



SECTION 1: Identification of the substance/mixture and of the company/undertaking

· **1.1 Product identifier**

· **Trade name:** Cargille Refractive Index Liquid Series M - nD=1.736-1.780

· **Product code:** 18151, 18152, 1815X, 1815Y, 19152, 19153

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**

· **Sector of Use** SU24 Scientific research and development

· **Application of the substance / the mixture:**

This SDS or an accurate copy is an integral part of using Refractive Index Liquid Series M. Only use Refractive Index Liquid Series M 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).

Conditions of Intended Use: (ABBR. C.I.U.) As an Optical Refractive Index Liquid at normal room pressure 101,32 kPa (760 mm Hg), temperature 18°C to 40°C (65°F to 104°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 1/4 oz (7,4cc), 1 oz (30cc), 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.

· **Uses advised against:** Contact manufacturer.

· **1.3 Details of the supplier of the Safety Data Sheet**

· **Manufacturer/Supplier:**

Cargille Laboratories
55 Commerce Road
Cedar Grove, NJ 07009-1289 USA
973-239-6633
compliance@cargille.com
www.cargille.com

· **1.4 Emergency telephone number:**

ChemTel Inc.
(800)255-3924, +1 (813)248-0585

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**

Acute Tox. 4 H302 Harmful if swallowed.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Dam. 1 H318 Causes serious eye damage.

STOT SE 3 H335 May cause respiratory irritation.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

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Hazard pictograms

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GHS05 GHS07

Signal word Danger

Hazard-determining components of labelling:

diiodomethane

Hazard statements

H302 Harmful if swallowed.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H335 May cause respiratory irritation.

Precautionary statements

P261 Avoid breathing mist/vapours/spray.

P264 Wash thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P302+P352 IF ON SKIN: Wash with plenty of water.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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

Results of PBT and vPvB assessment
PBT: Not applicable.

vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

Components:

CAS: 7704-34-9 EINECS: 231-722-6 Index number: 016-094-00-1 Reg.nr.: 01-2119487295-27-XXXX	sulfur	40-60%
	Skin Irrit. 2, H315	
CAS: 75-11-6 EINECS: 200-841-5	diiodomethane	40-60%
	Eye Dam. 1, H318 Acute Tox. 4, H302; Skin Irrit. 2, H315; STOT SE 3, H335	

Additional information: For the wording of the listed Hazard Statements refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures
General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

After inhalation: Supply fresh air; consult doctor in case of complaints.

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- **After skin contact:** Immediately wash with water and soap and rinse thoroughly. (Cont'd. from page 2)
- **After eye contact:**
Protect unharmed eye.
Remove contact lenses if worn.
Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; call for medical help immediately.
- **4.2 Most important symptoms and effects, both acute and delayed**
Coughing
Irritant to skin and mucous membranes.
Strong irritant with the danger of severe eye injury.
May cause respiratory irritation.
- **Hazards:**
Causes serious eye damage.
Harmful if swallowed.
- **4.3 Indication of any immediate medical attention and special treatment needed**
Medical supervision for at least 48 hours.
If necessary oxygen respiration treatment.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **For safety reasons unsuitable extinguishing agents:** None.
- **5.2 Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
- **Additional information:** Cool endangered receptacles with water in flooding quantities.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.
Ensure adequate ventilation
- **6.2 Environmental precautions** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Send for recovery or disposal in suitable receptacles.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

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SECTION 7: Handling and storage

· 7.1 Precautions for safe handling

- Prevent formation of aerosols.
- Use only in well ventilated areas.
- Avoid splashes or spray in enclosed areas.

- **Information about fire - and explosion protection:** Keep respiratory protective device available.

· 7.2 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.
- Provide ventilation for receptacles.

· **Information about storage in one common storage facility:**

- Store away from foodstuffs.
- Store away from oxidisers, strong acids, strong bases.
- Store away from metals.

· **Further information about storage conditions:**

- Protect from sunlight.
- Keep container tightly sealed.
- Store in dry conditions.

- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· 8.1 Control parameters

· **Ingredients 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.

- **DNELs:** No further relevant information available.
- **PNECs:** No further relevant information available.

· 8.2 Exposure controls

· **Personal protective equipment:**

· **General protective and hygienic measures:**

- The usual precautionary measures are to be adhered to when handling chemicals.
- 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 contact with the eyes and skin.

· **Respiratory protection:**

- Use suitable respiratory protective device when aerosol or mist is formed.
- Use suitable respiratory protective device when high concentrations are present.

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· **Protection of hands:**

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Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· **Eye protection:**

Contact lenses should not be worn.



Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

· **Body protection:**

Protective work clothing

Protection may be required for spills.

· **Limitation and supervision of exposure into the environment:**

No further relevant information available.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **Appearance**

· Form:	Liquid
· Colour:	Yellow
· Odour:	Characteristic
· Odour threshold:	Not determined.

