



SAFETY DATA SHEET

Section 1: Identification

Product identifier used on the label;

Product name: Immersion Oil Type B
Product code: MXA20352: 1fl.oz

Other means of identification;

No information

Recommended use of the chemical and restrictions on use;

Recommended use: Oil for microscope, oil-immersion objective lenses
Restrictions on use: No information

Company Identification

Manufacturer Cargille Laboratories
Address 55 Commerce Road Cedar Grove, NJ 07009-1289 USA

Supplier NIKON CORPORATION
Department in Charge: Healthcare Business Unit
Address: Yokohama Plant
471, Nagaodai-cho, Sakae-ku, Yokohama, Kanagawa 244-8533
Telephone number: +81-45-853-8608
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e-mail address: Msqa.Manager@nikon.com



Section 2: Hazard(s) identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;**Physical Hazards**

Not classified

Health Hazards

Skin corrosion/irritation:	Category 2
Specific target organ toxicity single exposure:	Category 3 (Respiratory tract irritation)
Specific target organ toxicity repeated or prolonged exposure:	Category 2 (Liver)

Environmental Hazards

Hazardous to the aquatic environment (chronic) Category 1

Other Hazards

No information

Signal word, hazard statement(s), symbol(s) and precautionary statement(s) in accordance with paragraph (f) of §1910.1200;**Symbol(s)****Signal word****Warning****Hazard Statement(s)**

H315: Causes skin irritation
H335: May cause respiratory irritation
H373: May cause damage to organs (Liver) through prolonged or repeated exposure
H410: Very toxic to aquatic life with long lasting effects

Precautionary Statement(s)

[Prevention]

P260: Do not breathe dust/fume/gas/mist/ vapors/spray.
P264: Wash hands thoroughly after handling.
P271: Use only outdoors or in a well-ventilated area.
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

[Emergency response]

P302+P352: If on skin: Wash with plenty of water.
P304+P340: If inhaled: Remove person to fresh air and keep comfortable for breathing.
P314: Get medical advice/attention if you feel unwell.



[Storage] P332+P313: If skin irritation occurs: Get medical advice/attention.
P362+P364: Take off contaminated clothing and wash it before reuse.
P391: Collect spillage.
P403+P233: Store in a well-ventilated place. Keep container tightly closed.
P405: Store locked up.
[Disposal] P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

Description of any hazards not otherwise classified;

No information

Ingredient with unknown acute toxicity in the mixture

Not applicable

Section 3: Composition/information on ingredients

Compositions (contents of the product)

Chemical name	CAS No.	Concentration/concentration ranges (wt %)
-	-	25 - 50
Hydrogenated terphenyls	-	25 - 50
-	-	25 - 50
Terphenyl	-	1 - 2.5

Section 4: First-aid measures

Necessary first-aid measures by relevant routes of exposure;

IF INHALED Supply fresh air; consult doctor in case of complaints.
IF ON SKIN Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
IF IN EYES Remove contact lenses if worn.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
IF SWALLOWED Rinse out mouth and then drink plenty of water.
Do not induce vomiting; call for medical help immediately.



Most important symptoms/effects, acute and delayed;

- Gastric or intestinal disorders when ingested.
- Causes skin irritation.
- May cause respiratory irritation.
- May cause damage to organs (Liver) through prolonged or repeated exposure.

Indication of immediate medical attention and special treatment needed, if necessary;

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

Section 5: Fire-fighting measures

Suitable (and unsuitable) extinguishing media;

Suitable extinguishing media:

- Foam, fire-extinguishing powder, gaseous extinguishing agents, carbon dioxide, water haze or fog

Unsuitable extinguishing media

- Water with full jet

Specific hazards arising from the chemical;

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

Special protective equipment and precautions for fire-fighters;

- Wear self-contained respiratory protective device.
- Wear fully protective suit.

Section 6: Accidental release measures

Personal precautions, protective equipment, and emergency procedures;

- Wear protective equipment.
- Keep unprotected persons away.
- Ensure adequate ventilation
- Do not allow to enter sewers/surface or ground water.
- Inform respective authorities in case of seepage into water course or sewage system.

Methods and materials 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.



