

# MSDS ATTACHMENT

PLEASE ATTACH THIS COMPLETED SHEET TO THE MSDS FOR :

PRODUCT :

HOUGHTO-GRIND 60

DATE :

(MSDS date)

11.10.2021

**1. Manufacturer/Supplier :**

PPS Industries Limited  
86 Hugo Johnston Drive, Auckland  
New Zealand  
P.O.Box 12823, Penrose, Auckland 1642  
Phone : 64 9 579-1001  
Facsimile : 64 9 579-9497  
Emergency Phone : 0800 657-894  
Website: www.ppsindustries.co.nz

**Emergency Information :**

National Poison Centre 0800 764-766  
Chemcall 24/7 Emergency Response Service : 0800 243-622

**13. Disposal Considerations :**

**Product**

Recommendation - Consult local or national regulations to ensure proper disposal.

**Packaging**

Disposal must be made according to official regulations.

**16. Other Information :**

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

# SAFETY DATA SHEET

## HOUGHTO-GRIND™ 60

SDS according to the Work Health and Safety Regulations (WHS)

### Section 1. Identification

**Product name** : HOUGHTO-GRIND™ 60  
**Product code** : 42006000  
**Other means of identification** : Not available.  
**UN number** : UN2491

#### Relevant identified uses of the substance or mixture and uses advised against

**Relevant uses** : Metalworking fluid  
**Uses advised against** : Any other purpose.

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

ProductStewardship@quakerhoughton.com  
www.quakerhoughton.com

**Emergency telephone number (with hours of operation)** : CHEMTREC Australia: +(61)-290372994

### Section 2. Hazard(s) identification

This product is considered hazardous under the Work Health and Safety Regulations.

**Classification of the substance or mixture** : SKIN CORROSION/IRRITATION - Category 1B  
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1  
TOXIC TO REPRODUCTION - Category 1  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

#### GHS label elements

**Hazard pictograms** :



Corrosion, Health hazard, Exclamation mark

**Signal word** :

**DANGER**

**Hazard statements** :

**Causes severe skin burns and eye damage.  
May cause respiratory irritation.  
May damage fertility or the unborn child.**

#### Precautionary statements

## Section 2. Hazard(s) identification

- Prevention** : Obtain special instructions before use. Wear protective gloves. Wear protective clothing. Wear eye or face protection. Avoid breathing vapor.
- Response** : Immediately call a POISON CENTER or doctor. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- Storage** : Store in a well-ventilated place. Keep container tightly closed.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Supplemental label elements** : Not applicable.

**Other hazards which do not result in classification** : None known.

## Section 3. Composition and ingredient information

**Substance/mixture** : Mixture

Ingredient name	% (w/w)	CAS number
2-aminoethanol	≥10 - <30	141-43-5
boric acid	≤10	10043-35-3
2,2',2"-nitrilotriethanol	≤10	102-71-6

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

## Section 4. First aid measures

### Description of necessary first aid measures

- General advice** : Get medical attention immediately. If medical advice is needed, have product container or label at hand. Use personal protective equipment as required. Remove contaminated clothing and wash it before reuse. Wash skin surfaces thoroughly after contact.
- Inhalation** : Get medical attention immediately. Move affected person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Skin contact** : Get medical attention immediately. Take off immediately all contaminated clothing. Rinse skin with water or shower.
- Eye contact** : Get medical attention immediately. Flush with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Remove contact lenses, if present and easy to do.
- Ingestion** : Get medical attention immediately. May cause burns to mouth, throat and stomach. Ingestion may cause gastrointestinal irritation and diarrhea. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

### Most important symptoms/effects, acute and delayed

- Inhalation** : breathing difficulty or shortness of breath, respiratory tract irritation, coughing
- Skin contact** : pain, redness, burns
- Eye contact** : pain, redness, watering, burns
- Ingestion** : May cause burns to mouth, throat and stomach, stomach pains, nausea or vomiting



## Section 4. First aid measures

### Indication of immediate medical attention and special treatment needed, if necessary

- 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.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Use personal protective equipment as required.

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire. Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.
- Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous thermal decomposition products** : In a fire, hazardous decomposition products may be produced. carbon oxides (CO, CO<sub>2</sub>) nitrogen oxides
- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
- Hazchem code** : 2X

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Put on appropriate personal protective equipment (see Section 8). Keep unnecessary personnel away. Avoid breathing vapor or mist. Provide adequate ventilation.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". Evacuate area.

- Environmental precautions** : Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Do not allow any potentially contaminated water, including rain water, runoff from fire fighting or spills, to enter any waterway, sewer or drain.

### Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. For large spills, dike spilled material or otherwise contain it to ensure runoff does not reach a waterway. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.



## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

## Section 8. Exposure controls and personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
2-aminoethanol	<b>Safe Work Australia (Australia, 4/2018).</b> STEL: 15 mg/m <sup>3</sup> 15 minutes. STEL: 6 ppm 15 minutes. TWA: 7.5 mg/m <sup>3</sup> 8 hours. TWA: 3 ppm 8 hours.
boric acid	<b>ACGIH TLV (United States, 3/2019).</b> TWA: 2 mg/m <sup>3</sup> 8 hours. Form: Inhalable fraction STEL: 6 mg/m <sup>3</sup> 15 minutes. Form: Inhalable fraction
2,2',2''-nitrilotriethanol	<b>Safe Work Australia (Australia, 4/2018).</b> <b>Skin sensitizer.</b> TWA: 5 mg/m <sup>3</sup> 8 hours.

### Biological Exposure Indices (BEI)

None.

- Appropriate engineering controls** : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location. Keep equipment clean.

## Section 8. Exposure controls and personal protection

- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: Face shield. If inhalation hazards exist, a full-face respirator may be required instead.
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers.
- Other skin protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- Thermal hazards** : Not expected under normal use. Not relevant/applicable due to nature of the product.

## Section 9. Physical and chemical properties

### Appearance

- Physical state** : Liquid.
- Color** : Yellow., Green.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : 10.4
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Open cup: >99°C (>210.2°F)
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapor pressure** : Not available.
- Vapor density** : Not available.
- Relative density** : 1.09
- Solubility** : Easily soluble in the following materials: cold water.
- Solubility in water** : Not available.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Flow time (ISO 2431)** : Not available.



## Section 10. Stability and reactivity

**Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**Chemical stability** : The product is stable.

**Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**Conditions to avoid** : No specific measures identified.

**Incompatible materials** : Strong oxidizing materials. strong acids. strong alkalis

**Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

**Acute toxicity** : Based on available data, the classification criteria are not met.

#### Acute toxicity estimates

Oral	10136.91 mg/kg
Dermal	6482.91 mg/kg
Inhalation (dusts and mists)	8.84 mg/l

#### Numerical measures of toxicity

Product/ingredient name	Result	Species	Dose	Exposure
2-aminoethanol	LC50 Inhalation Dusts and mists	Rat	1.5 mg/l	4 hours
	LD50 Oral	Rat	1720 mg/kg	-
boric acid	LD50 Oral	Rat	3500 mg/kg	-
2,2',2''-nitrilotriethanol	LD50 Oral	Rat	7.39 g/kg	-

**Irritation/Corrosion** : Causes severe skin burns and eye damage.

Product/ingredient name	Result	Species	Score	Exposure	Observation
2-aminoethanol	Eyes - Severe irritant	Rabbit	-	250 ug	-
	Skin - Moderate irritant	Rabbit	-	505 mg	-
boric acid	Skin - Mild irritant	Human	-	72 hours 15 mg l	-
2,2',2''-nitrilotriethanol	Eyes - Mild irritant	Rabbit	-	10 mg	-
	Eyes - Severe irritant	Rabbit	-	20 mg	-
	Skin - Mild irritant	Human	-	72 hours 15 mg l	-
	Skin - Severe irritant	Mouse	-	50 %	-
	Skin - Mild irritant	Rabbit	-	24 hours 560 mg	-

**Sensitization** : Based on available data, the classification criteria are not met.

**Mutagenicity** : Based on available data, the classification criteria are not met.

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

Product/ingredient name	IARC
2,2',2''-nitrilotriethanol	3

**Reproductive toxicity** : Based on available data, the classification criteria are not met.

**Specific target organ toxicity (single exposure)** : Irritating to respiratory system.

Name	Category	Route of exposure	Target organs
2-aminoethanol	Category 3	-	Respiratory tract irritation



## Section 11. Toxicological information

<b>Specific target organ toxicity (repeated exposure)</b>	: Based on available data, the classification criteria are not met.
<b>Aspiration hazard</b>	: Based on available data, the classification criteria are not met.
<b>Other information</b>	: None identified.

### Information on the likely routes of exposure

<b>Inhalation</b>	: Severely irritating to the respiratory system.
<b>Skin contact</b>	: Causes burns.
<b>Eye contact</b>	: Causes serious eye damage.
<b>Ingestion</b>	: Causes digestive tract burns. May cause burns to mouth, throat and stomach.

