1 Identification

- Product identifier
- Trade name: Cargille Laser Liquid Code 57B63 nD= 1.5780-1.6300
- Product code: 20270, 20290, 20310
- Recommended use and restriction on use
- Recommended use:
  This SDS or an accurate copy is an integral part of using Laser Liquid Code 57B63. Only use Laser Liquid Code 57B63 if the SDS is present. Conditions prevailing in this document, unless otherwise noted:
  Temperature = 23°C(73°F), Pressure = 1013.25 hPa (760 mm Hg)

  For Professional and R&D use only. Conditions of Intended Use: (ABBRE. C.I.U.) As an Optical Liquid at normal room pressure 101.32 kPa (760 mm Hg), temperature -6°C to 65°C (20°F to 150°F) in a non misted/non airborne state in a room having a normal air changes (2)/HR., in a trained and supervised laboratory/industrial setting using standard Good Laboratory/Good Manufacturing procedures.

  Note: Product normally sold in 4 oz (120cc), 16 oz (480cc), and gallon (3.84L) quantities. Used in single drop to a few cubic centimeters per application. See requisitioner for specific quantities involved.

- Restrictions on use: Contact manufacturer/supplier

2 Hazard(s) identification

- Classification of the substance or mixture
  The product is not classified as hazardous according to the Globally Harmonized System (GHS).

- Label elements
  - GHS label elements Not regulated.
  - Hazard pictograms: None.
  - Signal word: None.
  - Hazard statements: None.
  - Precautionary statements: None.

- Other hazards There are no other hazards not otherwise classified that have been identified.
3 Composition/information on ingredients

- Chemical characterization: Mixtures
- Components: None in reportable quantities.

4 First-aid measures

- Description of first aid measures
  - After inhalation: Supply fresh air; consult doctor in case of complaints.
  - After skin contact:
    Immediately wash with water and soap and rinse thoroughly.
    If skin irritation continues, consult a doctor.
  - After eye contact:
    Remove contact lenses if worn.
    Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
  - After swallowing:
    Rinse out mouth and then drink plenty of water.
    Do not induce vomiting; immediately call for medical help.
- Most important symptoms and effects, both acute and delayed:
  - Gastric or intestinal disorders when ingested.
- Indication of any immediate medical attention and special treatment needed:
  - If medical advice is needed, have product container or label at hand.

5 Fire-fighting measures

- Extinguishing media
  - Suitable extinguishing agents:
    - Foam
    - Fire-extinguishing powder
    - Gaseous extinguishing agents
    - Carbon dioxide
    - Water fog / haze
    - Water spray
- For safety reasons unsuitable extinguishing agents: Water stream.
- Special hazards arising from the substance or mixture
  - During heating or in case of fire poisonous gases are produced.
- Advice for firefighters
  - Protective equipment:
    - Wear self-contained respiratory protective device.
    - Wear fully protective suit.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures:
  - Use personal protective equipment as required.
Safety Data Sheet
acc. to OSHA HCS (29 CFR 1910.1200) and WHMIS 2015 regulations

Printing date: 10/11/2016
Revision: 10/11/2016

<table>
<thead>
<tr>
<th>Trade name: Cargille Laser Liquid Code 57B63 nD= 1.5780-1.6300</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensure adequate ventilation.</td>
</tr>
<tr>
<td>· <strong>Environmental precautions:</strong></td>
</tr>
<tr>
<td>Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.</td>
</tr>
<tr>
<td>· <strong>Methods and material for containment and cleaning up:</strong></td>
</tr>
<tr>
<td>Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).</td>
</tr>
<tr>
<td>Send for recovery or disposal in suitable receptacles.</td>
</tr>
<tr>
<td>· <strong>Reference to other sections:</strong></td>
</tr>
<tr>
<td>See Section 7 for information on safe handling.</td>
</tr>
<tr>
<td>See Section 8 for information on personal protection equipment.</td>
</tr>
<tr>
<td>See Section 13 for disposal information.</td>
</tr>
</tbody>
</table>

7 Handling and storage

· **Handling**
  · **Precautions for safe handling:** Avoid splashes or spray in enclosed areas.
  · **Information about protection against explosions and fires:** No special measures required.

· **Conditions for safe storage, including any incompatibilities**

· **Storage**
  · **Requirements to be met by storerooms and receptacles:**
    Avoid storage near extreme heat, ignition sources or open flame.
    Store in a well-ventilated place. Keep cool.
  · **Information about storage in one common storage facility:**
    Store away from foodstuffs.
    Store away from oxidizers, strong acids, strong bases.
  · **Further information about storage conditions:**
    Storage Temperatures : 39 - 104 °F / 4 - 40 °C.
    Keep containers tightly sealed.
  · **Specific end use(s):** No relevant information available.