Section 7: Handling and storage

Precautions for safe handling

Protective measures:

- No special measures required.
- Avoid splashes or spray in enclosed areas.

Advice on general occupational hygiene:

- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing.
- Wash hands before breaks and at the end of work.

Conditions for safe storage, including any incompatibilities

Technical measures:

- No special measures required.

Incompatible materials:

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

Conditions for safe storage:

- Avoid storage near extreme heat, ignition sources or open flame.
- Store in a well-ventilated place. Keep cool.
- Store away from foodstuffs.
- Further information about storage conditions:
Storage Temperatures: 65 - 90°F/18 - 32°C.
- Keep container tightly sealed.

Packing material:

- Use a sealed container without damage or leakage.

Section 8: Exposure controls/personal protection

Occupational Exposure Limits;

OSHA PEL	STEL/CEIL(C): 1 ppm (Celling), 9 mg/m ³ (Celling) (Terphenyl)
ACGIH TLV-TWA (2017)	0.5 ppm, 4.9 mg/m ³ (Hydrogenated terphenyls)
ACGIH TLV-STEL (2017)	0.53 ppm (Celling), 5 mg/m ³ (Celling) (Terphenyl)

Appropriate engineering controls;

- The usual precautionary measures are to be adhered to when handling chemicals.
- Do not inhale gases/fumes/aerosols.
- Avoid contact with the eyes and skin.



Individual protection measures, such as personal protective equipment;

Respiratory protection	Not required under normal conditions of use.
Hand protection	Protective gloves 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.
Skin and body protection	Protective work clothing

Section 9: Physical and chemical properties

Appearance (physical state, color, etc.)	Colourless to light yellow oily liquid
Odor	Slight odor
Odor threshold	Not determined
pH	Not applicable
Melting point/freezing point	0°C
Initial boiling point and boiling range	340°C (1 atm/1.0132 bar)
Flash point	163°C (Open Cup)
Evaporation rate	< 1.0 (water = 1.0)
Flammability (solid, gas)	Not applicable
Upper/lower flammability or explosive limits	Not determined
Vapor pressure	< 0.133 hPa (< 0.1 mm Hg)
Vapor density	Not determined
Relative density	Density: 0.923 g/cm ³ (25°C) Relative density: Not determined
Solubility (ies)	Water: Not miscible or difficult to mix.
Partition coefficient: <i>n</i> -octanol/water	Not determined
Auto-ignition temperature	Not determined
Decomposition temperature	Not determined
Viscosity	Dynamic (23°C): > 1250 cSt Kinematic (40°C): > 20.5 mm ² /sec (DIN 53211/4)
Explosive properties	No information
Oxidising properties	Not determined

Other information

No information



Section 10: Stability and reactivity

Reactivity

No further relevant information available.

Chemical stability

Stable under normal temperatures and pressures.

Possibility of hazardous reactions

Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomised.

Conditions to avoid

No decomposition if used and stored according to specifications.

Excessive heat.

Store away from oxidising agents.

Incompatible materials

Reacts with strong oxidising agents.

Reacts with strong acids and alkali.

Hazardous decomposition products

Under fire conditions only: Carbon monoxide and carbon dioxide

Section 11: Toxicological information

Symptoms related to the physical, chemical and toxicological characteristics;

Information on product:

Skin corrosion/irritation: Causes skin irritation.

Irritating to skin.

Other toxicological information: No information

Information on ingredients:

Hydrogenated terphenyls

Acute toxicity (oral): Rat LD₅₀ = 6,600 mg/kg - 17,500 mg/kg

Acute toxicity (dermal): Rabbit LD₅₀ > 2,000 mg/kg

Acute toxicity (inhalation: dust/mist): Rat 4hr-LC₅₀ > 4.7 mg/L

Rat 4hr-LC₅₀ > 4.3 mg/L (OECD TG 403, GLP)

Skin corrosion/irritation: In a skin irritation test with rabbits, moderate irritation was observed.

