SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: RotaMagic™ Super Concentrated Cutting Fluid
PRODUCT DESCRIPTION: RotaMagic™ Super Concentrated Cutting Fluid is water soluble, biodegrade cutting lubricant that yields a 10:1 ratio when mixed with water. RotaMagic™ extends tool life and improves cutter performance.

CAS NUMBER: Mixture
U.N. NUMBER: None
U.N. DANGEROUS GOODS CLASS: Non-Regulated Material
SUPPLIER/MANUFACTURER'S NAME: Hougen Manufacturing, Inc.
ADDRESS: 3001 Hougen Drive, Swartz Creek, MI 48473
EMERGENCY PHONE: 1-810-635-7111
BUSINESS PHONE: 1-810-635-7111 (Product Information)
FAX NUMBER: 1-810-635-8277
WEB SITE: www.hougen.com
E-MAIL: info@hougen.com
DATE OF PREPARATION: September 24, 2012
DATE OF LAST REVISION: New

SECTION 2 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:
Product Description: This product is a reddish amber liquid with a mild odor.
Health Hazards: Contact may cause irritation to eyes. Prolonged exposure to skin may cause irritation. Harmful if swallowed.
Flammability Hazards: This product is Non-Flammable with a flash point of greater than 350°F (COC)
Reactivity Hazards: Not reactive
Environmental Hazards: The environmental effects of this product have not been investigated; however it is not expected to cause any significant adverse effects.
Emergency Considerations: Emergency responders must wear the proper personal protective equipment (and have appropriate fire-suppression equipment) suitable for the situation to which they are responding.

US DOT SYMBOLS: Non-Regulated
CANADA (WHMIS) SYMBOLS: Not Controlled
EUROPEAN and (GHS) Hazard Symbols:
Signal Word: Warning!

EU LABELING AND CLASSIFICATION:
Classification of the substance or mixture according to Regulation (EC) No1272/2008 Annex 1
EC# 203-049-8 This substance is not classified in the Annex I of Directive 67/548/EEC
EC# 203-931-2 Annex1 Index# 607-197-00-8
EC# 200-289-5 This substance is not classified in the Annex I of Directive 67/548/EEC
CAS# 39464-69-2 is not listed in ESIS
EC# 225-208-0 Annex1 Index# 613-114-00-6
EC# 231-791-2 This substance is not classified in the Annex I of Directive 67/548/EEC
Hazard Determining Components:
Carboxylic Acid, Oxidation Inhibitor

GHS Hazard Classification(s):
Acute Oral Toxicity Category 4
Skin Sensitization Category 1
Skin Corrosion/Irritation Category 2
SAFETY DATA SHEET
RotaMagic™ Super Concentrated Cutting Fluid

Hazard Statement(s):
H302: Harmful if swallowed
H314: Causes severe skin burns and eye damage
H317: May cause an allergic skin reaction

Precautionary Statement(s):
P264: Wash hands thoroughly after handling
P270: Do not eat, drink or smoke when using this product
P281: Use personal protective equipment as required

EU HAZARD CLASSIFICATION PER DIRECTIVE 1999/45/EC:
[Xn] Harmful

Risk Phrases:
R22: Harmful if swallowed
R43: May cause sensitization by skin contact

Safety Phrases:
S39: Wear suitable eye/face protection
S45: In case of accident or if you feel unwell seek medical advice.

HEALTH HAZARDS OR RISKS FROM EXPOSURE:

ACUTE: Contact with eyes may cause irritation. Prolonged exposure to skin may cause irritation or sensitization. Harmful if swallowed. Inhalation of mists and spray may cause irritation to the respiratory tract.

