

## Safety Data Sheet

The content and format of this SDS is accordant with SS 586: Part 3: 2008.

### 1. Identification of the substance/preparation and of the company/undertaking

**.Product name:** Microscopes-Immersion Liquids for Light Microscopy

**.Model name:** IMMOIL-8CC, IMMOIL-500CC

**.Recommended use of the chemical and restrictions on use:** Oil for microscope, oil-immersion objective lenses.

Uses advised against: Do not use it in an application which may contaminate food or do harm to health.

**.Manufacturer/Supplier:** OLYMPUS SINGAPORE PTE LTD.

**.Address:** 438B Alexandra Road #03-07/12, Alexandra Technopark Blk B, Singapore 119968

Tel: +65 6834 0010 (9:00-17:00)

**.Further information obtainable from:** OLYMPUS SINGAPORE PTE LTD.

**.Information in case of emergency:**

Tel: +65 6834 0010

### 2. Hazards identification

**.Hazards Classification per SS586-2: 2008 (accordant with GHS criteria) :**

Physical hazards	Health hazards	Environmental hazards
Explosives-not classified Flammable gases-not classified Flammable aerosols-not classified Gases under pressure- not classified Flammable liquids- not classified Flammable solids-not classified Self-reactive substances and mixtures-not classified Pyrophoric liquids-not classified Pyrophoric solids-not classified Self-heating substances and mixtures-not classified Substances and mixtures, which in contact with water, emit flammable gases-not classified Oxidizing liquids-not classified Oxidizing solids-not classified Organic peroxides-not classified Corrosive to metals-not classified	Acute toxicity (oral)- not classified Acute toxicity (dermal)-not classified Acute toxicity (inhalation)-not classified Skin corrosion/irritation- not classified Serious eye damage/eye irritation- not classified Respiratory sensitizer-not classified Skin sensitizer- 1 Germ cell mutagenicity- not classified Carcinogenicity- not classified Toxic to reproduction- not classified Specific target organ toxicity following single exposure-2 (kidneys) Specific target organ toxicity following repeated exposure- 2 (kidneys, adrenal gland, liver) Aspiration hazard- not classified Effects on or via lactation-not classified	Acute hazards to the aquatic environment-2 Chronic hazards to the aquatic environment- 2

**.Signal word: Warning**

**.Symbol :**



**.Hazard Statement:**

H317: May cause an allergic skin reaction.

H371: May cause damage to organs (kidneys).

H373: May cause damage to organs (kidneys, adrenal gland, liver) through prolonged or repeated exposure.

H411: Toxic to aquatic life with long lasting effects.

**.Precautionary Statements:**

P260: Do not breathe dust/fume/gas/mist/vapours/spray.

P264: Wash hands thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.

P272: Contaminated work clothing should not be allowed out of the workplace.

P273: Avoid release to the environment.

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

**.Response Precautionary Statements:**

P302+352: IF ON SKIN: Wash with soap and water.

P333+313: If skin irritation or a rash occurs: Get medical advice/attention.

P363: Wash contaminated clothing before reuse.

P309+311: IF exposed or you feel unwell: Call a POISON CENTER or doctor/physician.

P314: Get medical advice/attention if you feel unwell.

P391: Collect spillage.

**.Storage precautionary statements :**

P405: Store locked up.

**.Disposal precautionary statements :**

P501: Dispose of contents/container to relevant local and national regulations.

### 3. Composition/information on ingredients

**Product description:** substance (); preparation/mixture (√)

Ingredients	CAS number	EC number	% by weight
1-Propene, 2-methyl-, homopolymer	9003-27-4	--	40%-70%
4-(1-phenylethyl)-o-xylene	6196-95-8	228-249-2	15%-40%
1,4-Dimethyl-2-(1-phenylethyl)	6165-51-1	228-201-0	

benzene			
1-phenyl-1-(2,4-xylyl)ethan 4-(1-phenylethyl)-m-xylene	6165-52-2	228-202-6	
Ethyl(phenylethyl) benzene	64800-83-5	265-241-8	

#### 4 First aid measures

**Persons using this product should consult a physician or other medical professional if an accident involving this product results in injury. Specific first-aid measures are as follows:**

- .Eyes Contact:** Immediately raise eyelids and flush with plenty of water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation persists, get medical attention.
- .Skin Contact:** Wash with water and soap. If skin irritation or a rash occurs: Get medical advice/attention.
- .Inhalation:** Remove to fresh air. Call a POISON CENTER or doctor/physician if you feel unwell.
- .Ingestion:** Immediately induce vomiting and keep at rest and get medical attention. Rinse mouth.
- .Acute effect and delayed effect:** Acute effect: This product may cause an allergic skin reaction and may cause damage to kidneys. Delayed effect: May cause damage to organs (kidneys, adrenal gland, liver) through prolonged or repeated exposure.
- .Personal protective equipment:** Wear protective gloves/protective clothing/eye protection/face protection. Wear respirators and safety goggles when liquid may splash or exposure limits are exceeded

