Hartland Lubricants & Chemicals
914 Commercial Court
PO Box 809
Onalaska, WI 54650
608-779-6353

MATERIAL SAFETY DATA SHEET

SECTION 1: IDENTITY

Product Name: **Hartland Synthetic Grinding Fluid**
Emergency Telephone: PERS Professional Emergency Resource Services 24 Hour #800-633-8253
Outside the U.S. 801-629-0667 Revised 09-26-2013

SECTION 2: COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENT NAME:	CAS No.	Weight
Water	7732-18-5	60-80%
*Ethanol, 2, 2', 2" -Nitrilotris - (Common Name: Triethanolamine)	102-71-6	10-30%
Boric Acid (H3BO3), COMPD.with Alkanolamines	Proprietary	10-30%
Carboxylic Acids, DI-, C6-12, COMPDS. with Alkanolamines	Proprietary	3-7%
*2-Propanol, 1,1'-IMINOBIS- (Common Name: Diisopropanolamine)	110-97-4	1-5%

* This chemical(s) is hazardous according to OSHA / WHIMIS criteria

COMPOSITION COMMENTS: Refer to section 8 for exposure limits on ingredients. Chemical ingredients not regulated by OSHA, SARA, State or Federal agencies are treated confidentially.

SECTION 3: HAZARDS IDENTIFICATION

HEALTH HAZARDS, GENERAL: Prolonged exposure to product mist or vapors may cause respiratory irritation.

SENSITIZATION: No known information

CARCINOGENICITY: IARC: Not listed as a Group 1, 2A, or 2B agent.
OSHA: Not regulated. NTP: Not listed.

TERATOGENICITY: No data available to indicate product or any components contained at greater than 0.1% may cause birth defects.

HEALTH WARNINGS:
INHALATION: Inhalation of product vapor or mist may cause irritation of mucous membranes in nasal passages and throat.
SKIN CONTACT: Slightly irritating. Repeated or prolonged contact can result in drying of the skin.
EYE CONTACT: Liquid, vapor and mists may cause discomfort in the eye with severe transient conjunctivitis. Serious corneal injury is no anticipated.
INGESTION: Can cause stomach ache and vomiting. Main hazard, if ingested, is aspiration into the lungs and subsequent pneumonitis.

ROUTES OF ENTRY: Inhalation, Ingestion, Skin and / or Eye contact.

SECTION 4: FIRST AID MEASURES

INHALATION: Remove victim immediately from source of exposure. When breathing is difficult, properly trained personnel may assist affected person by administering 100% oxygen. Perform artificial respiration if breathing has stopped. Get medical attention.

EYES: Important! Immediately rinse with water for at least 15 minutes. Get medical attention if any discomfort continues.

SKIN: Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues.

INGESTION: DO NOT INDUCE VOMITING! Administer large amounts of water. Get medical attention immediately! Never give anything by mouth to an unconscious person.

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT: >100°C (212°F) Cd OC (Cleveland Open Cup)

FLAMMABILITY LIMIT-LOWER (%): N/D

FLAMMABILTIY LIMIT-UPPER (%): N/D

EXTINGUISHING MEDIA: Foam, Carbon dioxide (CO2), Dry chemicals, sand, dolomite, etc.

SPECIAL FIRE FIGHTING PROCEDURES: Use water to keep fire exposed containers cool and disperse vapors. Water spray may be used to flush spills away form exposures and dilute spills to non-flammable mixtures. Keep run-off water out of sewers and water sources. Dike for water control. Avoid water in straight hose stream, will scatter and spread fire.

UNUSUAL FIRE & EXPLOSION HAZARDS: Pressure will increase in over heated closed containers.

HAZARDOUS COMBUSTION PRODUCTS: Acrid smoke / fumes. Oxides of Carbon and Nitrogen.

PROTECTIVE MEASURES IN CASE OF FIRE: Self contained breathing equipment and chemical resistant clothing recommended.

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Minimize skin contact

PRECAUTIONS TO PROTECT THE ENVIRONMENT: Keep product out of sewers and watercourses by diking or impounding. Advise authorities if product has entered or may enter sewers, watercourses or extensive land areas. Assure conformity with applicable government regulations.

SPILL CLEAN-UP PROCEDURES: Contain spill. Absorb small amounts. Collect and return large amounts to shipping container. Rinse area with water.

SECTION 7: HANDLING AND STORAGE

HANDLING PRECAUTIONS: Keep lid closed when not in use. Do not reuse container. Avoid spilling, skin and eye contact. Eye wash and emergency shower must be available at the work place. Do not store or mix with strong oxidizers. Product contains amines, do not mix with nitrites. Do not add nitrites or other nitrosating agents. Nitrosamines, which may cause cancer, may be formed.