CHRONIC: None known

TARGET ORGANS:
ACUTE: Eyes, skin
CHRONIC: None Known

SECTION 3 - COMPOSITION and INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>HAZARDOUS INGREDIENTS</th>
<th>CAS #</th>
<th>EINECS #</th>
<th>ICSC #</th>
<th>WT %</th>
<th>HAZARD CLASSIFICATION: RISK PHRASES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alkanolamine</td>
<td>102-71-6</td>
<td>203-049-8</td>
<td>1034</td>
<td>&gt;50%</td>
<td>HAZARD CLASSIFICATION: None RISK PHRASES: None</td>
</tr>
<tr>
<td>Carboxylic Acid</td>
<td>112-05-0</td>
<td>203-931-2</td>
<td>Not Listed</td>
<td>10 – 20%</td>
<td>HAZARD CLASSIFICATION: [C] Corrosive RISK PHRASES: R34</td>
</tr>
<tr>
<td>Glycerine</td>
<td>56-81-5</td>
<td>200-289-5</td>
<td>0624</td>
<td>5 – 10%</td>
<td>HAZARD CLASSIFICATION: None RISK PHRASES: None</td>
</tr>
<tr>
<td>Phosphoric Acid Ester</td>
<td>39464-69-2</td>
<td>Not Listed in ESIS</td>
<td>Not Listed</td>
<td>&lt;5%</td>
<td>HAZARD CLASSIFICATION: None RISK PHRASES: None</td>
</tr>
<tr>
<td>Oxidation Inhibitor</td>
<td>4719-04-4</td>
<td>225-208-0</td>
<td>Not Listed</td>
<td>&lt;5%</td>
<td>HAZARD CLASSIFICATION: [Xn] Harmful RISK PHRASES: R22, R43</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>231-791-2</td>
<td>Not Listed</td>
<td>Balance</td>
<td>HAZARD CLASSIFICATION: None RISK PHRASES: None</td>
</tr>
</tbody>
</table>

Balance of other ingredients are non-hazardous or less than 1% in concentration (or 0.1% for carcinogens, reproductive toxins, or respiratory sensitizers).

NOTE: ALL WHMIS required information is included in appropriate sections based on the ANSI Z400.1-2010 format. This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR, EU Directives and the Japanese Industrial Standard JIS Z 7250: 2000.

SECTION 4 - FIRST-AID MEASURES

EYE CONTACT: If product enters the eyes, open eyes while under gentle running water for at least 15 minutes. Seek medical attention if irritation or blurred vision occurs.

SKIN CONTACT: Wash skin thoroughly after handling. Seek medical attention if irritation develops and persists.

INHALATION: If breathing becomes difficult, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention if breathing difficulty continues.

INGESTION: If product is swallowed, call physician or poison control center for most current information. If professional advice is not available, do not induce vomiting. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Seek medical advice. Take a copy of the label and/or MSDS with the victim to the health professional.
SAFETY DATA SHEET
RotaMagic™ Super Concentrated Cutting Fluid

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None Known

RECOMMENDATIONS TO PHYSICIANS: Treat symptoms and reduce over-exposure.

SECTION 5 - FIRE-FIGHTING MEASURES

FLASH POINT: >350°F
AUTOIGNITION TEMPERATURE: Not Established
FLAMMABLE LIMITS (in air by volume, %):
Lower (LEL): Not Established
Upper (UEL): Not Established
FLAMMABLE LIMITS (in air by volume, %): Not Established
UNUSUAL FIRE AND EXPLOSION HAZARDS:
Explosion Sensitivity to Static Discharge: Not Sensitive
SPECIAL FIRE-FIGHTING PROCEDURES:
Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Isolate materials not yet involved in the fire and protect personnel. Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

NFPA RATING SYSTEM

<table>
<thead>
<tr>
<th>Flammability</th>
<th>Health</th>
<th>Reactivity</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>0</td>
<td>-</td>
</tr>
</tbody>
</table>

HMIS RATING SYSTEM

| HEALTH HAZARD (BLUE) | 1 |
| FLAMMABILITY HAZARD (RED) | 1 |
| PHYSICAL HAZARD (YELLOW) | 0 |

PROTECTIVE EQUIPMENT

<table>
<thead>
<tr>
<th>EYES</th>
<th>RESPIRATORY</th>
<th>HANDS</th>
<th>BODY</th>
</tr>
</thead>
<tbody>
<tr>
<td>See Sect 8</td>
<td>See Sect 8</td>
<td>See Sect 8</td>
<td></td>
</tr>
</tbody>
</table>

For Routine Industrial Use and Handling Applications

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe  * = Chronic hazard

SECTION 6 - ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK RESPONSE: Personnel should be trained for spill response operations.
SPILLS: Contain and recover liquid if possible. Use non-sparking tools and equipment. Cover or absorb spilled liquid with sand, earth or other inert material. Clean up spill immediately and place in appropriate containers. Do not discharge to sewers and surface waters. Dispose of in accordance with applicable Federal, State, and local procedures (see Section 13, Disposal Considerations).
SAFETY DATA SHEET
RotaMagic™ Super Concentrated Cutting Fluid

SECTION 7 - HANDLING and STORAGE

WORK PRACTICES AND HYGIENE PRACTICES: Wash thoroughly after handling this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Use in a well-ventilated location.

