

DATE: 11/05/98 ACCT: 531465004  
 INDEX: HB3083965 CAT NO: SB115500 PG NBR: 115750

\*\*\*\* MATERIAL SAFETY DATA SHEET \*\*\*\*  
 Buffer Solution pH 10.0 (Color-Coded Blue)  
 41141

\*\*\*\* SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION \*\*\*\*  
 MSDS Name: Buffer Solution pH 10.0 (Color-Coded Blue)  
 Catalog Numbers: 13636AR11, 13636AR12C, 13636AR15, 13636AR25, 13636AR26,  
 13636AR30, SB115 20, SB115 4, SB115 500, SB11520, SB1154, SB115500  
 Synonyms: None  
 Company Identification: Fisher Scientific  
 1 Reagent Lane  
 Fairlawn, NJ 07410  
 For information, call: 201-796-7100  
 Emergency Number: 201-796-7100  
 For CHEMTREC assistance, call: 800-424-9300  
 For international CHEMTREC assistance, call: 703-527-3887

\*\*\*\* SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS \*\*\*\*

CAS#	Chemical Name	%	EINECS#
0-00-0	Blue Food Color	0.02	unlisted
584-08-7	Potassium carbonate	0.6	209-529-3
1310-58-3	Potassium hydroxide	0.2	215-181-3
1332-77-0	Potassium borate	0.4	215-575-5
6381-92-6	Disodium dihydrogen ethylenediaminetetraacetate dihydrate	1.0	unlisted
7732-18-5	Water	Balance	231-791-2

\*\*\*\* SECTION 3 - HAZARDS IDENTIFICATION \*\*\*\*  
 EMERGENCY OVERVIEW  
 Appearance: clear, colorless.  
 Caution! May cause irritation.  
 Target Organs: None.

Potential Health Effects  
 Eye: May cause eye irritation.  
 Skin: May cause mild skin irritation. Low hazard for usual industrial handling.  
 Ingestion: Low hazard for usual industrial handling. May cause gastric disturbances and electrolytic imbalance.  
 Inhalation: May cause respiratory tract irritation. Low hazard for usual industrial handling.  
 Chronic: No information found.

\*\*\*\* SECTION 4 - FIRST AID MEASURES \*\*\*\*

Eyes: Get medical aid. Gently lift eyelids and flush continuously with water.  
 Skin: Get medical aid if irritation develops or persists. Flush skin with plenty of soap and water.  
 Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid.  
 Inhalation: Get medical aid immediately. Remove from exposure to fresh air immediately. If not breathing, give artificial respiration.  
 Notes to Physician: Treat symptomatically and supportively.  
 Antidote: None reported.

\*\*\*\* SECTION 5 - FIRE FIGHTING MEASURES \*\*\*\*  
 General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.  
 Extinguishing Media: Substance is noncombustible; use agent most appropriate to

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extinguish surrounding fire.  
 Autoignition Temperature: Not available.  
 Flash Point: Not available.  
 NFPA Rating: Not published.  
 Explosion Limits: Lower: Not available.  
 Upper: Not available.

\*\*\*\* SECTION 6 - ACCIDENTAL RELEASE MEASURES \*\*\*\*  
 General Information: Use proper personal protective equipment as indicated in Section 8.  
 Spills/Leaks: Absorb spill with inert material, (e.g., dry sand or earth), then place into a chemical waste container.  
 \*\*\*\* SECTION 7 - HANDLING AND STORAGE \*\*\*\*  
 Handling: Use with adequate ventilation. Avoid contact with eyes. Keep container tightly closed.  
 Storage: Store in a cool, dry place.

\*\*\*\* SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION \*\*\*\*  
 Engineering Controls: Good general ventilation should be sufficient to control airborne levels.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Blue Food Color	none listed	none listed	none listed
Potassium carbonate	none listed	none listed	none listed
Potassium hydroxide	2 mg/m3	2 mg/m3 TWA	none listed
Potassium borate	none listed	none listed	none listed
Disodium dihydrogen ethylenediaminetetraacetate dihydrate	none listed	none listed	none listed
Water	none listed	none listed	none listed

OSHA Vacated PELs:  
 Blue Food Color: No OSHA Vacated PELs are listed for this chemical.  
 Potassium carbonate: No OSHA Vacated PELs are listed for this chemical.  
 Potassium hydroxide: No OSHA Vacated PELs are listed for this chemical.  
 Potassium borate: No OSHA Vacated PELs are listed for this chemical.  
 Disodium dihydrogen ethylenediaminetetraacetate dihydrate: No OSHA Vacated PELs are listed for this chemical.  
 Water: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.  
 Skin: Wear appropriate gloves to prevent skin exposure.  
 Clothing: Wear appropriate protective clothing to minimize contact with skin.  
 Respirators: Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