· pH-value:	Not determined.
· Melting point/Melting range:	5 °C
· Boiling point/Boiling range:	≥ 181 °C

· **Flash point:** >110 °C (Open Cup)

· **Flammability (solid, gaseous):** Not applicable.

· **Auto/Self-ignition temperature:** 260 °C

· **Decomposition temperature:** Not determined.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits**

· Lower:	Not determined.
· Upper:	Not determined.

· **Oxidising properties** Not determined.

· **Vapour pressure:** 2,00 hPa (1,5 mm Hg)

· **Density at 20 °C:** 3,7 g/cm³

· **Relative density:** Not determined.

· **Vapour density:** App. 9 (water = 1,0)

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- | | |
|---|--|
| · Evaporation rate: | App. 1,0 (water = 1,0) |
| · Solubility in / Miscibility with water: | Slightly soluble. |
| · Partition coefficient (n-octanol/water): | Not determined. |
| · Viscosity | |
| Dynamic: | Not determined. |
| Kinematic: | Not determined. |
| · 9.2 Other information | No further relevant information available. |

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability** Stable under normal temperatures and pressures.
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**
Toxic fumes may be released if heated above the decomposition point.
Reacts with strong acids and alkali.
Reacts with amines.
Reacts with certain metals.
Reacts with strong oxidising agents.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials** No further relevant information available.
- **10.6 Hazardous decomposition products**
Iodine compounds
Sulphur oxides (SO_x)

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**
Harmful if swallowed.

- **LD/LC50 values relevant for classification:**

ATE (Acute Toxicity Estimates)

Oral	LD50	800 - 2000 mg/kg (rat)
------	------	------------------------

7704-34-9 sulfur

Oral	LD50	2000 mg/kg (rat)
------	------	------------------

75-11-6 diiodomethane

Oral	LD50	501-2000 mg/kg (rat)
------	------	----------------------

- **Primary irritant effect**
- **Skin corrosion/irritation:**
Causes skin irritation.

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- **Serious eye damage/irritation:** Causes serious eye damage. (Cont'd. from page 6)
- **Respiratory or skin sensitisation:** Based on available data, the classification criteria are not met.
- **IARC (International Agency for Research on Cancer):**

None of the ingredients are listed.

- **Probable routes of exposure:**
 - Ingestion.
 - Inhalation
 - Eye contact.
 - Skin contact.
- **Acute effects (acute toxicity, irritation and corrosivity):**
 - Harmful if swallowed.
 - Causes serious eye damage.
 - May cause respiratory irritation.
- **Repeated dose toxicity:** No further relevant information available.
- **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:**
 - May cause respiratory irritation.
- **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.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**
 - Do not allow product to reach ground water, water course or sewage system.
 - Danger to drinking water if even small quantities leak into the ground.
 - Harmful to aquatic organisms
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

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SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- | | |
|---|-----------------|
| <ul style="list-style-type: none"> · 14.1 UN-Number · DOT, ADR, IMDG, IATA | Not Regulated |
| <ul style="list-style-type: none"> · 14.2 UN proper shipping name · DOT, ADR, IMDG, IATA | Not Regulated |
| <ul style="list-style-type: none"> · 14.3 Transport hazard class(es) · DOT, ADR, IMDG, IATA · Class | Not Regulated |
| <ul style="list-style-type: none"> · 14.4 Packing group · DOT, ADR, IMDG, IATA | Not Regulated |
| <ul style="list-style-type: none"> · 14.5 Environmental hazards: · Marine pollutant: | No |
| <ul style="list-style-type: none"> · 14.6 Special precautions for user | Not applicable. |
| <ul style="list-style-type: none"> · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code | Not applicable. |

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
 - **Carcinogenic Categories**
- | |
|---|
| <ul style="list-style-type: none"> · IARC (International Agency for Research on Cancer) |
| None of the ingredients are listed. |
- **Directive 2012/18/EU**
 - **Named dangerous substances - ANNEX I** None of the ingredients are listed.
 - **National regulations:**
 - **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

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· **Other regulations, limitations and prohibitive regulations**

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· **Substances of very high concern (SVHC) according to REACH, Article 57**

None of the ingredients are listed.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 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.

· **Relevant phrases**

H302 Harmful if swallowed.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H335 May cause respiratory irritation.

· **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 Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

Acute Tox. 4: Acute toxicity – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

· **Sources**

Website, European Chemicals Agency (echa.europa.eu)

Website, US EPA Substance Registry Services (ofmpub.epa.gov/sorinternet/registry/substreg/home/overview/home.do)

Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)

Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: ISBN: 978-0-470-07488-6

Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.

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Safety Data Sheets, Individual Manufacturers

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