SAFETY DATA SHEET

1. IDENTIFICATION

Product Name:	**ELIMINATOR 113 – Biocide Plus**
Other means of identification:	None
Supplier:	HE&M Inc. PO Box 1148 4065 South Main & Webb Mid America Industrial Park Pryor, OK 74361
Telephone:	(888) 729-7787 (918) 825-4821
Fax:	(918) 825-4824
In case of Emergency:	INFOTRAC US and Canada (800) 535-5053 Outside the US or Canada +01-352-323-3500
Recommended Use:	Metalworking Fluid Additive. See product data sheet for full description on use.

2. HAZARDS IDENTIFICATION

GHS Classification	This material is classified in accordance with OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification	Skin corrosion/Irritation – Category 1 Serious Eye Damage/Eye Irritation – Category 1C Specific Target Organ Toxicity-Single Exposure – Category 3
GHS Label Hazard pictogram	
Signal word	Danger
Hazard Statement	H314 – Causes severe skin burns and eye damage. H318 – Causes serious eye damage. H335 – May cause respiratory irritation.
Precautionary statements	
Prevention	P264 – Wash thoroughly after handling. P280 – Wear protective gloves/protective clothing/eye protection/face protection. P260 – Avoid breathing dust/fume/gas/mist/ vapors/spray. P271 – Only use outdoors or in a well-ventilated area.
Response	P301+P330+P331 – IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

	P303+P361+P353 – IF ON SKIN (or hair) – Take off immediately all contaminated clothing. Wash with plenty of soap and water. P304+P340 – IF INHALED: Remove person to fresh air and keep 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. P302+P352 – IF ON SKIN: Wash with plenty of water. P332+P313 – IF SKIN IRRITATION OCCURS: Get medical advice/attention. Immediately call a POISON CENTER/doctor. P321 - Specific treatment (see this label). P362+P363 - Take off and wash all contaminated clothing before reuse.
Storage	P403 +P233 - Store in a well-ventilated place. Keep container tightly closed. P405 – Store locked up.
Disposal	P501 – Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazards Not Otherwise Classified (HNOC)	May be defatting to the skin.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture:

Components/Ingredients	CAS No.	% Range*
Boric acid amine salt	Confidential	30 – 35
Hexahydro-1,3,5-tris(2-hydroxyethyl)-s-triazine	4719-04-4	25 – 50
Triethanolamine	102-71-6	5 – 10
Ethanolamine	141-43-5	5 – 10

*Specific percentages of composition are being withheld as a trade secret.
*Proprietary CAS numbers are being withheld as a trade secret.

Additional components, of which may or may not be present, in this mixture are not classified as hazardous to health or the environment and within the current knowledge of the manufacturer or supplier and current regulations, are required to be reported in this section.

Occupational exposure limits, if applicable and available, are listed in Section 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION.

4. FIRST AID MEASURES

Eye	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
Skin	Take off contaminated clothing and wash before re-use. Wash skin thoroughly with soap and water. If skin irritation occurs, get medical attention.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Inhalation	If inhaled, move person to fresh air. If breathing becomes difficult, the exposed person may need to be kept under medical attention. Get medical attention if symptoms occur..
Notes to Physician	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. Treatment should in general be symptomatic and directed to relieving any effects.

Most important symptoms or effects, acute and delayed
For more detailed information on health effects and symptoms see Section 11 – TOXICOLOGICAL INFORMATION

Description of necessary first aid measures or specific treatments
Treatment should in general be symptomatic and directed to relieving any effects.

5. FIRE FIGHTING MEASURES

Extinguishing Media	Water spray, foam, dry chemical, and carbon dioxide are appropriate extinguishing media.
Unsuitable Extinguishing Media	Avoid using water jet.
Specific Hazards from Chemical	Not known.
Hazardous Combustion Products	Combustion products may include the following: Oxides of Carbon (CO, CO2 / carbon monoxide, carbon dioxide) Oxides of Nitrogen, and other undetermined byproducts of combustion.
Special Fire Fighting Instructions	Keep people away and evacuate the area. Firefighters should use standard protective equipment and in enclosed spaces, self – contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.
Unusual Fire or Explosion Hazards	No unusual fire or explosion hazards known. Do not use welding or cutting torch on or near drum even when empty. If improperly reused for other product, it could ignite. In case of fire, containers may explode from internal pressure. Water or foam may cause frothing. Avoid solid streams of water. Use water spray. Toxic nitrogen oxides may evolve when burning. See section 10 for additional information. See section 10 for additional information.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures	Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away. See Section 8 of the SOS for Personal Protective Equipment.
Environmental Precautions	Avoid release to the environment. Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.
Methods and Materials for Containment and Cleaning Up	Dike far ahead of larger spill for later recovery and disposal. Pick up free liquid for recycle and/or disposal. Residual liquid can be absorbed on inert material. Stop the flow of material, if this is without risk. Prevent entry into waterways, sewer, basements or confined areas.

