

MATERIAL SAFETY DATA SHEET

1. PRODUCT IDENTIFICATION

- Trade Name: ClearPage™ Running Buffers
- Catalog numbers: FB50042, FB50053, FB60053, FB50500, FB60042, FB60500
- Manufactured for/Supplier: C.B.S. Scientific Company, Inc.
 P.O. Box 856
 Del Mar, California 92014
 U.S.A.
- Information department: Technical Services, customer support.
- Telephone number: +1 (858) 755-4959

2. COMPOSITION / INFORMATION OF COMPONENTS

Mixture of the substances listed below with non-hazardous additions.

Chemical Name	%	CAS #	EINECS #
Tricine	2 to 15%	5704-04-1	227-193-6
Tris-hydroxymethyl-amino-methane ("Tris")	2 to 4%	77-86-1	201-064-4
Sodium Dodecyl Sulphate	0.1 to 2.5%	151-21-3	205-788-1
Sodium Bisulphite	0.002 to 0.5%	7681-57-4	231-673-0

3. HAZARDS IDENTIFICATION

Potential Health Effects:

EMERGENCY OVERVIEW

CAUTION!

MAY BE IRRITATING TO THE SKIN, EYES, AND UPPER RESPIRATORY TRACT.

MAY BE HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN.

Eye:

IRRITANT

Can cause minor irritation, tearing and reddening.

Skin:

IRRITANT

Can cause moderate skin irritation, reddening and inflammation. Not likely to cause acute or permanent damage.

Inhalation:

IRRITANT

Can cause moderate respiratory irritation.

Ingestion:

If ingested, this material may be irritating to mouth, throat and gastrointestinal tract. May be harmful if swallowed.

Special Toxic Effects

CAUTION! THE TOXICOLOGICAL PROPERTIES OF THIS MATERIAL HAVE NOT BEEN FULLY INVESTIGATED.

4. FIRST AID MEASURES

Eye:

Flush eyes with plenty of water for at least 20 minutes retracting eyelids often. Tilt the head to prevent chemical from transferring to the uncontaminated eye. Get immediate medical attention.

Skin:

Wash with soap and water under a drench shower. Remove contaminated clothing, launder immediately and discard contaminated leather goods. Get medical attention immediately.

Inhalation:

Remove to fresh air. If breathing is difficult, have a trained individual administer oxygen. If not breathing, give artificial respiration and have a trained individual administer oxygen. Get medical attention immediately.

Ingestion:

If swallowed, wash out mouth with water provided person is conscious.
Never give anything by mouth to an unconscious person. Get medical attention.

Note to Physician:

Treat symptomatically.

5. FIRE FIGHTING MEASURES

Flashpoint:	ND
Lower Flammable Limit %:	ND
Upper Flammable Limit %:	ND
Autoignition Temperature:	ND

Extinguishing Media:

Use extinguisher media appropriate for surrounding fire.

Firefighting Techniques / Equipment:

As in any fire, wear self-contained breathing apparatus pressure-demand (MHSA/NIOSH approved or equivalent) and full protective gear. Evacuate the area and fight fire from a safe distance.

Hazardous Combustion Products:

MAY EMIT TOXIC FUMES UNDER FIRE CONDITIONS.

6. ACCIDENTAL RELEASE MEASURES

Accidental releases may be subject to special reporting requirements and other regulatory mandates. Refer to section 8 for personal protection equipment recommendations.

Spill Cleanup:

Exposure to the spilled material may be irritating. Follow personal protective equipment recommendations found in Section 8 of this MSDS.

7. HANDLING AND STORAGE

Storage pressure: Ambient.

Handling Procedures:

DO NOT GET IN EYES, ON SKIN OR CLOTHING. Wash hands thoroughly before eating, drinking or smoking.

Storage Procedures:

Store in a cool location. Isolate from incompatible materials and conditions. Keep container(s) closed. The material is suitable for most general chemical storage areas, including refrigerators, but not to be stored with food.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls:

No special exhaust ventilation, process enclosures, or other engineering controls are necessary when handling or using this product to avoid overexposure.

Personal Protective Equipment:

Eye:

An eye wash station must be available where this product is used. Wear chemically resistant safety glasses with side shields when handling this product. Wear additional eye protection such as chemical splash goggles and/or face shield when the possibility exists for eye contact with splashing or spraying liquid, or airborne material. Do not wear contact lenses. Have an eye wash station available.

Skin:

Wear protective gloves. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, smoking and when leaving work. Have a safety shower available.

Respiratory:

No special equipment is required.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance/physical state: Liquid solution / suspension

Odor: No odor.