\*\*\*\* SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES \*\*\*\*  
 Physical State: Liquid  
 Appearance: clear, colorless  
 Odor: odorless  
 pH: 10.0  
 Vapor Pressure: Not available.  
 Vapor Density: Not available.  
 Evaporation Rate: 1 (Water=1)

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Not available.  
 Boiling Point: 212 deg F  
 Freezing/Melting Point: 32 deg F  
 Decomposition Temperature: Not available.  
 Solubility: Soluble in water.  
 Specific Gravity/Density: Not available.  
 Molecular Formula: Mixture  
 Molecular Weight: Not available

\*\*\*\* SECTION 10 - STABILITY AND REACTIVITY \*\*\*\*

Chemical Stability:  
 Stable.  
 Conditions to Avoid:  
 Mixtures reported.  
 Incompatibilities with Other Materials:  
 Not available.  
 Hazardous Decomposition Products:  
 None.  
 Hazardous Polymerization: Not available.

\*\*\*\* SECTION 11 - TOXICOLOGICAL INFORMATION \*\*\*\*

RTECS#:  
 CAS# 0-00-0: unlisted.  
 CAS# 584-08-7: 157750000  
 CAS# 1310-58-3: 112100000  
 CAS# 1310-58-3: 112100000  
 CAS# 6381-92-6: 4H4440000  
 CAS# 7732-18-5: 2C0110000  
 LD50/LC50:  
 Not available.  
 CAS# 584-08-7: Oral, mouse: LD50 = 2570 mg/kg; Oral, rat: LD50 = 1870 mg/kg.  
 CAS# 1310-58-3: Oral, rat: LD50 = 273 mg/kg.  
 CAS# 1332-77-0:  
 CAS# 6381-92-6:  
 CAS# 7732-18-5: Oral, rat: LD50 = 90 mL/kg.

Carcinogenicity:  
 Blue Food Color -  
 Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.  
 Potassium borate -  
 Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.  
 Potassium hydroxide -  
 Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.  
 Potassium hydroxide -  
 Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.  
 Potassium borate -  
 Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.  
 Disodium dihydrogen ethylenediaminetetraacetate dihydrate -  
 Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.  
 Water -  
 Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.  
 Epidemiology:  
 No data available.  
 Teratogenicity:  
 No data available.  
 Reproductive Effects:  
 No data available.  
 Neurotoxicity:  
 No data available.  
 Mutagenicity:  
 No data available.  
 Other Studies:  
 No data available.

\*\*\*\* SECTION 12 - ECOLOGICAL INFORMATION \*\*\*\*

Environmental Fate:  
 No information reported.  
 Physical/Chemical:  
 No information available.  
 Other:  
 None.

\*\*\*\* SECTION 13 - DISPOSAL CONSIDERATIONS \*\*\*\*

Dispose of in a manner consistent with federal, state, and local regulations.  
 RCRA D-Series Maximum Concentration of Contaminants:  
 None listed.  
 RCRA D-Series Chronic Toxicity Reference Levels: None listed.  
 RCRA F-Series: None listed.  
 RCRA P-Series: None listed.  
 RCRA U-Series: None listed.

\*\*\*\* SECTION 14 - TRANSPORT INFORMATION \*\*\*\*

US DOT  
 IMO  
 No information available

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No information available.  
 IATA  
 No information available.  
 RID/ADR  
 No information available.  
 Canadian TDG  
 No information available.

\*\*\*\* SECTION 15 - REGULATORY INFORMATION \*\*\*\*

US FEDERAL

TSCA  
 CAS# 0-00-0 is not listed on the TSCA inventory.  
 CAS# 584-08-7 is listed on the TSCA inventory.  
 CAS# 1310-58-3 is listed on the TSCA inventory.  
 CAS# 1332-77-0 is listed on the TSCA inventory.  
 CAS# 6381-92-6 is not listed on the TSCA inventory.  
 It is for research and development use only.  
 CAS# 7732-18-5 is listed on the TSCA inventory.  
 Health & Safety Reporting List  
 None of the chemicals are on the Health & Safety Reporting List.  
 Chemical Test Rules  
 None of the chemicals in this product are under a Chemical Test Rule.  
 Section 12b  
 None of the chemicals are listed under TSCA Section 12b.  
 TSCA Significant New Use Rule  
 None of the chemicals in this material have a SNUR under TSCA.  
 SARA  
 Section 302 (RQ)  
 CAS# 1310-58-3: final RQ = 1000 pounds (454 kg)  
 Section 302 (TPQ)  
 None of the chemicals in this product have a TPQ.  
 SARA Codes  
 CAS# 584-08-7: acute.  
 CAS# 1310-58-3: acute, reactive.  
 CAS# 6381-92-6: acute.  
 Section 313  
 No chemicals are reportable under Section 313.

