SAFETY DATA SHEET

Revision Date 09-21-2019 **Version** 3

SECTION 1: IDENTIFICATION

Product identifier

Product Code(s) 42006000-M
Product Name HOUGHTO-GRIND 60

Other means of identification

UN Number UN2491

Recommended use of the chemical and restrictions on use

Recommended Use Metalworking fluid
Uses advised against Any other purpose.

Suppliers name, address and phone number

Manufacturer, Importer, Supplier

Houghton Australia Pty. Ltd.
287 Wickham Road
Moorabbin, Victoria
Australia, 3189
+61 1300 736 642

Emergency telephone number

For further information, please contact: ProductStewardship@houghtonintl.com

Emergency Telephone 3E Company (+)1 760 476 3960 (Code 333938)
Australia: (+)61 1 800 686 951
Australia (+)61 280 363 166
New Zealand: (+)64 800 451719

SECTION 2: HAZARDS IDENTIFICATION

GHS Classification

Skin corrosion/irritation	Category 1 Sub-category B - (H314)
Serious eye damage/eye irritation	Category 1 - (H318)
Reproductive toxicity	Category 1B - (H360)
Specific target organ toxicity (single exposure)	Category 3 - (H335)

Label elements

Exclamation mark
Health hazards
Corrosion

Signal word
DANGER

Hazard statements
H314 - Causes severe skin burns and eye damage
H360 - May damage fertility or the unborn child
H335 - May cause respiratory irritation

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Do not breathe dust/fume/gas/mist/vapors/spray
Wash face, hands and any exposed skin thoroughly after handling
Use only outdoors or in a well-ventilated area
Keep only in original container
Precautionary Statements - Response
Immediately call a POISON CENTER or doctor/physician
Eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a POISON CENTER or doctor/physician
Skin
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
Inhalation
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Immediately call a POISON CENTER or doctor/physician
Ingestion
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
Precautionary Statements - Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed
Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Other hazards
Harmful to aquatic life with long lasting effects

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture. Health hazard information is based on its ingredients

Chemical name	CAS No	Weight-%
2-Aminoethanol	141-43-5	10% - 25%
Neutralised boric acid	10043-35-3*	2.5% - 10%
2,2',2''-Nitrilotriethanol	102-71-6	2.5% - 10%
Neutralised 2-Aminoethanol	141-43-5*	2.5% - 10%

The remaining composition is a mixture of non-classified ingredients or additives below the threshold for disclosure

SECTION 4: FIRST AID MEASURES

Description of first aid measures

General advice	Immediate medical attention is required. Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapors/spray. Remove from exposure, lie down.
Inhalation	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately if symptoms occur.
Skin contact	IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. Immediate medical attention is required.
Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Seek immediate medical attention/advice.
Ingestion	Clean mouth with water and afterwards drink plenty of water. Call a POISON CENTER or doctor/physician if exposed or you feel unwell.
Protection of First-aiders	Use personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

Most important symptoms and effects, both acute and delayed

Symptoms Causes burns. blistering. Breathing difficulties.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

SECTION 5: FIRE FIGHTING MEASURES

Extinguishing media

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Extinguishing media which shall not be used for safety reasons
None

Specific hazards arising from the chemical

Hazardous decomposition products
None under normal use

Special protective equipment and precautions for fire fighters
Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

Hazchem emergency action code 2X.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions	Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
For emergency responders	Use personal protection recommended in Section 8.

Environmental precautions

See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Ensure adequate ventilation. Do not eat, drink or smoke when using this product. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place.

Recommended Shelf Life
Shelf life 12 months

Incompatible materials
Acids. Strong oxidizing agents.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Chemical name	Australia	New Zealand	New Zealand - Biological Exposure Indices (BEI)
2-Aminoethanol	TWA: 3 ppm TWA: 7.5 mg/m^3 STEL: 6 ppm STEL: 15 mg/m^3	TWA: 3 ppm TWA: 7.5 mg/m^3 STEL: 6 ppm STEL: 15 mg/m^3	
2,2',2"-Nitrilotriethanol	TWA: 5 mg/m^3 (+)	TWA: 5 mg/m^3	

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection If splashes are likely to occur, wear:. Face-shield.

Skin and body protection Wear protective gloves/clothing.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Environmental exposure controls No information available.

Hygiene measures Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Remove

and wash contaminated clothing before re-use. Regular cleaning of equipment, work area and clothing is recommended. Do not eat, drink or smoke when using this product. Handle in accordance with good industrial hygiene and safety practice.

