Olympus Corporation of the Americas

SAFETY DATA SHEET

Section 1: Identification

Product identifier:

Product name: Microscopes-Immersion Liquids for Light Microscopy

Model names: IMMOIL-8CC; IMMOIL-500CC

Recommended uses:

Oil for microscope, oil-immersion objective lenses

Restrictions on use:

None identified

Details of the supplier of the safety data sheet:

Name of supplier: Olympus Scientific Solutions Americas

Address:

48 Woerd Avenue
Waltham, MA 02453-3824, U.S.A.

Telephone number: 1-781-419-3900

Emergency telephone number: **1-800-446-5967 option 3 (24-hour)**

Section 2: Hazards Identification

Classification of the mixture:

Classification (in accordance with OSHA Hazard Communication Standard (29 CFR 1910.1200)):

Sensitization – Skin:	Category 1
Specific Target Organ Toxicity (Single Exposure):	Category 2
Specific Target Organ Toxicity (Repeated Exposure):	Category 2
Aquatic Chronic Toxicity:	Category 2

Label elements:

In accordance with OSHA Hazard Communication Standard (29 CFR 1910.1200):

Hazard pictograms:

Signal word: **Warning**

Hazard statements: May cause an allergic skin reaction.
May cause damage to organs (kidneys).
May cause damage to organs (adrenal, liver) through prolonged or repeated exposure.
Toxic to aquatic life with long lasting effects.

Precautionary statements:

Do not breathe mist/vapors/spray.

Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.
If on skin: Wash with plenty of water.
If skin irritation or rash occurs: Get medical advice/attention
Wash exposed areas thoroughly after handling.
Wash contaminated clothing before reuse.
Do not eat, drink or smoke when using this product.
If exposed, concerned, or if you feel unwell: Call a POISON CENTER of doctor/physician.
Specific treatment (see Section 4 of this SDS).
Store locked up.
Dispose of contents/container in accordance with local/regional/national/ international regulations.
Avoid release to the environment.
Collect spillage.

Unclassified hazards

Combustible: This product burns but not easily ignited.

Percentage of ingredients with unknown toxicity

None.

Section 3: Composition / Information on Ingredients

Mixture

Information on ingredients:

Chemical name	Wt. %	Chemical formula	CAS No.
1-Pheny-1-(3,4-dimethylphenyl) ethane	ca. 40	$C_{16}H_{18}$	6196-95-8
1,4-Dimethyl-2-(1-phenylethyl) benzene		$C_{16}H_{18}$	6165-51-1
1-Phenyl-1-(2,4-xylyl)ethane		$C_{16}H_{18}$	6165-52-2
Ethyl(phenylethyl) benzene		$C_{16}H_{18}$	64800-83-5
Other ingredients (non hazardous) Trade secret and proprietary	ca. 60	-	-

The specific chemical identities and exact percentages (concentrations) of composition have been withheld as a trade secret.

Section 4: First-aid Measures

Description of first-aid measures

IF ON SKIN: Wash skin with running water and soap immediately. If skin irritation or rash occurs: Get medical advice/attention.

IF IN EYES: Rinse with clean water for at least 15 minutes and immediately get medical attention. Keep eyelids open with fingers so that eyeballs and all surfaces of eyes are flushed thoroughly.

IF INGESTED: Immediately induce vomiting and keep at rest and get medical attention. Rinse mouth.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, get medical attention.

Most important symptoms and effects, both acute and delayed

Acute effects: No information.
Delayed effects: May cause an allergic skin reaction.

Indication of any immediate medical attention and special treatment needed

In order to prevent secondary exposure, first-aiders should wear protective gloves/ protective clothing/ eye protection/ face protection as appropriate.

Section 5: Fire-fighting Measures

Extinguishing media

Suitable extinguishing media:

Fire foam, carbon dioxide or dry chemical powder

Unsuitable extinguishing media:

Discharging cylinder shape water from fire hose may lead to spread fire to the surroundings.

Special hazards arising from the mixture

Combustible: This product burns but not easily ignited.
Toxic gas and/or fume may generate by combustion.

