



HOUGHTON

SAFETY DATA SHEET

Revision Date: 09-13-2015

Version 2

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Code(s): 70744700-M
Product Name HOUGHTO-DRAW 7047-RP

Recommended use Metalworking fluid, Forming
Uses advised against Any other purpose.

Manufacturer, Importer, Supplier

Houghton International Inc.
Madison & Van Buren Aves.
Valley Forge, PA 19482
Telephone: 610-666-4000 FAX: 610-666-1376
Website: www.houghtonintl.com
Customer Service: 888-459-9844

Houghton Canada
915 Meyerside Drive
Mississauga
ON LST 1R8

Emergency telephone number

3E Company 1-866-519-4752 (USA, Canada, Mexico)
Company Access Code: 333938

SECTION 2: HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Carcinogenicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 2

GHS Label elements, including precautionary statements

Signal Word
Warning

Hazard Statements

Harmful if inhaled
Suspected of causing cancer
May cause damage to organs through prolonged or repeated exposure



Precautionary Statements**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
 Use only outdoors or in a well-ventilated area
 Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

Other information

Not applicable

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

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

Chemical Name	CAS-No	Weight %
2,2',2''-Nitrilotriethanol	102-71-6	2.5% - 10%
Neutralised 2,2',2''-Nitriloethanol	102-71-6*	2.5% - 10%
Oxirane, 2-methyl-, polymer with oxirane, monobutyl ether	9038-95-3	2.5% - 10%
Neutralised Potassium Hydroxide	1310-58-3*	1% - 2.5%
Neutralised 2,2'-Iminodiethanol	111-42-2*	1% - 2.5%
Neutralised 2-Aminoethanol	141-43-5*	1% - 2.5%

SECTION 4: FIRST AID MEASURES**4.1. Description of first-aid measures**

General advice	Do not breathe dust/fume/gas/mist/vapors/spray. When symptoms persist or in all cases of doubt seek medical advice. May produce an allergic reaction. Do not get in eyes, on skin, or on clothing.
Inhalation	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately if symptoms occur. Artificial respiration and/or oxygen may be necessary.
Skin contact	Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing before re-use. If symptoms persist, call a physician.
Eye contact	Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing.
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. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

4.2. Most important symptoms and effects, both acute and delayed

Main Symptoms Breathing difficulties

4.3. Indication of immediate medical attention and special treatment needed

Notes to physician Treat symptomatically. May cause sensitization of susceptible persons.

SECTION 5: FIRE FIGHTING MEASURES**5.1. Extinguishing media****Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment; Use CO2, dry chemical, or foam, Water spray or fog

Extinguishing media which shall not be used for safety reasons

None

5.2. Special hazards arising from the substance or mixture**Special Hazard**

Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Decomposition Products

None under normal use

5.3. Advice for firefighters**Special protective equipment for fire-fighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

SECTION 6: ACCIDENTAL RELEASE MEASURES**6.1. Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation. Use personal protective equipment. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes and clothing.

Advice for non-emergency personnel Material can create slippery conditions.

Advice for emergency responders For personal protection see section 8.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.

6.3. Methods and materials for containment and cleaning up

After cleaning, flush away traces with water.

6.4. Reference to other sections

See Section 8/12/13 for additional information

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Wear personal protective equipment. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities**Technical measures/Storage conditions**

Keep container tightly closed in a dry and well-ventilated place.

Recommended Shelf Life

No information available.

Incompatible Materials

Strong oxidizing agents, Strong acids, Strong bases

7.3. Specific end uses

Specific use(s) Metalworking fluid, Forming

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**Control parameters****Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH	AIHA WEEL
2,2',2''-Nitrilotriethanol 102-71-6	TWA: 5 mg/m ³			
Neutralised 2,2',2''-Nitriloethanol 102-71-6*	TWA: 5 mg/m ³			
Neutralised Potassium Hydroxide 1310-58-3*	Ceiling: 2 mg/m ³	(vacated) Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³	
Neutralised 2,2'-Iminodiethanol 111-42-2*	TWA: 1 mg/m ³ inhalable fraction and vapor Skin	(vacated) TWA: 3 ppm (vacated) TWA: 15 mg/m ³	TWA: 3 ppm TWA: 15 mg/m ³	
Neutralised 2-Aminoethanol 141-43-5*	STEL: 6 ppm TWA: 3 ppm	TWA: 3 ppm TWA: 6 mg/m ³ (vacated) TWA: 3 ppm (vacated) TWA: 8 mg/m ³ (vacated) STEL: 6 ppm (vacated) STEL: 15 mg/m ³	IDLH: 30 ppm TWA: 3 ppm TWA: 8 mg/m ³ STEL: 6 ppm STEL: 15 mg/m ³	

Other Exposure Guidelines

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Exposure controls**Engineering Measures**

Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment**Eye/Face Protection**

Safety glasses with side-shields.

Skin and body protection	Wear protective gloves/clothing.
Respiratory protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.
Hygiene measures	Wear personal protective equipment. Avoid breathing vapors, mist or gas. Do not eat, drink or smoke when using this product. Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state @20°C	liquid	Appearance	clear dark amber
Odor	Mild Soapy	Odor Threshold	Not Applicable
<u>Property</u>	<u>Values</u>		<u>Note</u>
pH	8.6		
Melting Point / Freezing Point	No information available		
Boiling point/boiling range	102 °C / 216 °F		
Flash point	Not Applicable		
Evaporation rate	< 1		(BuAc = 1)
Flammability (solid, gas)	No information available		
Flammability Limits in Air			
upper flammability limit	No information available		
Lower flammability limit	No information available		
Vapor pressure	No information available		
Vapor density	No information available		
Relative density	1.065		@ 15.5°C
Solubility(ies)	Soluble in water		
Partition coefficient: n-octanol/water	Not Applicable		
Autoignition temperature	No information available		
Decomposition temperature	No information available		
Viscosity, kinematic	No information available		
Explosive properties	Not Applicable		
Oxidizing Properties	Not Applicable		