Thermal hazards None under normal use conditions.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	liquid	**Appearance**	clear , yellow green
Odor	Not Determined	**Odor threshold**	Not Determined

Property	Values	Remarks
pH	10.4	
Melting point / freezing point	Not Determined	
Boiling point / boiling range	Not Determined	
Flash point	> 99 °C / > 210 °F	Open cup
Evaporation rate	Not Determined	
Flammability (solid, gas)	Not Determined	
Flammability Limit in Air		
Upper flammability limit:	Not Determined	
Lower flammability limit:	Not Determined	
Vapor pressure	Not Determined	
Vapor density	Not Determined	
Relative density	1.09	@15.5°C
Solubility(ies)	Soluble in water	
Partition coefficient	Not Determined	
Autoignition temperature	Not Determined	
Decomposition temperature	Not Determined	
Kinematic viscosity	Not Determined	
Explosive properties	Not applicable	
Oxidizing Properties	Not applicable	

Other Information

Viscosity, kinematic (100°C)	Not Determined
Pour Point	Not Determined
VOC Content (ASTM E-1868-10)	Not Determined
VOC content	Not Determined

SECTION 10: STABILITY AND REACTIVITY

Reactivity

None under normal use conditions.

Chemical stability

Stable under normal conditions.

Possibility of hazardous reactions

None under normal processing.

Conditions to avoid

None known based on information supplied.

Incompatible materials

Acids. Strong oxidizing agents.

Hazardous decomposition products

Carbon oxides. Nitrogen oxides (NOx).

SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity

Information on likely routes of exposure

Product Information - Principle Routes of Exposure

Inhalation Irritating to respiratory system.

Eye contact May result in permanent damage including blindness.

Skin contact Corrosive.

Ingestion Ingestion causes burns of the upper digestive and respiratory tracts.

Symptoms Causes burns. May result in permanent damage including blindness. Signs and symptoms may include coughing, gasping, choking and difficulty breathing.

Numerical measures of toxicity - Product Information

ATEmix (oral) 7,163.00 mg/kg
ATEmix (dermal) 6,060.00 mg/kg
ATEmix (inhalation-dust/mist) 8.90 mg/l

Acute toxicity - Product Information

Product does not present an acute toxicity hazard based on known information

Acute toxicity - Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
2-Aminoethanol	1720 mg/kg (Rat)	= 1 mL/kg (Rabbit) = 1025 mg/kg (Rabbit)	
Neutralised boric acid	3500 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 0.16 mg/L (Rat) 4 h
2,2',2''-Nitrilotriethanol		> 16 mL/kg (Rat) > 2000 mg/kg (Rabbit)	
Neutralised 2-Aminoethanol	1720 mg/kg (Rat)	= 1 mL/kg (Rabbit) = 1025 mg/kg (Rabbit)	

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Corrosive. Category 1B.

Serious eye damage/eye irritation Causes severe eye damage.

Respiratory or skin sensitization Based on available data, the classification criteria are not met.

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity Based on available data, the classification criteria are not met.

Reproductive toxicity Contains a known or suspected reproductive toxin. May impair fertility. May cause harm to

	the unborn child.
Specific target organ systemic toxicity (single exposure)	May cause irritation of respiratory tract.
Specific target organ systemic toxicity (repeated exposure)	Based on available data, the classification criteria are not met.
Aspiration hazard	Based on available data, the classification criteria are not met.
Exposure levels	See section 8 for more information
Interactive effects	None known

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Crustacea
2-Aminoethanol	2.8: 72 h Pseudokirchneriella subcapitata mg/L EC50	227: 96 h Pimephales promelas mg/L LC50 flow-through 3684: 96 h Brachydanio rerio mg/L LC50 static 300 - 1000: 96 h Lepomis macrochirus mg/L LC50 static 114 - 196: 96 h Oncorhynchus mykiss mg/L LC50 static 200: 96 h Oncorhynchus mykiss mg/L LC50 flow-through	65: 48 h Daphnia magna mg/L EC50
Neutralised boric acid	>28: 72 h Selenastrum capricornutum mg/L EC50	1020: 72 h Carassius auratus mg/L LC50 flow-through 627: 96 h Oncorhynchus tschawytscha mg/L LC50	115 - 153: 48 h Daphnia magna mg/L EC50
2,2',2''-Nitrilotriethanol	216: 72 h Desmodesmus subspicatus mg/L EC50 169: 96 h Desmodesmus subspicatus mg/L EC50	10600-13000: 96 h Pimephales promelas mg/L LC50 flow-through 1000: 96 h Pimephales promelas mg/L LC50 static 450-1000: 96 h Lepomis macrochirus mg/L LC50 static	1386: 24 h Daphnia magna mg/L EC50
Neutralised 2-Aminoethanol	2.8: 72 h Pseudokirchneriella subcapitata mg/L EC50	227: 96 h Pimephales promelas mg/L LC50 flow-through 3684: 96 h Brachydanio rerio mg/L LC50 static 300 - 1000: 96 h Lepomis macrochirus mg/L LC50 static 114 - 196: 96 h Oncorhynchus mykiss mg/L LC50 static 200: 96 h Oncorhynchus mykiss mg/L LC50 flow-through	65: 48 h Daphnia magna mg/L EC50