Special protective equipment and precautions for fire-fighters

Remove containers from fire area if it can be done without risk.
For initial fire, use dry powder, carbon dioxide, etc.
For large fire, it is effective to use fire foam, etc to shut off air supply.
Cool surrounding facilities, etc. with water spray.
Take action from upwind.
Wear air respirators, chemical protective clothing during fire fighting.
When extinguishing a fire in a confined area, be sure to wear self-contained breathing apparatus.

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:

Stay in the windward. Immediately eliminate all sources of ignition such as open flame, hot surfaces, etc.

For emergency responders:

Wear suitable protective equipment (see Section 8. Exposure Controls and Personal Protective Equipment) to avoid contact with eyes and skin or inhalation. Ventilate before entering a confined area.

Environmental precautions

Do not release to the environment. Care should be made so that any adverse effects on the environment will not cause by discharging the product into rivers, etc.

Methods and material for containment and cleaning up

For small spills, absorb with dry earth, sawdust, sand, etc and collect into a closed container then dispose of them.
For large spills, dike with earth and sand, etc. to prevent further spills and cover liquid surface with foam and collect into an empty container as much as possible.
Ground all equipment used to handle spills.
Stop leakage if it can be done without risk.

Reference to other sections

Refer to "Section 8 Exposure controls/ personal protection" and "Section 13 Disposal consideration" as appropriate.

Section 7: Handling and Storage

Precautions for safe handling

Containment and measures for safe handling:

Keep away from sources of ignition such as open flame, static discharge, electric sparks, etc.
Use non-sparking tools.
Do not inhale or swallow.
Avoid contact with eyes and skin.
Prevent leakage.
Use only outdoors or in a well-ventilated area.
Wash hands thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.

Incompatible substances or mixture:

Strong oxidizers.

Conditions for safe storage, including any incompatibilities

Ground all storage containers and use non-sparking tools, equipments.
Keep away from oxidizing agents.
Store locked up.
Keep container tightly closed and store in a well-ventilated place.

Specific end uses

Oil for microscope, oil-immersion objective lens

Section 8: Exposure Controls / Personal Protection

Control parameters

Occupational Exposure Limits: None specified

Exposure controls

Appropriate engineering controls:

Handle the product only under conditions where sufficient ventilation is provided and/or in a closed system. Install eye washer and safety shower near handling and storage area and display where they are.

Individual protection measures, such as personal protective equipment:

Eye/ face protection:	Wear suitable safety glasses.
Skin protection:	Wear oil-resistant protective gloves and work clothing as appropriate.
Respiratory protection:	Wear gas mask for organic gas, air-supplied respirators, air respirators,

etc.

Environmental exposure controls:

Avoid release to the environment.

Section 9: Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance:	Clear and colourless, slightly viscous liquid
Odor:	Faint aromatic odor
Odor threshold:	No data available
pH:	No data available
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	≥ 200°C (distillation range)
Flash point:	154°C
Evaporation rate:	No data available
Flammability (solid, gas):	Not applicable
Upper/lower flammability or explosive limits:	No data available
Vapor pressure:	No data available
Vapor density:	≥ 1.0 (Air = 1)
Relative density:	0.918 g/cm^3 (at 15°C)
Solubility:	Almost insoluble in water
Partition coefficient: n-octanol/water:	No data available
Auto ignition temperature:	≥300°C
Decomposition temperature:	No data available
Viscosity:	No data available
Pour point:	-50°C

Section 10: Stability and Reactivity

Reactivity

This product is considered to be a non-reactive material under normal and anticipated storage and handling conditions.

Chemical stability

This product is stable to light or heat.

Possibility of hazardous reactions

No information

Conditions to avoid

Sources of ignition such as hot surfaces, sparks, open flames, etc.

Incompatible materials

See Section 7.

Hazardous decomposition products

No information

Section 11: Toxicological Information

Information on toxicological effects

Information on product:

Acute toxicity (oral): LD50 (rats) > 2,000 mg/kg

Skin irritation: Continuous or repeated skin contact causes mild irritation to human. Mild irritating to rabbits.

Eye irritation: Causes minimum eye irritation to rabbits.

Skin sensitisation: Continuous or repeated skin contact may cause very mild allergic dermatitis in human.