Specific target organ toxicity single exposure: About humans, there are descriptions that "irritation on an upper respiratory tract and nausea symptoms are present" when aerosol was inhaled, and that "an airway is stimulated"



Specific target organ toxicity repeated exposure: in the acute inhalation exposure test employing rats", therefore, it classified into Category 3 (Respiratory tract irritation). In addition, the acute oral toxicity tests employing rats (OECD TG 401, GLP) has a description that "control of spontaneous movement, and dirt on hairs by diarrhea, feces and urine were seen with general findings, but necropsy findings were normal in all animals" by 10,000 mg/kg. Moreover, there is a description that "short term exposure effect: eyes, skin, and respiratory tract are stimulated". In a 20-day dermal administration test with rabbits (International Research and Development Corp. method, GLP) it was reported that "at mg/kg there was no systemic toxicity", and in a 90-day oral administration study with rats (OECD TG 408, GLP) it was reported that "there were weight increase in the liver, kidney and adrenal gland (females only) and weight loss in female animals but no toxic effects related to administration of this substance in histopathological studies ". Also, in a 90-day aerosol inhalation exposure test with rats (OECD TG 413, GLP) there is a report of "weight loss, increased liver weight and chromodacryorrhea", and in a 182-day aerosol inhalation exposure test with rats (Industrial Biotest Laboratory, Inc. method) there is a report of "an increase in SGOT, SAP and SGPT, a reduction in BUN and an increase in liver weight".

Other toxicological information No information

Terphenyl

Acute toxicity (oral): Rat LD₅₀ = 17,500 mg/kg
Acute toxicity (dermal): Rabbit LD₅₀ > 12,500 mg/kg
Other toxicological information No information

Delayed and immediate effects and also chronic effects from short- and long-term exposure;

- Gastric or intestinal disorders when ingested.
- Causes skin irritation.
- May cause respiratory irritation.
- May cause damage to organs (Liver) through prolonged or repeated exposure.

Numerical measures of toxicity (such as acute toxicity estimates);

Not applicable



Whether the chemical is listed in the NTP Report on Carcinogens or has been found to be a potential carcinogen in the IARC Monographs, or by OSHA;

IARC: Not listed as Group 1, Group 2A or Group 2B
NTP Report: Not listed
OSHA: Not listed

Section 12: Ecological information

Ecotoxicity:

Information on product:	No information
Information on ingredients: Terphenyl	No information
Aquatic acute toxicity:	No information
Aquatic chronic toxicity:	Very toxic to aquatic life with long lasting effects.

Persistence and degradability:

Information on product:	No information
Information on ingredients:	No information

Bioaccumulative potential:

Information on product:	No information
Information on ingredients:	No information

Mobility in soil:

Information on product:	No information
Information on ingredients:	No information

Other adverse effects:

No information

Section 13: Disposal considerations

Waste treatment methods

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. Disposal must be made according to official regulations.



Section 14: Transport information

UN number	3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (TERPHENYL)
Transport hazard class(es)	9
Packing group	III
Environmental hazards	Applicable
Transport in bulk according to Annex II of MARPOL 73/78 and IBC code	Not applicable

Special precautions for user

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.

Section 15: Regulatory information

OSHA:	Hazardous chemical
TSCA inventory:	All ingredients in this product are listed on the TSCA Inventory.
TSCA SNUR:	Not listed
SARA Title III:	Not listed
CERCLA Reportable Quantity:	Not listed
Clean Air Act:	This product does not contain any substances regulated as hazardous air pollutants under Section 112 of the Clean Air Act.
Clean Water Act:	This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act.

Section 16: Other information, including date of preparation or last revision

Update history:

Date of issue:	28th APRIL, 2016
Date of revision:	24th JANUARY, 2018

References:

NITE GHS classification results (<http://www.safe.nite.go.jp/ghs/list.html>) (2017)
ACGIH, American Conference of Governmental Industrial Hygienists (2017) TLVs and BEIs.

[Disclaimer]

This SDS has been prepared based on the best available information however, it may not be sufficient in some cases. It is user's responsibility to modify or update any contents in this SDS regarding information on hazardous properties and/or instruction for safe handling of the product when they become available. Precautionary measures in this SDS are only applicable for normal handling conditions and it is necessary to take appropriate additional measures to ensure safe handling which depend on your specific use conditions or situations.