8 Exposure controls/personal protection

· **Control parameters**
  · **Components with limit values that require monitoring at the workplace:**
    The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· **Exposure controls**
  · **Personal protective equipment:**
    · **General protective and hygienic measures:**
      The usual precautionary measures for handling chemicals should be followed.
      Keep away from foodstuffs, beverages and feed.
      Immediately remove all soiled and contaminated clothing.
      Wash hands before breaks and at the end of work.
      Avoid close or long term contact with the skin.
      Avoid contact with the eyes.
    · **Engineering controls:** No relevant information available.

(Cont'd. on page 4)
Trade name: Cargille Laser Liquid Code 57B63 nD= 1.5780-1.6300

- Breathing equipment: Not required under normal conditions of use.
- Protection of hands: Gloves not required under normal conditions of use. Wear protective gloves to handle contents of damaged or leaking units. Gloves are advised for repeated or prolonged contact.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
- Eye protection:

Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.
- Body protection: Protective work clothing
- Limitation and supervision of exposure into the environment

No relevant information available.

9 Physical and chemical properties

- Information on basic physical and chemical properties
- Appearance:
  - Form: Liquid
  - Color: Colorless
  - Odor: Slight
  - Odor threshold: Not determined.
- pH-value: Not applicable.
- Melting point/Melting range: Not determined.
- Boiling point/Boiling range: >149 °C (>300 °F)
- Flash point: ≥121 °C (≥250 °F) (Open Cup)
- Flammability (solid, gaseous): Not applicable.
- Auto-ignition temperature: Not determined.
- Decomposition temperature: Not determined.
- Danger of explosion: Not determined.
- Explosion limits
  - Lower: Not determined.
  - Upper: Not determined.
- Oxidizing properties: Not determined.
- Vapor pressure at 23 °C (73 °F): <6.66 hPa (<5 mm Hg)
- Density at 20 °C (68 °F): 1.9 g/cm³ (15,856 lbs/gal)
- Relative density: 1.9 (water = 1)
- Vapor density: >1 (air = 1)
- Evaporation rate: App. 1 (mineral oil = 1)
10 Stability and reactivity

- **Reactivity:** No relevant information available.
- **Chemical stability:** Stable under normal temperatures and pressures.
- **Thermal decomposition / conditions to be avoided:**
  No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions:**
  Toxic fumes may be released if heated above the decomposition point.
  Reacts with strong oxidizing agents.
  Reacts with strong acids and alkali.
  Reacts with certain metals.
- **Conditions to avoid:** Excessive heat.
- **Incompatible materials:** Oxidizers, strong bases, strong acids
- **Hazardous decomposition products:**
  Under fire conditions only:
  Carbon monoxide and carbon dioxide

11 Toxicological information

- **Information on toxicological effects**
  - **Acute toxicity:**
  - **LD/LC50 values that are relevant for classification:** None.
  - **Primary irritant effect:**
  - **On the skin:** Based on available data, the classification criteria are not met.
  - **On the eye:** Based on available data, the classification criteria are not met.
  - **Sensitization:** Based on available data, the classification criteria are not met.
- **IARC (International Agency for Research on Cancer):**
  None of the ingredients are listed.
- **NTP (National Toxicology Program):**
  None of the ingredients are listed.
- **OSHA-Ca (Occupational Safety & Health Administration):**
  None of the ingredients are listed.

- **Probable route(s) of exposure:**
  Ingestion.

(Cont'd. on page 6)
Safety Data Sheet
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Trade name: Cargille Laser Liquid Code 57B63 nD= 1.5780-1.6300

(Cont'd. of page 5)

Inhalation.
Eye contact.
Skin contact.
  · Acute effects (acute toxicity, irritation and corrosivity): None.
  · Repeated dose toxicity: None.
  · CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
  · 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: Based on available data, the classification criteria are not met.
  · STOT-single exposure: Based on available data, the classification criteria are not met.
  · STOT-repeated exposure: Based on available data, the classification criteria are not met.
  · Aspiration hazard: Based on available data, the classification criteria are not met.

12 Ecological information

  · Toxicity
  · Aquatic toxicity No relevant information available.
  · Persistence and degradability No relevant information available.
  · Bioaccumulative potential:
    Due to the distribution coefficient n-octanol/water an accumulation in organisms is not expected.
  · Mobility in soil: No relevant information available.
  · Additional ecological information
  · General notes:
    Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
  · Results of PBT and vPvB assessment
    · PBT: Not applicable.
    · vPvB: Not applicable.
    · Other adverse effects: No relevant information available.