#### 5. Fire-fighting measures

- .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 chemical:** This product is combustible but is not easily ignited. Toxic gas and/or fume may generate from combustion.
- .Special Fire-Fighting Method:**  
 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.  
 Firefighters must wear self-contained breathing apparatus and full protective equipment (e.g. fire-retardant clothing).  
 Deny unnecessary entry to the place around the fire.  
 Remove containers from fire area if it can be done without risk.  
 Cool surrounding facilities, etc. with water spray.  
 Extinguish fire from upwind, and the fire extinguishing method should be appropriate to the situation in the surroundings.

#### 6. Accidental release measures

- .Personal precautions, protective equipment and emergency procedures:**
- For non-emergency personnel:**  
 Wear suitable protective equipment to prevent any contamination of skin, eyes and personal clothing.  
 Stay in the windward.
- For emergency responders:**  
 Wear suitable protective equipment to prevent any contamination of skin, eyes and personal clothing.  
 Remove ignition sources and provide of sufficient ventilation.

Evacuate the danger area or consult an expert when necessary.

**.Environmental precautions:** Keep cleaning run-offs out of municipal sewers and open bodies of water. Comply with local and national laws and regulations.

**.Methods and material for containment and cleaning up:**

**Small Spill:**

Mop up or absorb with an inert dry material (e.g. sand, dry lime) and place in an appropriately labeled waste disposal container.

**Large Spill:**

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.

## 7. Handling and storage

**.Precautions 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.

**.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.

The storeroom should be equipped with proper facilities for accidental leakage.

## 8. Exposure controls/personal protection

**.Control parameters:**

Ingredients	OSHA PEL-TWA	ACGIH TLV-TWA
1-Propene, 2-methyl-, homopolymer	Not established	Not established
4-(1-phenylethyl)-o-xylene	Not established	Not established
1,4-Dimethyl-2-(1-phenylethyl) benzene (CAS: 6165-51-1)	Not established	Not established
4-(1-phenylethyl)-m-xylene	Not established	Not established
Ethyl(phenylethyl) benzene (CAS: 64800-83-5)	Not established	Not established

**.Engineering Controls:**

Handle the product only under conditions where sufficient ventilation is provided.

Install eye washer and safety shower near handling and storage area.

**.Personal Protective Equipments(for workers):**

**.Protection of Hands:**

Wear oil-resistant protective gloves and work clothing as appropriate.



**.Protection of Eyes:**

No special requirements under normal conditions. Wear safety glasses when liquid may contact eyes.



**.Respiratory Protection:** Use an approved respirator if exposure limits are exceeded or if irritation or other symptoms occur.



**.Protection of Body:**

Wear oil-resistant protective gloves and work clothing as appropriate.



**.General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Avoid contact with eyes and skin.

## 9. Physical and chemical properties

General Information	
Form	Slightly viscous liquid
Colour	Clear and colourless
Odour	Faint aromatic odour
pH Value	No data available
Boiling Range	≥200°C (distillation range)
Melting point/Melting range	No data available
Flash point	154°C

<b>Flammable/Explosive Limits-Lower Vol %</b>	No data available
<b>Flammable/Explosive Limits-Upper Vol %</b>	No data available
<b>Relative density</b>	0.918 g/cm <sup>3</sup> (at 15°C)
<b>Relative Vapour density</b>	No data available
<b>Vapour pressure</b>	No data available
<b>Vapour density</b>	≥1.0 (air=1)
<b>Solubility /Miscibility</b>	Almost insoluble in water
<b>n-octanol/Water Partition Coefficient</b>	No data available
<b>Auto-ignition temperature</b>	≥300°C
<b>Decomposition Temperature</b>	No data available
<b>Viscosisty</b>	No data available
<b>Odour Threshold Value</b>	No data available
<b>Evapouration Rate</b>	No data available
<b>Flammability (solid, gas, etc.)</b>	This product is not classified as flammable liquid per GHS criteria.

### 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 under normal ambient and anticipated storage and handling conditions of temperature and pressure.
- .Possibility of hazardous reactions:** No information available.
- .Conditions to Avoid:** Sources of ignition such as hot surfaces, sparks, open flames, etc.
- .Incompatible materials:** Oxidizing agents.
- .Hazardous decomposition products:** Hazardous gas and/or fume may generate from combustion.

### 11. Toxicological information

**.Product Toxicity Data:** The toxicity data of this product has not been determined by testing or research, but to our best knowledge, this product is not toxic. The toxicity data of ingredients shown below is for reference only.