STORAGE AND HANDLING PRACTICES: Store in a cool dry well ventilated location. Protect from physical damage.

SECTION 8 - EXPOSURE CONTROLS - PERSONAL PROTECTION

EXPOSURE LIMITS/GUIDELINES:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS#</th>
<th>ACGIH TWA</th>
<th>OSHA TWA</th>
<th>WEEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Ingredients</td>
<td>All Listed above</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
</tr>
</tbody>
</table>

Currently, International exposure limits are not established for the components of this product. Please check with competent authority in each country for the most recent limits in place.

VENTILATION AND ENGINEERING CONTROLS: Use with adequate ventilation to ensure exposure levels are maintained below the limits provided above. Use local exhaust ventilation to control airborne dust.

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada, or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.

RESPIRATORY PROTECTION: Not normally required when using this product. Maintain airborne contaminant concentrations below guidelines listed above, if applicable. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member states.

EYE PROTECTION: Safety glasses as appropriate to prevent eye contact. If necessary, refer to U.S. OSHA 29 CFR 1910.133 or appropriate Canadian Standards.

SKIN PROTECTION: Chemical resistant gloves to prevent skin contact when using this product. If necessary, refer to U.S. OSHA 29 CFR 1910.138 or appropriate Standards of Canada, or appropriate Standards of the EU, Australian Standards, or relevant Japanese Standards.

SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Physical State:</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance &amp; Odor:</td>
<td>Reddish amber liquid with a mild odor.</td>
</tr>
<tr>
<td>Odor Threshold (PPM):</td>
<td>Mild</td>
</tr>
<tr>
<td>Vapor Pressure (mmHg):</td>
<td>Not Available</td>
</tr>
<tr>
<td>Vapor Density:</td>
<td>1</td>
</tr>
<tr>
<td>Evaporation Rate (nBuAc = 1):</td>
<td>Not Available</td>
</tr>
<tr>
<td>Boiling Point (°C):</td>
<td>456°F</td>
</tr>
<tr>
<td>Freezing Point (°C):</td>
<td>&lt;32°F</td>
</tr>
<tr>
<td>pH:</td>
<td>8.8</td>
</tr>
<tr>
<td>Specific Gravity 20°C: (WATER =1)</td>
<td>1.087</td>
</tr>
<tr>
<td>Solubility in Water (%):</td>
<td>Complete</td>
</tr>
</tbody>
</table>

SECTION 10 - STABILITY and REACTIVITY

STABILITY: Product is stable

DECOMPOSITION PRODUCTS: When heated to decomposition this product produces carbon oxides.
SAFETY DATA SHEET
RotaMagic™ Super Concentrated Cutting Fluid

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: Nitrates and nitrating agents

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Incompatible materials

SECTION 11 - TOXICOLOGICAL INFORMATION

TOXICITY DATA: Toxicity data is not available for this product:
No LD50 Data Available

SUSPECTED CANCER AGENT: None of the ingredients are found on the following lists: FEDERAL OSHA Z LIST, NTP, CAL/OSHA, IARC and therefore is not considered to be, nor suspected to be a cancer-causing agent by these agencies.

IRRITANCY OF PRODUCT: Contact with this product can be irritating to exposed skin, respiratory system and eyes.

SENSITIZATION OF PRODUCT: This product contains an ingredient that is considered a sensitizer.

REPRODUCTIVE TOXICITY INFORMATION: No information concerning the effects of this product and its components on the human reproductive system.

SECTION 12 - ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

ENVIRONMENTAL STABILITY: No specific data is available for this product, however this product is expected to be readily biodegradable

EFFECT OF MATERIAL ON PLANTS or ANIMALS: No evidence is currently available on this product’s effects on plants or animals.

EFFECT OF CHEMICAL ON AQUATIC LIFE: No evidence is currently available on this product’s effects on aquatic life.

SECTION 13 - DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate Federal, State, and local regulations, those of Canada, Australia, EU Member States and Japan.

RCRA WASTE CODE: None listed
EU WASTE CODE: Not Listed

SECTION 14 - TRANSPORTATION INFORMATION

US DOT; IATA; IMO; ADR:
THIS PRODUCT IS NOT CLASSIFIED AS DANGEROUS GOODS AS DEFINED BY 49 CFR 172.101 BY THE U.S. DEPARTMENT OF TRANSPORTATION.

PROPER SHIPPING NAME: Class 55 Cleaning Compound
HAZARD CLASS NUMBER and DESCRIPTION: None
UN IDENTIFICATION NUMBER: None
PACKING GROUP: None
DOT LABEL(S) REQUIRED: None
NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER (2004): None
MARINE POLLUTANT: This products ingredients that are not classified by the DOT as a Marine Pollutant (as defined by 49 CFR 172.101, Appendix B)

TRANSPORT CANADA, TRANSPORTATION OF DANGEROUS GOODS REGULATIONS:
This product is not classified as Dangerous Goods, per regulations of Transport Canada.
SAFETY DATA SHEET
RotaMagic™ Super Concentrated Cutting Fluid

INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA):
This product is not classified as Dangerous Goods, by rules of IATA.

INTERNATIONAL MARITIME ORGANIZATION (IMO) DESIGNATION:
This product is not classified as Dangerous Goods by the International Maritime Organization.

EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR):
This product is not classified by the United Nations Economic Commission for Europe to be dangerous goods.

SECTION 15 - REGULATORY INFORMATION

UNITED STATES REGULATIONS
SARA REPORTING REQUIREMENTS: This product is ingredients are subject to the reporting requirements of Sections 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act., as follows: None

TSCA: All components in this product are listed on the US Toxic Substances Control Act (TSCA) inventory of chemicals.

SARA 311/312:

Acute No Chronic Health: No Fire: No Reactivity: No

Health:

U.S. SARA THRESHOLD PLANNING QUANTITY: There are no specific Threshold Planning Quantities for this product. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) may apply, per 40 CFR 370.20.

U.S. CERCLA REPORTABLE QUANTITY (RQ):

None

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65):

None of the ingredients are on the California Proposition 65 lists.

CANADIAN REGULATIONS:

CANADIAN DSL/NDSL INVENTORY STATUS: All of the components of this product are on the DSL Inventory

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS: No component of this product is on the CEPA First Priorities Substance Lists.

CANADIAN WHMIS CLASSIFICATION and SYMBOLS: This product is categorized as Not Controlled, as per the Controlled Product Regulations

EUROPEAN ECONOMIC COMMUNITY INFORMATION:

EU LABELING AND CLASSIFICATION:
Classification of the mixture according to Regulation (EC) No1272/2008. See section 2 for details.

AUSTRALIAN INFORMATION FOR PRODUCT:

AUSTRALIAN INVENTORY OF CHEMICAL SUBSTANCES (AICS) STATUS: All components of this product are listed on the AICS.

STANDARD FOR THE UNIFORM SCHEDULING OF DRUGS AND POISONS: Not applicable.

JAPANESE INFORMATION FOR PRODUCT:

JAPANESE MINISTER OF INTERNATIONAL TRADE AND INDUSTRY (MITI) STATUS: The components of this product are not listed as Class I Specified Chemical Substances, Class II Specified Chemical Substances, or Designated Chemical Substances by the Japanese MITI.
SAFETY DATA SHEET
RotaMagic™ Super Concentrated Cutting Fluid

INTERNATIONAL CHEMICAL INVENTORIES:
Listing of the components on individual country Chemical Inventories is as follows:

Asia-Pac:  Listed or Exempt
Australian Inventory of Chemical Substances (AICS):  Listed or Exempt
Korean Existing Chemicals List (ECL):  Listed or Exempt
Japanese Existing National Inventory of Chemical Substances (ENCS):  Listed or Exempt
Philippines Inventory if Chemicals and Chemical Substances (PICCS):  Listed or Exempt
Swiss Giftliste List of Toxic Substances:  Listed or Exempt
U.S. TSCA:  Listed or Exempt

SECTION 16 - OTHER INFORMATION

PREPARED BY: Paul Eigbrett  MSDS Authoring Services

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