### Delayed and immediate effects and also chronic effects from short and long term exposure

May damage the unborn child. May damage fertility. Irritating to respiratory system.

### Symptoms related to the physical, chemical and toxicological characteristics

<b>Inhalation</b>	: breathing difficulty or shortness of breath, respiratory tract irritation, coughing
<b>Skin contact</b>	: pain, redness, burns
<b>Eye contact</b>	: pain, redness, watering, burns
<b>Ingestion</b>	: May cause burns to mouth, throat and stomach., stomach pains, nausea or vomiting

## Section 12. Ecological information

This material is harmful to aquatic life.

### Toxicity

Product/ingredient name	Result	Species	Exposure
2-aminoethanol	Acute EC50 2.8 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute LC50 >100000 µg/l Marine water	Crustaceans - Crangon crangon - Adult	48 hours
boric acid	Acute LC50 170 mg/l Fresh water	Fish - Carassius auratus	96 hours
	Acute EC50 >28 mg/l	Algae - Selenastrum capricornutum	72 hours
	Acute LC50 45.5 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia	48 hours
	Acute LC50 133000 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
2,2',2"-nitrilotriethanol	Acute LC50 75 mg/l Marine water	Fish - Pagrus major	96 hours
	Chronic NOEC 6000 µg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 2100 µg/l Fresh water	Fish - Oncorhynchus mykiss	87 days
	Acute EC50 609.98 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute LC50 11800000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 16000 µg/l Fresh water	Daphnia - Daphnia magna	21 days

### Persistence and degradability

Not available.

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
2-aminoethanol	-1.31	-	low
boric acid	-1.09	-	low
2,2',2"-nitrilotriethanol	-1	<3.9	low

## Section 12. Ecological information

### Mobility in soil




Soil/water partition coefficient ( $K_{oc}$ ) : Not available.

Other adverse effects : No known significant effects or critical hazards.

## Section 13. Disposal considerations

**Disposal methods** : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Empty containers or liners may retain some product residues. Empty containers retain product residue and can be hazardous. Care should be taken when handling emptied containers that have not been cleaned or rinsed out.

## Section 14. Transport information

	ADG	IMDG	IATA
UN number	UN2491	UN2491	UN2491
UN proper shipping name	ETHANOLAMINE	ETHANOLAMINE	Ethanolamine
Transport hazard class(es)	8 	8 	8 
Packing group	III	III	III
Environmental hazards	No.	No.	No.

### Additional information

**ADG** : **Hazchem code** 2X  
**Special provisions** 223

**IMDG** : **Emergency schedules** F-A, S-B  
**Special provisions** 223

**IATA** : **Quantity limitation** Passenger and Cargo Aircraft: 5 L. Packaging instructions: 852. Cargo Aircraft Only: 60 L. Packaging instructions: 856. Limited Quantities - Passenger Aircraft: 1 L. Packaging instructions: Y841.  
**Special provisions** A3, A803

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to IMO instruments** : Not available.



## Section 15. Regulatory information

### Standard for the Uniform Scheduling of Medicines and Poisons

5

### Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

### International regulations

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

**Australian Inventory of Industrial Chemicals (AIIC)** : All components are listed or exempted.

**New Zealand Inventory of Chemicals (NZIoC)** : All components are listed or exempted.

## Section 16. Any other relevant information

<b>Date of issue/Date of revision</b>	: 10/11/2021
<b>Version</b>	: 2
<b>Key to abbreviations</b>	: ADG = Australian Dangerous Goods ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) N/A = Not available SGG = Segregation Group SUSMP = Standard Uniform Schedule of Medicine and Poisons UN = United Nations IARC = International Agency for Research on Cancer.
<b>References</b>	: <b>Safety data sheets of raw materials, global regulatory body information, scientific literature, and testing data .</b>

✓ Indicates information that has changed from previously issued version.

### Notice to reader

This product's safety information is provided to assist our customers in assessing compliance with safety/health/environmental regulations. The information contained herein is based on data available to us and is correct to the best of our knowledge, information and belief at the date of its publication. However, no warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of this data, the results to be obtained from the use thereof, or the hazards connected with the use of the product. Since the use of this product is within the exclusive control of the user, it is the user's obligation to determine the conditions for safe use of the product. Such conditions should comply with all regulations concerning the product. The company referenced in this Safety Data Sheet assumes no liability



## Section 16. Any other relevant information

for any injury or damage, direct or consequential, resulting from the use of this product unless such injury or damage is attributable to the gross negligence of such company.