STORAGE PRECAUTIONS: Store separate from strong acids and oxidizers.
STORAGE CRITERIA: Chemical storage.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

COMPONENT	STD	TWA	STEL	TWA	STEL
Ethanol, 2,2',2"-Nitrilotris	OSHA			N/E	N/E
(Common Name:Triethanolamine)	ACGIH			5mg/m3	N/E

ENGINEERING CONTROLS: Use engineering controls to reduce air contamination to permissible exposure level.
VENTILATION: No specific recommendation made, but respiratory protection may still be required if air contamination exceeds acceptable level.
RESPIRATORS: No specific recommendation made, but respiratory protection may still be required under exceptional circumstances when excessive air contamination exists.
PROTECTIVE GLOVES: For prolonged or repeated skin contact, use suitable protective gloves. Use protective gloves made of neoprene, nitrile, polyethylene or PVC.
EYE PROTECTION: Wear splash-proof eye goggles to prevent any possibility of eye contact.
PROTECTIVE CLOTHING: Wear appropriate clothing to prevent repeated or prolonged skin contact.
HYGIENIC WORK PRACTICES: Wash at the end of each work shift and before eating, smoking and using the toilet.
PROTECTIVE EQUIPMENT: Wear protective Gloves and Eyewear.


SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE / PHYSICAL STATE:	Liquid		
COLOR:	Yellow or Blue		
ODOR:	Amine		
SOLUBILITY DESCRIPTION:	Soluble in water		
BOILING POINT (°C, RANGE):	100° (212°F)	PRESSURE:	760mmHg
MELT / FREEZE POINT (°C, INTERVAL)	0° (32°F)		
DENSITY:	1.08	TEMPERATURE (°C):	15.6 (60°F)
VAPOR DENSITY (AIR=1):	>1		
EVAPORATION RATE:	<1	REFERENCE:	BuAc=1
pH-VALUE, CONC. SOLUTION:	10.2		
pH-VALUE, DILUTED SOLUTION:	9.6	CONCENTRATION%M:	@5%

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Normally stable
CONDITIONS TO AVOID: Avoid heat, flames and other sources of ignition. Avoid contact with strong oxidizers.
HAZARDOUS POLYMERIZATION: Will not occur
POLYMERIZATION DESCRIPTION: Not applicable
HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of Carbon and Nitrogen

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION: No experimental toxicological data on the preparation as such is available.

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: There is no ecological data on the product itself.

SECTION 13: DISPOSAL CONSIDERATIONS

DISPOSAL METHODS: Spilled material, unused contents and empty containers must be disposed of in accordance with local, state and federal regulations.

SECTION 14: TRANSPORT INFORMATION

DOT HAZARD CLASS:	Not regulated
SEA TRANSPORT NOTES:	Not regulated per IMDG
AIR TRANSPORT NOTES:	Not regulated per IATA

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS: COMPONENT	SARA 302	CERCLA	SARA 313
2-Propanol,1,1'-Iminobis(Common Name: Diisopropanolamine)	No	No	No
Ethanol,2,2',2"-Nitrilotris(Common Name: Triethanolamine)	No	No	No
Boric Acid (H3BO3), COMPD. With Alkanolamines	No	No	No
Carboxylic Acids, DI-,C6-12, CMPLDS. With Alkanolamines	No	No	No

SARA HAZARD CATEGORIES: Acute Chronic

US STATE REGULATIONS: BY COMPONENT	CA	MA	FL	MN	NJ	PA	RI
Ethanol,2,2',2"-Nitrilotris (Common Name: Triethanolamine)		Yes	Yes			HS	yes

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS): Not a controlled product

INVENTORIES: COMPONENT	CAN	US	EU	AUS	JAP	KOR	PHLP	CHN
Ethanol,2,2',2"-Nitrilotris (Common Name: Triethanolamine)	DSL	Yes	EINECS	Yes	Yes	Yes	Yes	Yes
Boric Acid (H3BO3), COMPD. With Alkanolamines		Excluded			PRTR1			
Carboxylic Acids, DI-,C6-12, CMPLDS. With Alkanolamines		Excluded			Salt			
2-Propanol,1,1'-Iminobis (Common Name: Diisopropanolamine)	DSL	Yes	EINECS	Yes	Yes		Yes	Yes

NOTICE: This product contains substances that are excluded from the TSCA Inventory by the Physicochemical Exclusion under 40 CFR 710.4(d)(7).(d) Chemical substances excluded from the inventory. (7) Any chemical substance which results from a chemical reaction that occurs when a chemical substance, solely intended to impart a specific physicochemical characteristic, functions as intended.

SECTION 16: OTHER INFORMATION

NFPA-HMIS: HEALTH	Irritation, minor residual injury (1) - HMIS / NFPA
NFPA-HMIS: FLAMMABILITY	Burns only if pre-heated (1) - HMIS / NFPA
NFPA-HMIS: REACTIVITY	Normally stable (0) - HMIS / NFPA
HMIS PERSON PROTECTION INDEX	B - Safety Eyewear and Gloves

While the information and recommendations set forth herein are believed to be accurate as of the date thereof, we make no warranty with respect thereto and disclaim all liability from reliance therein.