Information on ingredients (mixture of four substances):

Acute toxicity (oral): LD50 (rats) = 1,940 mg/kg (male), 2,200 mg/kg (female)

Acute toxicity (inhalation): LC50 (rats) > 1.8 g/m^3

Skin irritation: Moderate irritating to rabbit skin. (Primary Irritation Index: 2.8)

Eye irritation: Not irritating to rabbit eyes.

Skin sensitisation: Negative in a guinea pigs skin sensitization test (Buehler method).. Positive in a guinea pigs skin sensitization test (GMPT: Maximization method).

Germ cell mutagenicity: (*in vitro*) Negatives in an Ames and chromosome aberration (bacteria) studies.

Carcinogenicity: No carcinogenic effect or promotion of carcinogen was observed in a rat 24-months study.

Reproductive toxicity: No teratogenic activity in mice was observed.

STOT-single exposure: May cause headache, nausea or dizziness.

Other information: Bio-magnification rate after 29 days in mice at a dose level of 1.5 mg/kg (2days): 0.02%

Information on ingredient (1,4-Dimethyl-2-(1-phenylethyl) benzene):

Germ cell mutagenicity: (*in vitro*) Negatives in an Ames and a chromosome aberration studies.

Reproductive toxicity: No teratogenic effects were observed in an animal study.

STOT-single exposure: Decreased body weight gain in 1,000 mg/kg or higher dose levels, and effects on kidneys in 2,000 mg/kg or higher dose levels were observed in a rat single dose oral study.

STOT-repeated exposure: Effects on adrenal and liver were observed in combined repeated dose toxicity study with the reproduction/developmental toxicity screening test (oral dose studies with adult rats).
LOAEL = 12.5 mg/kg/day (male)
LOAEL = 200 mg/kg/day (female)

Carcinogenicity

No ingredients are listed by NTP, IARC, or OSHA as a carcinogen.

Section 12: Ecological Information

Toxicity:

Information on product: No information

Information on ingredients (1,4-Dimethyl-2-(1-phenylethyl) benzene):

Acute toxicity: Crustacea (*Daphnia magna*) 48-hr EC50 = 0.39 mg/L

Persistence and degradability:

No information available

Bioaccumulative potential:

No information available

Mobility in soil:

No information available

Other adverse effects:

Do not release the product into the environment.

Section 13: Disposal Consideration

Waste treatment methods

Dispose of the remaining product and container in accordance with relevant laws and local regulation. Wastes should be dealt by a licensed industrial waste trader and fully notify them of the information on hazardous properties and precautions regarding safe handling.

Avoid discharging waste water or cleaning water containing this product directly into rivers, etc.

Do not dump into sewers, on the ground or into any body of water.

Used container should be cleaned before disposal or recycled in a suitable manner which shall follow the relevant laws and local regulations.

Section 14: Transport Information

UN number:	3082
UN proper shipping name:	Environmental hazardous substances, liquid, N.O.S.
Transport hazard class(es):	Class 9 (Environmentally hazardous substances: aquatic environment)
Packing group:	III
Environmental hazards:	Applicable (marine pollutant)

Special precautions for user

Confirm no damages, corrosion and leakages of containers before transportation. Load dangerous goods and containers in a way of no falling, overturning or damage. During transportation, avoid exposure to direct sunlight and load containers in a way to prevent damage, corrosion and leakage. Secure prevention of cargo collapse. If a disaster occurs by accident, etc during transportation, notify fire station and other relevant agencies of it at first. Do not stack heavy objects on the top of cargos.

Transport in bulk according to Annex II of MARPOL 73/78 and IBC code

Not applicable

Section 15: Regulatory Information

Safety, health and environmental regulations/ legislation specific for the mixture

All ingredients in this product are listed on the TSCA inventory.

Chemical safety assessment

Not conducted

Section 16: Other Information

Update history:

Date of issue: 17th August, 1993

Date of revision: 28th August, 2013

Revision was made in order to be in compliance with the OSHA Hazard Communication Standard (29 CFR 1910.1200).

【Disclaimer】

The information contained in this Safety Data Sheet is described based on the data and information currently available to us and may be updated based on the revision of a statute and new knowledge. The precautions are provided only for normal handling, it is advisable to handle with proper safety measures for a special application. The contents mentioned in the SDS are only for providing the information and no warranty is made with respect to them.