REGULATED.**

Approved by U.S. Department of Labor "essentially similar" to form OSHA-20

SECTION V HEALTH HAZARD DATA TT 283

Threshold Limited Value	Boric acid: orl - wmn LDLo: 200 mg/kg. orl - inf LDLo: 934 mg/kg.
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Effects of Overexposure	EYES: May be irritating on contact. SKIN: No absorption through intact skin. Absorption into blood stream through damaged skin may result in erythema, macular rash, CNS effects after 24 hours. INGESTION: Large doses (>15 grams as Boric acid) may cause erythema, macular rash, diarrhea, nausea, dizziness and CNS effects after 36-72 hours.
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Emergency and First Aid Procedures	EYES: Flush thoroughly with water for at least 15 minutes, lifting lower and upper eyelids occasionally. If irritation persists, get medical attention. SKIN: Flush with water, then wash with mild soap and water. INGESTION: If swallowed, if conscious, give one or two glasses of water to drink, induce vomiting and call physician. Never give anything by mouth to an unconscious person. INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
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SECTION VI REACTIVITY DATA

Stability	Unstable		Conditions to Avoid	Excessive temperature.
	Stable	X		
Incompatibility (Materials to Avoid)	None known.			

Hazardous Decomposition Products	When heated to decomposition, emits toxic fumes of oxide of nitrogen, carbon dioxide and/or carbon monoxide.
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Hazardous Polymerization	Conditions to Avoid
May Occur	Will Not Occur
	X
Not applicable.	

SECTION VII SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled	Sweep up and place in a suitable container for disposal. Wash spill area with soap and water.
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Waste Disposal Method	Discharge, treatment, or disposal may be subject to Federal, State or Local laws. These disposal guidelines are intended for the disposal of catalog-size quantities only.
	Dispose of in accordance with federal, state and local regulations.

SECTION VIII SPECIAL PROTECTION INFORMATION

Respiration Protection (Specify Type)	None required in normal laboratory handling. If dusty conditions prevail, work in ventilation hood or wear a NIOSH/MSHA approved respirator.			
Ventilation	Local Exhaust	Recommended.	Special	No.
	Mechanical (General)	Recommended.	Other	No.
Protective Gloves	Rubber.	Eye Protection	Chemical safety glasses.	
Other Protective Equipment	Lab coat, smock, eye wash station, proper gloves, ventilation hood.			

SECTION IX SPECIAL PRECAUTIONS

Precautions to be Taken in Handling & Storing	Store in a cool place. Wash thoroughly after handling.
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Other Precautions	Read label on container before using. Do not wear contact lenses when working with chemicals.
	Avoid contact with eyes. Remove and wash contaminated clothing.

For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

Revision No. 1	Date 2/22/99	Approved Michael Raszeja	Chemical Safety Coordinator MR
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