Boiling point (°C): ND

Melting Point (°C): ND

Solubility in water:	ND
pH:	7.6 to 8.4
Vapor Pressure:	ND
Vapor Density:	ND
Specific Gravity/Density:	ND
Octanol/water Partition Coeff:	ND
Volatiles:	ND
Evaporation Rate:	ND
Viscosity:	ND

10. STABILITY AND REACTIVITY

Stability:

Stable under normal conditions of use. Incompatible with strong oxidizers.

Conditions to avoid:

Strong oxidizing agents. Temperatures above the high flash point of this combustible material in combination with sparks, open flames, or other sources of ignition.
Mechanical shock.

Hazardous Decomposition Products:

Nitrogen oxides, Carbon dioxide. Carbon monoxide.

Hazardous Polymerization:

Will not occur.

11. TOXICOLOGICAL INFORMATION

FOLLOWING DATA FOR TRIS (FREE BASE):

CAUTION! THE TOXICOLOGICAL PROPERTIES OF THIS MATERIAL HAVE NOT BEEN FULLY INVESTIGATED. FOLLOW GOOD LABORATORY PRACTICES WHEN HANDLING.

Routes of Exposure

Inhalation, ingestion, skin and eye contact.

LD50

REGISTRY OF THE TOXIC EFFECTS OF CHEMICAL SUBSTANCES (RTECS)

RTECS # TY2900000 (listed as: 1,3-propanediol, 2-amino-2-(hydroxymethyl)-)

The oral LD50 in rats is = 5,900 mg/kg.

Intravenous LD50 - rat = 1800 mg/kg. Intravenous LD50 - mouse = 1210 mg/kg.

Only selected data is presented here. See actual entry in RTECS for complete information.

Carcinogenicity

NOT LISTED BY IARC, NTP OR OSHA AS A CARCINOGEN

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12. ECOLOGICAL INFORMATION
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Ecotoxicological Information: No ecological information available.

Environmental Fate (Degradation, Transformation, and Persistence): Bioconcentration is not expected to occur. Biodegrades at a moderate rate.

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13. DISPOSAL CONSIDERATIONS
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Waste Disposal

Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste.

If the material is determined to be a hazardous waste, the transportation, storage, treatment and disposal of this waste material must be conducted in compliance with 40 CFR 262, 263, 264, 268 and 270. Disposal can occur only in properly permitted facilities.

Contact your local disposal service provider(s) for appropriate method(s) of disposal.

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14. TRANSPORT INFORMATION
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Proper Shipping Name: NOT REGULATED

Hazard Class: NA

UN/NA Code: NA

Packaging Group: NA

Reportable Quantity: None

Labels Required: NA

Marine Pollutant (49 CFR 172.101 Appendix B): No

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15. REGULATORY INFORMATION
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Federal Regulations

All ingredients are listed on Inventory of Existing Chemical Substances under the Toxic Substances Control Act (TSCA).

TRIS INFORMATION

Listed on the Inventory of Existing Chemical Substances under the Toxic Substances Control Act (TSCA). TSCA Section 8(b).

NOHS 1974: HZD 81165; TNF 850 (est.); NIS 4; NOS 6; TNE 7274 (est.)

NOES 1983: HZD 81165; TNF 2296 (est.); NIS 9; NOS 22; TNE 40897 (est.); TFE 30773 (est.)

State Regulations

Based on available information, this material does not contain any components currently known to the State of California to cause cancer, birth defects or reproductive harm at levels which would be subject to Proposition 65.

International Regulations

TRIS INFORMATION

CANADA: Domestic Substances List / Non-Confidential.

OEL=MAK

International Phrases

R - 36/37/38 Irritating to eyes, respiratory system and skin.

S - 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical adv

36/37/39 Wear suitable protective clothing, gloves & eye/face protection.

38 In case of insufficient ventilation, wear suitable respiratory equipment.

EINECS Numbers: See page 1 of this document.

SARA TITLE III RATINGS for Triethanolamine

Immediate Hazard	Delayed Hazard	Fire Hazard	Pressure Hazard	Reactivity Hazard	SARA 313 Chemical

NFPA RATINGS for Tris

Health	Flammability	Reactivity	Special Hazards
-	-	-	-

HMIS Ratings for Tris

Health	Flammability	Reactivity	Personal Protection nEquipment
1	0	0	E + N

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16. OTHER INFORMATION
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Abbreviations:

ND- No Determined

NA- Not Applicable

SARA- Superfund and Reauthorization Act

HMIS- Hazard Material Information System

WHMIS- Workplace Hazard Materials Information System

NTP- National Toxicology Program

OSHA- Occupational Health and Safety Administration

IARC- International Agency for Research on Cancer

PROP 65- California Safe Drinking Water and Toxic Enforcement Act Of 1986

EINECS- European Inventory of Existing Commercial Chemical Substances

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.