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MATERIAL SAFETY DATA SHEET

1 CHEMICAL PRODUCT & COMPANY IDENTIFICATION

TRADE NAME BIS TRIS HYDROCHLORIDE

CAS NUMBER 124763-51-5

ROI NUMBER 1164B

SYNONYMS BIS(2-HYDROXYMETHYL)AMINO-TRIS(HYDROXYMETHYL)METHANE HYDROCHLORIDE

MANUFACTURER/ SUPPLIER
Research Organics
4353 E 49th Street
Cleveland, Ohio
44125 USA

TELEPHONE NUMBERS - 24 HOUR EMERGENCY ASSISTANCE:

INFOTRAC 800-535-5053

TELEPHONE NUMBERS - GENERAL ASSISTANCE:

Product Information 800-321-0570

2 COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	CAS Number	Percentage*	Exposure Limits/Health Hazards
BIS TRIS HYDROCHLORIDE	124763-51-5	>97 %	No Exposure limits established by OSHA or ACGIH MAY BE IRRITATING, MAY BE HARMFUL.

***Values do not reflect absolute minimums and maximums; those values may vary from time to time.**

3 HAZARDS IDENTIFICATION

Emergency Overview

CAUTION! May be harmful. To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.
MAY BE IRRITATING TO THE SKIN, EYES, AND UPPER RESPIRATORY TRACT.

Potential Health Effects Skin

This material May cause skin irritation. Reddening, itching and inflammation may result.

Potential Health Effect Eyes

Direct contact may cause irritation, redness, tearing and blurred vision.

Potential Health Effects Inhalation

May cause irritation to the respiratory tract.
This material may cause injury or illness if inhaled.

Potential Health Effect Ingestion

If ingested, this material may cause irritation to the 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.

Target Organs

ND

4 FIRST AID MEASURES

Skin

Immediately flush skin with plenty of water, for at least 15 minutes, while removing contaminated clothing and shoes. Contaminated clothing must be laundered before reuse. Get medical attention if irritation develops or persists.

Eyes

Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing.

Get medical attention if irritation persists.

Inhalation

Safely remove victim to fresh air. If not breathing, institute cardiopulmonary resuscitation (CPR). If breathing is difficult, ensure clear airway and give oxygen.

Get medical attention.

Ingestion

If swallowed, wash out mouth with water provided person is conscious.

Never give anything by mouth to an unconscious person.

Get medical attention.

5 FIRE FIGHTING MEASURES

Hazardous Combustion Products

MAY EMIT TOXIC FUMES UNDER FIRE CONDITIONS.

Extinguishing Media

Use a water spray, dry chemical, alcohol foam, all purpose foam or carbon dioxide to extinguish fire.

Basic Fire Fighting Procedure

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

Unusual Fire and Explosion Hazards

Irritating and toxic substances may be emitted upon thermal decomposition.

Flash Point Temperature	ND (Solid)
Autoignition Temperature	ND
Flammability Limits in Air Lower	ND
Flammability Limits in Air Upper	ND

6 ACCIDENTAL RELEASE MEASURES

Emergency Action

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind. (See Personal Protection Information Section.)

Environmental Precautions

Isolate hazard area and deny entry. Keep unnecessary people away. Take immediate steps to stop and contain

the spill. Caution should be exercised regarding personnel safety and exposure to the spilled material.

Spill or Leak Procedure

Vacuum or sweep up material and place in a disposal container. Clean up spills immediately under quailfied supervision observing precautions in Protective Equipment section. Avoid clean up procedures that generate dust or result in water pollution.
After removal, scrub the contaminated area with detergent and flush thoroughly with water. Absorb wash liquid and place in the disposable container. Do not flush to sewer. Avoid runoff into storm sewers and ditches which lead to waterways.

7 HANDLING AND STORAGE

Handling

Avoid contact with strong oxidizers.
Use only in a well ventilated area. Avoid contact with skin,eyes and on clothing. Empty containers may contain material residue. Do not reuse. Do not eat, drink or smoke in areas of use or storage.
Wash hands thoroughly before eating, drinking or smoking.

Storage

Store at room temperature.

