

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****· 1.1 Product identifier****· Trade name: Cargille Refractive Index Liquid Series A nD=1.571-1.640****· Product code:** 18091, 18092, 18095, 1809X, 1809Y, 19095, 19096, 19097**· 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 A. Only use Refractive Index Liquid Series A 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**

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

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

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

· Hazard pictograms

GHS09

· Signal word Not Regulated

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- **Hazard-determining components of labelling:**

Terphenyl
hydrogenated terphenyl

- **Hazard statements**

H411 Toxic to aquatic life with long lasting effects.

- **Precautionary statements**

P273 Avoid release to the environment.

P391 Collect spillage.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Labelling of packages where the contents do not exceed 125 ml**

- **Hazard pictograms**



GHS09

- **Signal word** None.

- **Hazard-determining components of labelling:**

Terphenyl
hydrogenated terphenyl

- **Hazard statements** None.

- **Precautionary statements** None.

· **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

- **3.2 Mixtures**

- **Components:**

CAS: 3842-58-8	hydrogenated terphenyl Aquatic Chronic 4, H413	40-60%
CAS: 26140-60-3 EINECS: 247-477-3 Reg.nr.: 01-2119488220-43-XXXX	Terphenyl Aquatic Chronic 1, H410	1-<2,5%

· **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**

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

- **After eye contact:**

Remove contact lenses if worn.

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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; call for medical help immediately.

- **4.2 Most important symptoms and effects, both acute and delayed**

Gastric or intestinal disorders when ingested.

- **Hazards:** Causes skin irritation.

- **4.3 Indication of any immediate medical attention and special treatment needed**

If medical advice is needed, have product container or label at hand.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**

- **Suitable extinguishing agents:**

Foam

Fire-extinguishing powder

Gaseous extinguishing agents

Carbon dioxide

Water haze or fog

- **For safety reasons unsuitable extinguishing agents:**

Water with full jet

Water spray

- **5.2 Special hazards arising from the substance or mixture**

Formation of toxic gases is possible during heating or in case of fire.

- **5.3 Advice for firefighters**

- **Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

- **6.2 Environmental precautions**

Inform respective authorities in case of seepage into water course or sewage system.

- **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.

See Section 13 for disposal information.

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SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** Avoid splashes or spray in enclosed areas.
- **Information about fire - and explosion protection:** No special measures required.
- **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.
Store in a well-ventilated place. Keep cool.
- **Information about storage in one common storage facility:**
Store away from foodstuffs.
Store away from oxidisers, strong acids, strong bases.
- **Further information about storage conditions:**
Storage Temperatures : 65 - 90 °F / 18 - 32 °C.
Keep container tightly sealed.
- **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.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.
- **Respiratory protection:** Not required under normal conditions of use.
- **Protection of hands:**



Protective gloves

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

- **Eye protection:**



Safety glasses

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Follow relevant national guidelines concerning the use of protective eyewear.

- **Body protection:** Protective work clothing
- **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 applicable.

· Melting point/Melting range: Not determined.

· Boiling point/Boiling range: >230 °C

· Flash point: >113 °C (Closed Cup)

· Flammability (solid, gaseous): Not applicable.

· Auto/Self-ignition temperature: Not determined.

· Decomposition temperature: Not determined.

· Danger of explosion: Not determined.

· Explosion limits

Lower: Not determined.

Upper: Not determined.

· Oxidising properties: Not determined.

· Vapour pressure at 23 °C: 1,33 hPa (1.0 mm Hg)

· Density:

Relative density: 1,22

Vapour density: <2,2 (Air = 1,0)

Evaporation rate: <1,0 (n-Butyl Acetate = 1.0)

· Solubility in / Miscibility with

water: Not miscible or difficult to mix.

· Partition coefficient (n-octanol/water): Not determined.

· Viscosity

Dynamic at 25 °C: 22 cSt

Kinematic: Not determined.

· 9.2 Other information

No further relevant information available.

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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**
Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomised.
Reacts with strong oxidising agents.
Reacts with strong acids and alkali.
- **10.4 Conditions to avoid**
Excessive heat.
Store away from oxidising agents.
- **10.5 Incompatible materials** No further relevant information available.
- **10.6 Hazardous decomposition products**

Under fire conditions only:
Carbon monoxide and carbon dioxide
Halogenated hydrocarbons
Hydrohalogens

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:** Based on available data, the classification criteria are not met.
- **LD/LC50 values relevant for classification:** None.
- **Primary irritant effect**
- **Skin corrosion/irritation:** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation:** Based on available data, the classification criteria are not met.
- **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):** None.
- **Repeated dose toxicity:** None.
- **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.

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- **Aspiration hazard:** Based on available data, the classification criteria are not met.

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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**
Due to the distribution coefficient n-octanol/water an accumulation in organisms is not expected.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:**
Harmful to fish
Toxic for water fleas
- **Additional ecological information:**
- **General notes:**
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

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.
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 packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- **14.1 UN-Number**
- **DOT** Exempt
- **ADR, IMDG, IATA** UN3082

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· **14.2 UN proper shipping name**

· DOT Exempt
 · ADR, IATA ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
 LIQUID, N.O.S (TERPHENYL)
 · IMDG ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
 LIQUID, N.O.S (TERPHENYL), MARINE
 POLLUTANT

· **14.3 Transport hazard class(es)**

· DOT Exempt
 · Class

· ADR



· Class 9 (M6) Miscellaneous dangerous substances and
 articles.
 · Label 9

· IMDG, IATA



· Class 9 Miscellaneous dangerous substances and articles.
 · Label 9

· **14.4 Packing group**

· DOT Exempt
 · ADR, IMDG, IATA III

· **14.5 Environmental hazards:**

· Marine pollutant: Yes
 Symbol (fish and tree)

· **14.6 Special precautions for user**

Warning: Miscellaneous dangerous substances and
 articles.
 · Danger code (Kemler): 90
 · EMS Number: F-A,S-F

· **14.7 Transport in bulk according to Annex II
 of Marpol and the IBC Code**

Not applicable.

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<ul style="list-style-type: none"> · Transport/Additional information: 	<p>Not regulated when carried in single or combination packaging containing a net quantity of 5 L or less for liquids or 5 kg or less for solids per the following: DOT: 171.4(c)(2) ADR: SP 375 IMDG: 2.10.2.7 IATA: special provision A197</p>
<ul style="list-style-type: none"> · ADR · Transport category · Tunnel restriction code 	<p>3 E</p>

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Carcinogenic Categories**

· **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.
- **Seveso category E1** Hazardous to the Aquatic Environment
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 200 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
- **National regulations:**
- **Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water.
- **Other regulations, limitations and prohibitive regulations**

· **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

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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**

H410 Very toxic to aquatic life with long lasting effects.
H413 May cause long lasting harmful effects to aquatic life.

- **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
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
Aquatic Chronic 4: Hazardous to the aquatic environment - long-term aquatic hazard – Category 4

- **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.
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