7. HANDLING AND STORAGE

Handling	Open container in a well-ventilated area. Avoid breathing vapors. Do not use sodium nitrite or other nitrosating agents in formulations containing this product. Suspected cancer-causing nitrosamines could be formed. Do not get in eyes. Avoid contact with skin. Observe good industrial hygiene practices. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Launder contaminated clothing before reuse. Avoid environmental contamination.

Storage	Store away from incompatible materials. See section 10 for incompatible materials.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls	The level of protection and types of controls necessary will vary depending upon potential exposure conditions. It is necessary to provide adequate ventilation so not to exceed exposure limits.
Environmental Controls	Comply with applicable environmental regulations limiting discharge to air, water and soil. Protect the environment by applying appropriate control measures to prevent or limit emissions.

Exposure Limit Values

Material	CAS #	Basis	Type	Value
Triethanolamine	102-71-6	ACGIH	TWA	5 mg/m3
Ethanolamine	141-43-5	ACGIH	TWA	3 mg/m3
Ethanolamine	141-43-5	ACGIH	STEL	6 ppm
Ethanolamine	141-43-5	NIOSH	STEL	15 mg/m3
Ethanolamine	141-43-5	NIOSH	REL	8 mg/m3
Ethanolamine	141-43-5	OSHA-Z	PEL	6 mg/m3

Personal Protective Equipment	Provide easy access to water supply and eye wash facilities. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
Eye / Face Protection	If contact from spray or splashing, safety glasses with side-shields are recommended.
Skin Protection	Wear protective clothing. Coveralls, apron, chemical resistant boots may be necessary to minimize contact.
Hand Protection	Use nitrile or neoprene gloves. Use good industrial hygiene practices. In case of skin contact, wash hands and arms with soap and water. Suitable gloves can be recommended by the glove supplier. Suitable gloves can be recommended by the glove supplier.
Respiratory Protection	Recommended if ventilation is limited and the potential airborne concentration may exceed the recommended and / or acceptable exposure limits.
Special Instructions for Protection and Hygiene	Practice good industrial hygiene. Do not get in eyes, on skin, or ingest this material. Wash hands immediately after handling material. Eye wash station available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear to yellow amber liquid
Odor	Mild
Odor Threshold	Not Determined
pH	9.5 to 10.0 @ 5% w/w
Melting Point / Freezing Point	<32°F (0°C)
Initial Boiling Point and Boiling Range	Not Determined
Flash Point	Not Determined
Evaporation Rate (Butyl Acetate @ 25°C = 1)	Not Determined
Flammability (solid, gas)	Not Applicable
Upper Explosive Limit / Lower Explosive Limit	Not Applicable

Vapor Pressure (Water @ 20°C = 17.5 mmHg)	Not Determined
Vapor Density	Not Determined
Relative Density (20°C)	1.10 – 1.20
Solubility	Soluble in water
Partition Coefficient (n-octanol / water)	Not Determined
Auto-ignition Temperature	Not Determined
Decomposition Temperature	Not Determined
Viscosity	Not Determined

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended handling and storage conditions.
Conditions to Avoid	Exposure to excessive heat, ignition sources, or oxidizing materials.
Incompatible Materials	Strong acids. Halogens and halogenated compounds. Strong oxidizing agents. Organic anhydrides. Material is a strong base. Strong bases will react with some metals to form salts. This material reacts violently with acids.
Hazardous decomposition materials	Oxides of carbon, oxides of nitrogen, and other unknown products of incomplete combustion. Thermal decomposition may form smoke.
Reactivity	Not expected.
Other Information	Avoid contact with nitrites, nitrates or nitrosating agents due to the potential for nitrosamine formation.

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Eye contact, skin contact, ingestion, and inhalation (mist).

Potential Acute Health Effects

Eye Contact	Remarks: Causes serious eye damage.
Skin Contact	Classification: Severely irritating to skin. (Read across); Rabbit. Remarks: Prolonged or repeated contact as from clothing wet with the material may cause burns. Prolonged or repeated contact may cause irritation. Causes skin irritation.
Inhalation	Not determined. Inhalation of products of decomposition may cause health hazard. Serious effects may be delayed after exposure. Repeated or prolonged exposure to mist may produce respiratory tract irritation.
Ingestion	May be harmful if swallowed.

Component	Result	Species	Dose	Exposure
Product	LD50 Dermal	Rabbit	>2,000 mg/kg	Prolonged or widespread contact with this material could result in the absorption of potentially harmful amounts.
Product	ATE Mixture Oral	Rat	>2,000 mg/kg	Swallowing this material can cause burns to the mouth and esophagus. Asphyxiation can occur from swelling of the throat. Perforation of the esophagus and stomach can occur.

Target Organ	Species	Results	Comments
Inhalation (ATE Mix)	Not applicable	>5 mg/l, 4h	Dusts, mists, and fumes.