9.2 Other information

Viscosity, kinematic (100°C)	No information available
Pour point	No information available
VOC Content (ASTM E-1868-10)	No information available
VOC Content	No information available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

None under normal use conditions

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

None under normal use conditions

10.4. Conditions to avoid

Do not freeze

10.5. Incompatible Materials

Strong oxidizing agents, Strong acids, Strong bases

10.6. Hazardous decomposition products

None under normal use conditions

SECTION 11: TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information	Harmful by inhalation
Inhalation	Harmful by inhalation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Eye contact	There is no data available for this product.
Skin contact	There is no data available for this product.
Ingestion	There is no data available for this product.

Component Information

Chemical Name	LD50 Oral (Rat)	LD50 Dermal (Rat/Rabbit)	LC50 Inhalation
2,2',2''-Nitrilotriethanol 102-71-6		> 16 mL/kg (Rat) > 2000 mg/kg (Rabbit)	
Neutralised 2,2',2''-Nitriloethanol 102-71-6*	4190 mg/kg (Rat)	2000 mg/kg (Rabbit) 16 mL/kg (Rat)	
Oxirane, 2-methyl-, polymer with oxirane, monobutyl ether 9038-95-3	12300 µL/kg (Rat)	> 20 mL/kg (Rabbit)	
Neutralised Potassium Hydroxide 1310-58-3*	214 mg/kg (Rat)		
Neutralised 2,2'-Iminodiethanol 111-42-2*	1100 mg/kg (Rat)		
Neutralised 2-Aminoethanol 141-43-5*	1720 mg/kg (Rat)		

Information on toxicological effects

Symptoms Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Signs and symptoms may include coughing, gasping, choking and difficulty breathing. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing.

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

Sensitization	May cause sensitization by inhalation.
Germ Cell Mutagenicity	None known.
Carcinogenicity	The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Neutralised 2,2',2''-Nitriloethanol 102-71-6*		Group 3		
Neutralised	A3	Group 2B		X

2,2'-Iminodiethanol 111-42-2*				
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ACGIH: (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC: (International Agency for Research on Cancer)

Group 3 - Not Classifiable as to Carcinogenicity in Humans

Group 2B - Possibly Carcinogenic to Humans

OSHA: (Occupational Safety & Health Administration)

X - Present

Reproductive toxicity	None known.
Specific target organ systemic toxicity (single exposure)	None known.
Specific target organ systemic toxicity (repeated exposure)	May cause damage to organs through prolonged or repeated exposure if swallowed.
Aspiration hazard	None known.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
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 2,2',2''-Nitriloethanol	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 Potassium Hydroxide		80: 96 h Gambusia affinis mg/L LC50 static 165: 24 h Poecilia reticulata mg/L LC50		270: 24 h Daphnia magna mg/L EC50
Neutralised 2,2'-Iminodiethanol	2.2: 96 h Pseudokirchnerella subcapitata mg/L EC50	1370 - 1550: 96 h Pimephales promelas mg/L LC50		30.1 - 89.9: 48 h Daphnia magna mg/L EC50
Neutralised 2-Aminoethanol	15: 72 h Desmodesmus subspicatus 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.

Bioaccumulation

Chemical Name	log Pow
2,2',2''-Nitrilotriethanol 102-71-6	-2.53
Neutralised 2,2'-Iminodiethanol 111-42-2*	-2.18

Mobility

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

Other adverse effects No information available

SECTION 13: DISPOSAL CONSIDERATIONS**Waste treatment**

Waste Disposal Methods Dispose of in accordance with federal, state, and local regulations.

Contaminated packaging Observe all label precautions until container is cleaned, reconditioned or destroyed.

SECTION 14: TRANSPORT INFORMATION

DOT Not regulated

TDG Not regulated

ICAO/IATA Not regulated

IMDG/IMO Not regulated

SECTION 15: REGULATORY INFORMATION**International Inventories**

TSCA	Complies
DSL	All components are NOT on the Chemical Inventory
AICS	Does not Comply
PICCS	Does not Comply
KECL	Does not Comply
IECSC	Complies
ENCS	Does not Comply

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

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

U.S. Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
Neutralised 2,2'-Iminodiethanol	111-42-2*	2.0604	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	no
Sudden Release of Pressure Hazard	no
Reactive Hazard	no

Clean Water Act

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Neutralised Potassium Hydroxide	1000 lb			X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
Neutralised Potassium Hydroxide	1000 lb	
Neutralised 2,2'-Iminodiethanol	100 lb	

U.S. State Regulations**SCAQMD Rule 1144**

This product has not been tested for VOC content by the ASTM E-1868-10 method and is not approved for sale or distribution in the SCAQM District of California if the product is used as a metal forming, metal removal, metal treating, metal protection fluid or as a direct-contact lubricant.

California Proposition 65

WARNING: This product contains a chemical(s) known to the State of California to cause cancer and/or birth defects or other reproductive harm.

International Regulations**Canada**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

D2B Toxic materials

D2A Very toxic materials

Other information

Not applicable

SECTION 16: OTHER INFORMATION**NFPA**

Health Hazard 2

Flammability 1

Instability 0

Physical and chemical hazards -

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

STOT SE - Specific target organ systemic toxicity (Single exposure)

STOT RE - Specific target organ systemic toxicity (repeated exposure)

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

VOC - Volatile organic compounds
NIOSH IDLH: Immediately Dangerous to Life or Health

Revision Date: 09-13-2015

Revision Note

No information available

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.

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