13 Disposal considerations

  · Waste treatment methods
  · Recommendation:
    The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.
  · Uncleaned packagings
  · Recommendation: Disposal must be made according to official regulations.
### 14 Transport information

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN-Number</td>
<td>Not regulated.</td>
</tr>
<tr>
<td>DOT, ADR, IMDG, IATA</td>
<td>Not regulated.</td>
</tr>
<tr>
<td>UN proper shipping name</td>
<td>Not regulated.</td>
</tr>
<tr>
<td>DOT, ADR, IMDG, IATA</td>
<td>Not regulated.</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>Not regulated.</td>
</tr>
<tr>
<td>DOT, ADR, IMDG, IATA</td>
<td>Not regulated.</td>
</tr>
<tr>
<td>Class</td>
<td>Not regulated.</td>
</tr>
<tr>
<td>Packing group</td>
<td>Not regulated.</td>
</tr>
<tr>
<td>DOT, ADR, IMDG, IATA</td>
<td>Not regulated.</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>No</td>
</tr>
<tr>
<td>Marine pollutant</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.

### 15 Regulatory information

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety, health and environmental regulations/legislation specific for the substance or mixture</td>
<td></td>
</tr>
<tr>
<td>United States (USA)</td>
<td></td>
</tr>
<tr>
<td>SARA</td>
<td></td>
</tr>
<tr>
<td>Section 302 (extremely hazardous substances)</td>
<td>None of the ingredients are listed.</td>
</tr>
<tr>
<td>Section 355 (extremely hazardous substances)</td>
<td>None of the ingredients are listed.</td>
</tr>
<tr>
<td>Section 313 (Specific toxic chemical listings)</td>
<td>None of the ingredients are listed.</td>
</tr>
<tr>
<td>TSCA (Toxic Substances Control Act)</td>
<td>All ingredients are listed.</td>
</tr>
<tr>
<td>Proposition 65 (California)</td>
<td></td>
</tr>
<tr>
<td>Chemicals known to cause cancer</td>
<td>None of the ingredients are listed.</td>
</tr>
<tr>
<td>Chemicals known to cause reproductive toxicity for females</td>
<td>None of the ingredients are listed.</td>
</tr>
<tr>
<td>Chemicals known to cause reproductive toxicity for males</td>
<td>None of the ingredients are listed.</td>
</tr>
</tbody>
</table>
Safety Data Sheet
acc. to OSHA HCS (29 CFR 1910.1200) and WHMIS 2015 regulations

Trade name: Cargille Laser Liquid Code 57B63 nD2 1.5780-1.6300

- Chemicals known to cause developmental toxicity: (Cont'd. of page 7)
  None of the ingredients are listed.

- Carcinogenic categories

  - EPA (Environmental Protection Agency):
    None of the ingredients are listed.
  - IARC (International Agency for Research on Cancer):
    None of the ingredients are listed.
  - NIOSH-Ca (National Institute for Occupational Safety and Health):
    None of the ingredients are listed.
  - Canadian Domestic Substances List (DSL):
    All ingredients are listed.

- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. The information supplied is based on data available to us and is believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to this information presented and Cargille Laboratories assumes no responsibility for the result of the use of this product. This information is furnished upon the condition that the persons responsible for its use shall make their own determination of the suitability of the material for their particular purpose. Please note that we consider the English version to be the authoritative version for compliance and regulatory purposes.

- Date of preparation / last revision 10/11/2016 -

- Abbreviations and acronyms:
  ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
  IMDG: International Maritime Code for Dangerous Goods
  DOT: US Department of Transportation
  IATA: International Air Transport Association
  CAS: Chemical Abstracts Service (division of the American Chemical Society)
  LC50: Lethal concentration, 50 percent
  LD50: Lethal dose, 50 percent
  PBT: Persistent, Bioaccumulative and Toxic
  vPvB: very Persistent and very Bioaccumulative
  NIOSH: National Institute for Occupational Safety
  OSHA: Occupational Safety & Health
  LDLo: Lowest Lethal Dose Observed

- Sources
  Website, European Chemicals Agency (echa.europa.eu)
  Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/overview/home.do)
  Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)

(Cont'd. on page 9)
### Trade name: Cargille Laser Liquid Code 57B63 nD= 1.5780-1.6300

<table>
<thead>
<tr>
<th>Safety Data Sheets, Individual Manufacturers</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SDS Prepared by: ChemTel Inc.</td>
<td></td>
</tr>
<tr>
<td>1305 North Florida Avenue</td>
<td></td>
</tr>
<tr>
<td>Tampa, Florida USA 33602-2902</td>
<td></td>
</tr>
<tr>
<td>Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573</td>
<td></td>
</tr>
<tr>
<td>Website: <a href="http://www.chemtelinc.com">www.chemtelinc.com</a></td>
<td></td>
</tr>
</tbody>
</table>

(Cont'd. of page 8)