Storage Hazards

Store away from strong oxidizers.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Contols

Facilities using or storing this material must be equipped with an eyewash station and safety shower.
Local exhaust ventilation, process enclosures, and other forms of engineering controls are the preferred means for controlling exposures.

Eye Protection PPE

Avoid eye contact with this material. Wear chemical safety glasses of goggles for dust environments.
Do not wear contact lenses when working with this substance.

Skin Protection PPE

If skin contact is anticipated, protective clothing, including impervious gloves, should be worn.
Wash contaminated clothing separately.
Showering and changing into street clothing after work is recommended.

Respiratory Protection PPE

A NIOSH/MSHA approved air purifying respirator is recommended where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited.
Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstance where air purifing respirators may not provide adequate protection.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance

SOLID

Boiling Point	ND
Melting Point	ND
Freezing Point	ND
Vapor Density	ND
Vapor Pressure	ND
Specific Gravity	ND
Molecular Formula	C8H20NOSCl

Molecular Weight	245.7
pH	ND

10 STABILITY REACTIVITY

Stability/Incompatibility

Incompatible with strong oxidizing agents.

Decomposition Products

MAY EMIT TOXIC FUMES UNDER FIRE CONDITIONS.

Hazardous Polymerization

Will not occur.

11 TOXICOLOGICAL INFORMATION

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 # Not Listed.
NO ORAL LD50 IN RATS INFORMATION IS AVAILABLE.

Carcinogenicity

NOT LISTED BY IARC, NTP OR OSHA AS A CARCINOGEN

12 ECOLOGICAL INFORMATION

EcoToxicological Information

DATA NOT YET AVAILABLE.

Chemical Fate Information

DATA NOT YET AVAILABLE.

13 DISPOSAL CONSIDERATIONS

Waste Disposal

Check state and local regulations for any additional requirements as these may be more restrictive than federal laws and regulations.

Dissolve or Mix the Material with a Combustible Solvent and Burn in a Chemical Incinerator Equipped with an Afterburner and Scrubber.

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.

14 TRANSPORTATION INFORMATION

Department of Transportation (DOT) Requirements

Proper Shipping Name	CHEMICALS, N.O.S.		
Hazard Class	NA (SOLID)	**UN/NA Code**	NA
Packaging Group	NA		
Reportable Quantity	NONE		
Labels Required	NA		

Marine Pollutant (49 CFR 172.101 Appendix B) NO

15 REGULATORY INFORMATION

Federal Regulations

This product is NOT on the EPA Toxic Substances Control Act (TSCA) inventory. The following

notices are required by 40 CFR 720.36 (C) for those products NOT on the inventory list: (i) This product is supplied solely for use in Research and Development by

or under the supervision of a technically qualified individual as defined by 40 CFR 720.0 et.sec. (ii) The health risks of this product have not fully been determined. Any information that is or becomes available will be supplied on a Material Safety

Data Sheet. Uses other than for Research and Development may constitute a violation of TSCA.

State Regulations

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

Reformulation, use or processing of this product may affect its composition and would require re-evaluation

International Regulations

ND

International Phrases

R - ND Not Determined

S - ND Not Determined

EINECS - ND

SARA TITLE III RATINGS

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

NFPA Ratings

Health	Flammability	Reactivity	Special Hazards
-	-	-	-

HMIS RATINGS

Health	Flammabilty	Reactivity	Personal Protection Equipment
1	0	0	E

16 OTHER INFORMATION

Disclaimer

The data contained in this Material Safety Data Sheet relates only to the specific material designated herein. It does not relate to use in combination with any other material or in any process. Research Organics, Inc. provides the information contained herein in good faith but make no representation as to its comprehensiveness or accuracy. Individuals receiving this information must exercise their independent judgment in determining it appropriateness for a particular purpose. Research Organics, Inc. makes no representations, or warranties, either expressed or implied, of merchantability, fitness for a particular purpose with respect to the information refers. Accordingly, Research Organics, Inc. will not be responsible for damages resulting from the use of reliance upon this information. In no instance is any Research Organics, Inc. product offered for drug, food, food additive or clinical use in humans.

This material is sold for research and development only. Use in any applications other than research and development may require prior approval from the EPA or inclusion on the TSCA inventory.

Completed On: 3/2/2005 Replaces Sheet Dated: 12/14/2000

Completed By: Environmental and Safety Department