1 Identification

- Product identifier
- Trade name: Cargille Immersion Liquid Code OHGL nD= 1.333-1.470
- Product code: 19580
- Recommended use and restriction on use
- Recommended use:
  This SDS or an accurate copy is an integral part of using Immersion Liquid Code OHGL. Only use Immersion Liquid Code OHGL 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: (ABBR. C.I.U.) As an Optical Immersion Liquid at normal room pressure 101.32 kPa (760 mm Hg), temperature 7°C to 40°C (45°F to 104°F) in a non misted / non airborne state in a room having 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) and 16 oz (480cc) 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 None.
  - Hazard pictograms: Not regulated.
  - Signal word: Not regulated.
  - Hazard statements: None.
  - Precautionary statements: Not regulated.

- Other hazards
  There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

- Chemical characterization: Mixtures

<table>
<thead>
<tr>
<th>Components</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade Secret</td>
<td>40-60%</td>
</tr>
</tbody>
</table>
Trade name: Cargille Immersion Liquid Code OHGL nD= 1.333-1.470

Additional information:
For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret.

4 First-aid measures

- Description of first aid measures
  - After inhalation: Supply fresh air; consult doctor in case of complaints.
  - After skin contact:
    Wash with soap and water.
    If skin irritation is experienced, 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:
    Do not induce vomiting.
    Seek immediate medical advice.
  - 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:
    No relevant information available.

5 Fire-fighting measures

- Extinguishing media
  - Suitable extinguishing agents:
    CO2, extinguishing powder or water spray. Fight larger fires with water spray.
  - For safety reasons unsuitable extinguishing agents: Water stream.
  - Special hazards arising from the substance or mixture: No relevant information available.

- 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
  - Ensure adequate ventilation.
  - For large spills, wear protective clothing.
  - Environmental precautions: No special measures required.

- Methods and material for containment and cleaning up
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  - Dispose of the collected material according to regulations.

- Reference to other sections
  - See Section 7 for information on safe handling.
  - See Section 8 for information on personal protection equipment.
7 Handling and storage

- Handling
  - Precautions for safe handling: No special measures required.
  - 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.
  - Information about storage in one common storage facility: Store away from oxidizing agents.
  - Further information about storage conditions: Storage Temperatures : 65 - 90 °F / 18 - 32 °C.
  - 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:

<table>
<thead>
<tr>
<th>Trade Secret</th>
<th>Long-term value: 15* 5** mg/m³</th>
<th>Long-term value: 10* 3** mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEL (USA)</td>
<td>mist: *total dust **respirable fraction</td>
<td>mist: **mist, respirable</td>
</tr>
<tr>
<td>TLV (USA)</td>
<td>TLV withdrawn-insufficient data human occup. exp.</td>
<td></td>
</tr>
<tr>
<td>EL (Canada)</td>
<td>Long-term value: 10* 3** mg/m³</td>
<td></td>
</tr>
<tr>
<td>EV (Canada)</td>
<td>Long-term value: 10 mg/m³</td>
<td></td>
</tr>
<tr>
<td>LMPE (Mexico)</td>
<td>Long-term value: 10 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

- 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.
  - Engineering controls: No relevant information available.
  - Breathing equipment: Not required under normal conditions of use.
  - Protection of hands: No chemical-protective gloves required.
  - Eye protection:
    - Safety glasses
    - Follow relevant national guidelines concerning the use of protective eyewear.

- Body protection:
  - Not required under normal conditions of use.
  - Protection may be required for spills.
Trade name: Cargille Immersion Liquid Code OHGL nD= 1.333-1.470

| Limitation and supervision of exposure into the environment | No special requirements. |
| Risk management measures | No special requirements. |