Delayed / Chronic Health Effects	
Eye Contact	Irritation, dryness.
Skin Contact	Irritation, redness, defatting, drying, and cracking.
Inhalation	Preexisting respiratory conditions may be aggravated by exposure.
Ingestion	Information based on components of this mixture have may indicate that prolonged or repeated exposure may cause liver and kidney damage.
Product:	May cause adverse reproductive effects based on animal data.
Boric acid amine salt	Repeated overexposure may result in liver and kidney damage.
Triethanolamine	Repeated overexposure may result in liver and kidney damage.
Ethanolamine	Repeated overexposure may result in liver and kidney damage.
Skin Corrosion / Irritation	Category 2
Eye Damage / Irritation	Category 1
Skin Sensitizer	Mixture not determined
Respiratory Sensitizer	Mixture not determined
Germ Cell Mutagenicity	Mixture not determined
Teratogenicity	Mixture not determined
Developmental	Mixture not determined
Fertility	Mixture not determined
Carcinogenicity	Mixture not determined
Reproductive Toxicity	Mixture not determined
Aspiration Toxicity	Mixture not determined
Specific Target Organ Toxicity – Single Exposure	If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract.
Specific Target Organ Toxicity – Repeated Exposure	Triethanolamine - Liver Kidney Trace quantities of ethylene oxide (ETO) may accumulate in the headspace of storage vessels. Ethylene oxide is a potential carcinogens and reproductive hazard for humans. Although such exposures are not expected to exceed exposure limits, adequate ventilation is recommended.

12. ECOLOGICAL INFORMATION

Acute Aquatic Toxicity: Do not release into waterways, water systems, or land. Material is water soluble. May cause adverse physical affects to aquatic organisms.

Component	Result	Species	Exposure
Boric acid amine salt:	LC50 >100 mg/L	Zebra fish	96 hours
Triethanolamine:	LC50 11,800 mg/L	Rainbow trout	96 hours

Terrestrial Toxicity	Not determined.
Persistence and Degradability	Not determined
Bio accumulative Potential	Not determined
Mobility in Soil	Mixture not determined.
Other Adverse Ecological Effects	Complete ecological effects of this mixture are not known. Do not release into waterways, water systems, or environment.

13. DISPOSAL CONSIDERATIONS

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal. Dispose of in accordance to federal, state and local regulations.

Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty containers should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE

INJURY OR DEATH.

The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste, nor is it formulated to contain materials which are listed as hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrosivity, toxicity, or reactivity and is not formulated with contaminants as determined by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

14. TRANSPORT INFORMATION

UN Number	Not Regulated
UN Proper Shipping Name	Not Regulated
Transport Hazard Class	Not Regulated
Packing Group	Not Regulated
Environmental Hazards	Marine Pollutant – Not determined
Transportation in Bulk (Annex II of MARPOL 73/78 and IBC Code)	
Special Precautions	Spilled material may be a slip hazard.
U.S. DOT / Canadian TDG	Not Regulated
IMO / IDMG	Not Regulated
ICAO / IATA	Not Regulated
ADR / RID	Not Regulated

It is the responsibility of the handlers and transportation organization who is transporting this material to follow all applicable laws, regulations and rules relating to the transportation of this material. The information provided above is not intended to convey all specific regulatory or operational information and requirements which may pertain to this product.

15. REGULATORY INFORMATION

OSHA HAZARD COMMUNICATION STANDARD: The hazard classifications of this substance / mixture were made congruent to the Occupational Safety and Health Standards, established in OSHA Regulation Standards 29 CFR 1910.1200.

Complies with the following national/regional chemical inventory requirements: TSCA, DSL, EINECS

SARA 302 (TPQ)	SARA 304 (RQ)	SARA 313	CERCLA (RQ)	CAA 112(b) HAPS	CAA 112(r)
None	None	None	None	None	None

EPA SARA Title III Section 311/312 (40 CFR 370) Hazard Classification: Immediate acute health hazard.

California Proposition 65: This product does not contain any chemicals known to the State of California to cause cancer, birth defects or other harm.

16. ADDITIONAL INFORMATION

Revision Date: July 26, 2019
Revision #: 4.0
Supersedes Revision #: 3.0
Prepared or Revised By: HE&M Inc.
This SDS prepared for this substance / mixture was made congruent to the Occupational Safety and Health Standards, established in OSHA Regulation Standards 29 CFR 1910.1200.

HMIS	Health	Flammability	Physical Hazard	PPE
	3*	1	0	B
NFPA	Health	Flammability	Chemical Reactivity	Special Hazards
	3	1	0	None Known

Disclaimer: The information presented herein has been compiled from sources considered to be dependable and is accurate as of the date issued. However, since data, safety standards, and government regulations are subject to change and the conditions of handling and use are beyond our control, we make no warranty regarding the accuracy of such data or its suitability for any use or for any consequence of its use. The data in this SDS relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. Safe handling and use remain the responsibility of the purchaser and the purchaser has the sole responsibility to determine the suitability of the materials for any use and the manner of user contemplated. We assume no responsibility for injury to the recipient or to third persons or for any damage to any property and the recipient assumes all such risks.