Clear Air Act:  
 This material does not contain any hazardous air pollutants.  
 This material does not contain any Class 1 Ozone depleters.  
 This material does not contain any Class 2 Ozone depleters.  
 Clean Water Act:  
 CAS# 1310-58-3 is listed as a Hazardous Substance under the CWA.  
 None of the chemicals in this product are listed as Priority Pollutants under the CWA.  
 None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:  
 None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

Blue Food Color is not present on state lists from CA, PA, MN, MA, FL, or NJ.  
 Potassium carbonate is not present on state lists from CA, PA, MN, MA, FL, or NJ.  
 Potassium hydroxide is not present on state lists from CA, PA, MN, MA, FL, or NJ.  
 Potassium hydroxide can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.  
 Potassium borate is not present on state lists from CA, PA, MN, MA, FL, or NJ.  
 Disodium dihydrogen ethylenediaminetetraacetate dihydrate is not present on state lists from CA, PA, MN, MA, FL, or NJ.  
 Water is not present on state lists from CA, PA, MN, MA, FL, or NJ.  
 California No Significant Risk Level:  
 None of the chemicals in this product are listed.  
 European/International Regulations  
 European Labeling in Accordance with EC Directives  
 Hazard Symbols: Not available.  
 Hazard Phrases:  
 Safety Phrases:  
 WGK (Water, Danger/Protection)  
 CAS# 0-00-0: No information available.  
 CAS# 584-08-7: 1  
 CAS# 1310-58-3: 1  
 CAS# 1332-77-0: No information available.  
 CAS# 6381-92-6: 2  
 CAS# 7732-18-5: No information available.

Canada

CAS# 584-08-7 is listed on Canada's DSL/NDSL List.  
 CAS# 1310-58-3 is listed on Canada's DSL/NDSL List.  
 CAS# 1332-77-0 is listed on Canada's DSL/NDSL List.  
 CAS# 7732-18-5 is listed on Canada's DSL/NDSL List.  
 This material has a water classification of D3B.  
 CAS# 0-00-0 is not listed on Canada's Ingredient Disclosure List.  
 CAS# 584-08-7 is not listed on Canada's Ingredient Disclosure List.  
 CAS# 1310-58-3 is not listed on Canada's Ingredient Disclosure List.  
 CAS# 1332-77-0 is not listed on Canada's Ingredient Disclosure List.

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CAS# 6381-92-6 is not listed on Canada's Ingredient Disclosure List.  
CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.  
Exposure Limits  
CAS# 1310-58-3: OEL-AUSTRALIA: TWA 2 mg/m<sup>3</sup>, OEL-BELGIUM: STEL 2 mg/m<sup>3</sup>  
OEL-DENMARK: TWA 2 mg/m<sup>3</sup>, OEL-FINLAND: TWA 2 mg/m<sup>3</sup>, OEL-FRANCE: STEL 2 mg/m<sup>3</sup>  
OEL-GERMANY: TWA 2 mg/m<sup>3</sup>, OEL-IRELAND: TWA 2 mg/m<sup>3</sup>, OEL-ITALY: TWA 2 mg/m<sup>3</sup>  
OEL-JAPAN: TWA 2 mg/m<sup>3</sup>, OEL-NETHERLANDS: TWA 2 mg/m<sup>3</sup>, OEL-NORWAY: TWA 2 mg/m<sup>3</sup>  
OEL-SPAIN: TWA 2 mg/m<sup>3</sup>, OEL-SWEDEN: TWA 2 mg/m<sup>3</sup>, OEL-SWITZERLAND: TWA 2 mg/m<sup>3</sup>  
OEL-TAIWAN: TWA 2 mg/m<sup>3</sup>, OEL-UNITED KINGDOM: TWA 2 mg/m<sup>3</sup>, STEL 2 mg/m<sup>3</sup>, OEL  
IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACCGI TLV, OEL IN NEW ZEAL  
AND, SINGAPORE, VIETNAM check ACCI TLV

\*\*\*\*\* SECTION 16 - ADDITIONAL INFORMATION \*\*\*\*\*  
MSDS Creation Date: 2/14/1995 Revision #6 Date: 9/02/1997

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. Fisher is not liable for any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.