Persistence and degradability

No information available

Bioaccumulative potential

Chemical name	Partition coefficient
2-Aminoethanol	-1.91
Neutralised boric acid	-0.757
2,2',2''-Nitrilotriethanol	-2.53
Neutralised 2-Aminoethanol	-1.91

Mobility

Will likely be mobile in the environment due to its water solubility Miscible with water

Other adverse effects

No information available

SECTION 13: DISPOSAL CONSIDERATIONS

Safe handling and disposal methods

Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Disposal of any contaminated packaging

Do not reuse empty containers.

Environmental regulations

No information available

SECTION 14: TRANSPORT INFORMATION

ADG

UN Number	UN2491
Proper shipping name	ETHANOLAMINE SOLUTION
Hazard Class	8
Packing Group	III
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable
Special precautions for users	No information available
Hazchem emergency action code	2X
Description	UN2491, ETHANOLAMINE SOLUTION, 8, III

IMDG

UN/ID no	UN2491
Proper shipping name	ETHANOLAMINE SOLUTION
Hazard Class	8
Packing Group	III
EmS-No	F-A, S-B
Vessel Stowage Location Code	A
Description	UN2491, ETHANOLAMINE SOLUTION, 8, III

IATA

UN/ID no	UN2491
Proper shipping name	ETHANOLAMINE SOLUTION
Hazard Class	8
Packing Group	III
ERG Code	8L
Description	UN2491, ETHANOLAMINE SOLUTION, 8, III

SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations

Australia

See section 8 for national exposure control parameters

Standard for Uniform Scheduling of Medicines and Poisons (SUSMP)
Classified as a scheduled poison according to the Standard for Uniform Scheduling of Medicines and Poisons (SUSMP)

Poison Schedule Number 5

New Zealand

HSNO Hazard Classification:
6.1E - Substances that are acutely toxic
6.8A - Substances that are known or presumed human reproductive or developmental toxicants
8.2B - Substances that are corrosive to dermal tissue
8.3A - Substances that are corrosive to ocular tissue
9.1C - Substances that are harmful in the aquatic environment

HSNO Approval Number:

HSNO Approval Number: HSR002547
HSNO Group Standard: Corrosion Inhibitors (Corrosive) GROUP STANDARD 2017.

International Inventories

Inventory information may be utilizing alternative CAS#s or exemptions beyond those stated within this document For further information, please contact: ProductStewardship@houghtonintl.com

TSCA	Complies
DSL	Complies
AICS	Complies
PICCS	Complies
KECL	Does not Comply
IECSC	Complies
ENCS	Complies
TCSI	Does not Comply
NZIoC	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
AICS - Australian Inventory of Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
ENCS - Japan Existing and New Chemical Substances
TCSI - Taiwan National Existing Chemical Inventory
NZIoC - New Zealand Inventory of Chemicals

International Regulations

Ozone-depleting substances (ODS) Not applicable

Persistent Organic Pollutants Not applicable

Chemicals Subject to Prior Informed Consent (PIC) Not applicable

Other Information
Not applicable

SECTION 16: OTHER INFORMATION

Revision Date	09-21-2019
Revision Note	This SDS has been revised in the following section(s), Company Logo.

Key or legend to abbreviations and acronyms used in the safety data sheet

TWA	Time weighted average	STEL	Short term exposure limit
Ceiling	Maximum limit value:	(s) - Skin	Skin designation
+	Sensitizers	C	Carcinogen

STOT SE - Specific target organ systemic toxicity (Single exposure)
STOT RE - Specific target organ systemic toxicity (repeated exposure)
VOC - Volatile organic compounds

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet