SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier:
   Trade name: NOVACAN GLASS CUTTER OIL

1.2 Relevant identified use of the solution and uses advised against:
   A lubricant for glass cutters used in the stained glass trade.

1.3 Manufacturer Identification and address:
   Novacan Industries Ltd
   856 Washington Drive
   Port Moody, BC V3H 3K8
   Canada
   Phone: 1.604.931.6422
   E-Mail: info@novacan.net

1.4 EMERGENCY TELEPHONE NUMBER:
   For spill, leak, fire or exposure call 24 HR Emergency Phone#: CANUTECH 1.613.996.6666

SECTION 2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

<table>
<thead>
<tr>
<th>Classification according to Regulation</th>
<th>Hazard Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSHA Hazard Communication Standard and United Nations GHS Rev 6</td>
<td>Aspiration Hazard - Category 1</td>
</tr>
</tbody>
</table>

2.2 Label elements:
   Hazard pictograms

   ![Hazard pictogram]
2.3 Signal word: Danger

Hazard statements:
H304 May be fatal if swallowed and enters airways.

Precautionary statements:
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
Aspiration hazard.
P331 Do NOT induce vomiting.
P405 Store locked up.
P501 Dispose of contents/container to an approved waste disposal plant

2.3 Other relevant information and hazards overview:

Routes of Entry: (under normal conditions of use)
Skin Contact: Minor  Eye Contact: Minor  Ingestion: Major  Inhalation: Major

Physical Description: Transparent light purple liquid, slightly viscous.

Health Hazard: This substance is an aspiration hazard if aerosolization or misting occurs. Aspiration may also occur if substance is ingested and then vomited.

NFPA Ratings:

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>0</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEALTH</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FLAMMABILITY</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>REACTIVITY</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPECIFIC HAZARD</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Must be pre-heated for ignition to occur.

SECTION 3  COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances or Mixtures: Substance
See 3.2 Mixtures below.

3.2 Substance:
Description of the substance:
Clear light purple liquid, slightly viscous.
Hazardous ingredients:

<table>
<thead>
<tr>
<th>Substance name</th>
<th>CAS No.</th>
<th>Concentration % w/w</th>
</tr>
</thead>
<tbody>
<tr>
<td>White mineral oil, technical</td>
<td>8042-47-5</td>
<td>100</td>
</tr>
<tr>
<td>Tocopheral</td>
<td>02-09-59</td>
<td>&lt; 0.001</td>
</tr>
</tbody>
</table>

SECTION 4  FIRST AID MEASURES.

4.1 Description of first aid measures.

Routes of Entry: (under normal conditions of use)

Skin Contact: Minor  Eye Contact: Minor  Ingestion: Major  Inhalation: Major

Eye Contact: Flush contaminated eye(s) with lukewarm, gently running water for 15 minutes, holding eyelids open. Remove contact lenses if present and easy to do. Seek medical attention if irritation persists.

Skin Contact: In case of contact, immediately wash skin thoroughly with soap and water or use a recognized skin cleanser. Remove contaminated clothing and shoes and launder before reuse.

Inhalation: This substance has a low vapor pressure and is not expected to present an inhalation hazard under normal conditions. Caution should be taken to prevent aerosolization or misting of this product. The short term exposure limit for this product as an oil mist is 10mg/m³. Above this limit product may cause respiratory irritation or other pulmonary effects.

Ingestion: Ingestion is relatively non-toxic unless aspiration occurs. Do not induce vomiting as aspiration may lead to chemical pneumonitis that is characterized by pulmonary edema and hemorrhage and may be fatal. If vomiting occurs, lower head below knees to avoid aspiration. Seek medical attention immediately. This substance has laxative properties and may result in abdominal cramps.

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

Acute: High vapor concentration may induce headache, nausea, dizziness and respiratory irritation.

Chronic: Prolonged / repetitive skin contact may cause skin defatting or dermatitis.

4.3 Indication of any immediate medical attention and special treatment needed.

Refer to 4.1 & 4.2
SECTION 5  FIREFIGHTING MEASURES

5.1 Extinguishing media:
Suitable extinguishing media: Dry chemical, carbon dioxide, foam, steam or water fog.
Un-suitable extinguishing media: Do not use water streams which will scatter and spread fire.

5.2 Special hazards arising from the substance or mixture.
This substance will burn although it is not easily ignited. It must be preheated for ignition.
May create dense smoke during combustion.

5.3 Advice for fire-fighters:
Cool unaffected containers and remove to safety.
Prevent run-off water from entering storm drains, bodies of water or other environmentally sensitive areas.

SECTION 6  ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel:
Use personal protective equipment. Ensure adequate ventilation. Evacuate personnel to safe areas. Material can create slippery conditions.

For emergency responders:
Wear appropriate breathing apparatus, protective clothing, gloves and eye / face protection.
Remove all sources of ignition. Keep away from heat / sparks / open flames / hot surfaces.

6.2 Environmental precautions:
Implement spill control plan. Stop or reduce leak if safe to do so. Prevent from entering sanitary or storm sewers, waterways, or confined spaces. Use inert materials such as earth or sand to form a dike. Prevent from contacting aquatic life.

6.3 Methods and material for containment and cleaning up:
If spill is large enough to require containment, use inert materials such as earth or sand to form a containment dike. Absorb spilled solution with absorbent pads or other suitable material.

6.4 Reference to other sections:
See SECTION 8 for exposure levels and detailed personal protective equipment recommendations.
See SECTION 13 for waste handling guidelines.
SECTION 7 HANDLING AND STORAGE

7.1 Precautions for safe handling:
- No special requirements. Observe good industrial hygiene practices.
- Avoid contact with skin, eyes and clothing.
- Do not ingest.
- Keep away from heat and sources of ignition.
- Keep container closed when not in use.

7.2 Conditions for safe storage, including any incompatibilities:
- Store upright in tightly closed and labeled original containers. Store away from strong oxidizing agents or combustible material. Keep in a dry, cool and well ventilated place. To maintain product quality, do not store in heat or direct sunlight.

7.3 Specific end uses:
This substance is intended for use as a lubricant for glass cutters used in the stained glass trade.

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 Control parameters:

Occupational exposure limits:

<table>
<thead>
<tr>
<th>Substance</th>
<th>ACGIH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>White mineral oil, technical</td>
<td>TLV 5 mg/m³ as oil mist</td>
<td>PEL 5 mg/m³ as oil mist</td>
</tr>
<tr>
<td></td>
<td>STEL 10 mg/m³ as oil mist</td>
<td></td>
</tr>
</tbody>
</table>

BIOLGICAL OCCUPATIONAL EXPOSURE LIMITS: Not established
DERIVED NO EFFECT LEVEL (DNEL): Not established
PREDICTED NO EFFECT CONCENTRATION (PNEC): Not established

8.2 Exposure controls:

Engineering Controls: Control airborne concentrations below the exposure guidelines.

Respiratory Protection: Not required under normal conditions of use. Avoid breathing mist. If ventilation is inadequate, use NIOSH/MSHA certified respirator with organic mist filter to protect against mist.

Hand Protection: Not required under normal conditions of use. For prolonged or repeated skin exposure, wear impervious gloves and boots and / or other protective clothing according to circumstances.
**Eye Protection:** Not required under normal conditions of use. If material is used in a way that splashing could occur, use splash proof safety goggles.

**Body Protection:** Use protection suitable to the circumstances, to the amount of substance, and to the specific work-place.

**Other:** Remove and wash contaminated clothing and gloves, before re-use. Wash face, hands and any exposed skin thoroughly after handling. Avoid release to the environment. Notify authorities if substance enters sewers or bodies of water.

### SECTION 9  PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

- **Appearance:** Clear light purple oily liquid
- **Odor:** Odorless
- **Odor Threshold:** Not determined
- **pH:** Not determined

- **Freezing Point:** Not determined
- **Boiling Point:** 264 °C
- **Flash Point:** 210 °C
- **Evaporation Rate:** Not Determined
- **Flammability:** Not Flammable
- **Upper / Lower Flammability or explosive limit:** Not Applicable

- **Vapor Pressure:** < 1.0 mmHg @ 20°C
- **Vapor Density:** > 1
- **Relative Density:** 0.862 kg/l @15 °C
- **Solubility:** Not soluble in water

- **Partition Coefficient:** No data
- **Auto Ignition Temperature:** N/A
- **Decomposition Temperature:** N/A
- **Viscosity:** Kinematic Viscosity = 20.4 cST @ 68°F / 20°C

### SECTION 10  STABILITY AND REACTIVITY

10.1 **Reactivity:** Not reactive under typical conditions of use.

10.2 **Chemical stability:** Normally stable under standard temperatures and pressure.

10.3 **Possibility of hazardous reactions:** Hazardous Polymerization will not occur.

10.4 **Conditions to avoid:** Extreme heat and incompatible materials listed in 10.5 below.

10.5 **Incompatible materials:** Chlorine, fluorine, and other strong oxidizers and acids.

10.6 **Hazardous decomposition products:** Incomplete combustion can produce carbon monoxide and / or carbon dioxide.
SECTION 11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

Acute Toxicity:

<table>
<thead>
<tr>
<th>CHEMICAL</th>
<th>DERMAL</th>
<th>EYES</th>
<th>INHALATION</th>
<th>ORAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>White mineral oil, technical</td>
<td>LD$_{50}$ (Rat) 2000 mg/kg</td>
<td>Not Listed</td>
<td>LC$_{50}$ (Rat) 5 mg/m$^3$ as oil mist</td>
<td>LD$_{50}$ Oral (Rat) 5000 mg/kg</td>
</tr>
</tbody>
</table>

Additional Acute Toxicity:

**Skin:** No data available.

**Eye:** No data available.

**Ingestion:** Avoid aspiration resulting from vomiting of ingested substance.

**Inhalation:** Avoid aspiration of oil mist.

**Chronic Toxicity:** Chronic Potential Health Effects:

**Inhalation:** Aspiration can lead to chemical pneumonitis that is characterized by pulmonary edema and hemorrhage and may be fatal.

**Skin:** No data available.

**Carcinogenicity:** by agency.

<table>
<thead>
<tr>
<th>Agency</th>
<th>OSHA</th>
<th>ACGIH</th>
<th>IARC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
</tr>
</tbody>
</table>

**Reproductive Toxicity Information:** No data available.

**Mutagenicity:** No data available.

Specific target organ toxicity (single exposure):

**STOT SE:** No data available.

Specific target organ toxicity (repeated exposure):

**STOT RE:** No data available.
SECTION 12    ECOLOGICAL INFORMATION
12.1 Toxicity: This substance is not sufficiently soluble in water to produce toxic effects in aquatic organisms.
12.2 Persistence and degradability: This substance is considered biodegradable.
12.3 Bioaccumulative potential: No data available.
12.4 Mobility in soil: No data available.
12.5 Results of PBT and vPvB assessment: No data available.
12.6 Other adverse effects: No data available.

SECTION 13    DISPOSAL CONSIDERATIONS
13.1 Waste treatment methods: The substance should not be allowed to enter drains, water courses or the soil. Offer surplus and non-recyclable solutions to a licensed disposal firm. Waste must be classified and labeled prior to recycling or disposal. Send to a licensed waste disposal firm. Dispose of as hazardous waste in compliance with state and federal regulations.

SECTION 14    TRANSPORT INFORMATION
14.1 DOT Hazardous Materials Shipping Regulations 49 CFR
   Not regulated for transport.
14.2 International Marine Organization (IMO) Hazardous Materials Shipping Regulations
   Not regulated for transport.
14.3 International Air Transport Association (IATA) Hazardous Materials Shipping Regulations
   Not regulated for transport.
14.4 European Agreement Concerning The Carriage of Dangerous Goods by Road (ADR): Not applicable.

14.5 Environmental Hazards: Not applicable

14.6 Special precautions for users: Not applicable

14.7 Transport in bulk: Not applicable

SECTION 15 REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the mixture.

U.S. Regulations:
- TSCA (Toxic Substance Control Act): All components are listed in the inventory.
- CERCLA, 40 CFR 302: Not reportable.
- SARA 313, 40 CFR 372: Not reportable.
- SARA 311/312, 40 CFR 370: None

SECTION 16 OTHER INFORMATION

16.1 Indication of changes: Original authored May 20, 2016

16.2 Abbreviations and acronyms:
- OSHA - Occupational Safety and Health Administration
- GHS - Globally Harmonized System
- CAS# - Chemical Abstract Service Number
- NFPA - National Fire Protection Association
- ACGIH - American Conference of Government Industrial Hygienists
- TWA - Time Weighted Average
- TLV - Threshold Limit Value
- STEL - Short Term Exposure Limit
- PEL - Personal Exposure Limit
- NIOSH - National Institute of Occupational Safety and Health
SE - Single Exposure
RE - Repeated Exposure
STOTL - Specific Target Organ Toxicity
mg/m$^3$ - Milligrams per cubic metre
ppm - Parts per Million
LD$50$ - The lethal dose which is fatal to 50% of the specified test subjects, by the specified means of entry.
SARA - Superfund Amendment and Reauthorization Act
CERCLA - Comprehensive Environmental Response Compensation and Liability Act
TSCA - Toxic Substance Control Act
CFR - Code of Federal Regulations

16.3 Key literature references and sources for data:
UNECE - United Nations Economic Commission for Europe
Globally Harmonized System of Classification and Labelling on Chemicals
GHS - Sixth Edition 2015 (Purple Book)
Code of Federal Regulations - Title 49, Subtitle B, Chapter 1, Subchapter C, Part 171 to 177