### 9 Physical and chemical properties

| Information on basic physical and chemical properties |
| Appearance: |
| Form: | Liquid |
| Color: | Colorless |
| Odor: | Odorless |
| Odor threshold: | Not determined. |
| pH-value: | Not determined. |
| Melting point/Melting range: | -9 °C (~48 °F) |
| Boiling point/Boiling range: | >100 °C (>212 °F) |
| Flash point: | >199 °C (>390 °F) (PMCC) |
| Flammability (solid, gaseous): | Not applicable. |
| Auto-ignition temperature: | Not determined. |
| Decomposition temperature: | Not determined. |
| Danger of explosion: | Product does not present an explosion hazard. |
| Explosion limits |
| Lower: | Not determined. |
| Upper: | Not determined. |
| Oxidizing properties: | Not determined. |
| Vapor pressure: | 32 hPa (24 mm Hg) |
| Density at 20 °C (68 °F): | 1.1 - 1.3 g/cm³ (9.18 - 10.849 lbs/gal) (Estimated Range) |
| Relative density: | 1.2 (Water=1) |
| Vapor density: | <3.1 (Air=1) |
| Evaporation rate: | <1 (Water=1) |
| Solubility in / Miscibility with Water: | Fully miscible. |
| Partition coefficient (n-octanol/water): | Not determined. |
| Viscosity |
| Dynamic: | Not determined. |
| Kinematic at 25 °C (77 °F): | 26 cSt |
| Other information | No relevant information available. |

### 10 Stability and reactivity

| Reactivity: | No relevant information available. |
Trade name: Cargille Immersion Liquid Code OHGL nD= 1.333-1.470

- **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**
  - Reacts with strong oxidizing agents.
  - Reacts with strong alkali.
- **Conditions to avoid** Excessive heat.
- **Incompatible materials** Oxidizers
- **Hazardous decomposition products**
  - Under fire conditions only:
  - Possible in traces.

### 11 Toxicological information

- **Information on toxicological effects**
  - **Acute toxicity**: None.
  - **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.

<table>
<thead>
<tr>
<th>IARC (International Agency for Research on Cancer):</th>
</tr>
</thead>
<tbody>
<tr>
<td>None of the ingredients are listed.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NTP (National Toxicology Program):</th>
</tr>
</thead>
<tbody>
<tr>
<td>None of the ingredients are listed.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OSHA-Ca (Occupational Safety &amp; Health Administration):</th>
</tr>
</thead>
<tbody>
<tr>
<td>None of the ingredients are listed.</td>
</tr>
</tbody>
</table>

- **Probable route(s) of exposure**
  - Ingestion.
  - Inhalation.
  - Eye contact.
  - Skin contact.
- **Acute effects (acute toxicity, irritation and corrosivity)**: From product as supplied: None.
- **Repeated dose toxicity**: From product as supplied: 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.

(Cont'd. on page 6)
12 Ecological information

- Toxicity
  - Aquatic toxicity: No relevant information available.
  - Bioaccumulative potential: No relevant information available.
  - Mobility in soil: No relevant information available.
- Additional ecological information
- General notes:
  - Negative ecological effects are, according to the current state of knowledge, not expected.
- 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:
    - Smaller quantities can be disposed of with household waste.
    - 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.
    - Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

- UN-Number
  - DOT, ADR, IMDG, IATA: Not regulated.
- UN proper shipping name
  - DOT, ADR, IMDG, IATA: Not regulated.
- Transport hazard class(es)
  - DOT, ADR, IMDG, IATA
    - Class: Not regulated.
- Packing group
  - DOT, ADR, IMDG, IATA: Not regulated.
- Environmental hazards
  - Marine pollutant: No
Trade name: Cargille Immersion Liquid Code OHGL nD= 1.333-1.470

- Special precautions for user: Not applicable.
- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.

15 Regulatory information

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

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

Trade name: Cargille Immersion Liquid Code OHGL nD= 1.333-1.470

(Cont'd. of page 7)

- 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 11/10/2016 / -

- 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
  GHS: Globally Harmonized System of Classification and Labelling of Chemicals
  CAS: Chemical Abstracts Service (division of the American Chemical Society)
  DNEL: Derived No-Effect Level (REACH)
  PNEC: Predicted No-Effect Concentration (REACH)
  LC50: Lethal concentration, 50 percent
  LD50: Lethal dose, 50 percent
  PBT: Persistent, Bioaccumulative and Toxic
  SVHC: Substances of Very High Concern
  vPvB: very Persistent and very Bioaccumulative
  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)
  Safety Data Sheets, Individual Manufacturers
  SDS Prepared by:
  ChemTel Inc.
  1305 North Florida Avenue
  Tampa, Florida USA 33602-2902
  Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573
  Website: www.chemtelinc.com