<b>Ingredient (s)/Product</b>	<b>CAS</b>	<b>LD 50/LC 50</b>
Product	--	Acute toxicity (Oral ) LD50: >2,000mg/kg (rat)
Mixture of four substances	--	Acute toxicity (Oral ) LD50: 1,940mg/kg (rat, male) Acute toxicity (Oral ) LD50: 2,200mg/kg (rat, female) Acute toxicity (Inhalation ) LC50: >1.8g/m <sup>3</sup>

- .Serious eye damage/eye irritation:** No classification for this product.
- .Skin corrosion/irritation:** No classification for this product.
- .Respiratory /Skin sensitizer:** Continuous or repeated skin contact may cause very mild allergic dermatitis in human.
- .Germ cell mutagenicity:** No classification for this product.
- .Carcinogenicity:** No classification for this product.

**.Reproductive Toxicity:** No classification for this product.

**.STOT-single exposure:** Category 2-May cause damage to organs (kidneys)

As for the ingredient 1,4-Dimethyl-2-(1-phenylethyl) benzene (CAS: 6165-51-1), research data shows that 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:** Category 2-May cause damage to organs (kidneys, adrenal gland, liver) through prolonged or repeated exposure.

As for the ingredient 1,4-Dimethyl-2-(1-phenylethyl) benzene (CAS: 6165-51-1), effects on kidney, 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)

**.Aspiration hazard:** No classification for this product.

**.Effects on or via lactation:** No classification for this product.

## 12. Ecological information

**.Ecotoxicity:** As for the whole product, there is no relevant data. The data shown below is of the ingredient.

1,4-Dimethyl-2-(1-phenylethyl) benzene (CAS: 6165-51-1): 48h-EC<sub>50</sub> = 0.25mg/L, Crustacea (*Daphnia magna*)

**.Persistence and Degradability:** No information available

**.Bioaccumulative Potential:** No information available

**.Mobility in Soil:** No information available

**.Other adverse effects:** Do not allow product to reach ground water, water course or sewage system.

## 13. Disposal considerations

Do not allow product to reach sewage system.

Do not throw it into any open bodies of water.

Waste recycling must be operated strictly according to relevant regulations.

## 14. Transport Information

**DOT/Air-Transportation- Air-Transportation- IATA/ICAO/Sea-Transportation-IMO/IMDG:**

**.Proper Shipping Name:** Environmental hazardous substances, liquid, N.O. S. (1-Propene, 2-methyl-, homopolymer)

**.Hazard Class:** Class 9 ( Environmentally hazardous substances: aquatic environment)

**.UN Code:** 3082

**.Packing Group:** III

**.Assigned Pictogram:**



**.Marine Pollutant (Yes/No):** YES

**.EMS NO.:** F-A, S-F

**.Environmental hazards:** Marine Pollutant

**.Special precautions for user:**

Check whether the package is completed or sealed before transporting; make sure no damage of packages and prevent goods from falling down during transporting; the transport vehicle should be equipped with facilities for fire-fighting and accidental release handling; do NOT transport this product together with incompatible substances; stay away from fire and areas of high temperature during stopovers.

**.Transport in bulk according to Annex II of MARPOL 73/78 and IBC code:** Not applicable

## **15. Regulatory information**

### **.Singapore:**

**.SS 586: Part 1(Transport and storage of dangerous goods):** This product is classified as Class 9 with the UN code 3082 per United Nations Recommendations on the Transport of Dangerous Goods. The standard hazard communication label should comply with the requirements of this regulation.

**.SS 586: Part 2:** Hazards classification per SS586-2: 2008 (accordant with GHS criteria) :

Skin sensitizer- 1; Specific target organ toxicity following single exposure-2 (kidneys);

Specific target organ toxicity following repeated exposure- 2 (kidneys, adrenal gland, liver);

Acute hazards to the aquatic environment-2; Chronic hazards to the aquatic environment- 2

**.Fire Safety Act:** As this product is not classified as flammable liquid, there is no special fire safety approach. However, it is combustible and it should comply with relevant provisions (e.g. Fire emergency plan, fire safety managers and company emergency response teams, etc.).

**.Environmental Protection and Management Act:** This product is toxic to aquatic life with long lasting effects. Do Not release it to water environment. The use or processing must comply with this Act to ensure no harm to environment. As for detailed information concerning water pollution control, see PART V of this Act.

### **.United States:**

**.TSCA (Toxic Substance Control Act):** All ingredients of this product are listed in the U.S. Toxic Substances Control Act Chemical Substance Inventory List.

### **.Clean Water Act:**

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

**.Carcinogenicity categories:** Not listed by EPA, IARC and NTP.

### **.EU:**

**.67/548/EECAnnexII:** Not listed.

**.REACH Regulation Annex XVII Regulation List:** Not listed.

**.REACH Regulation Annex XIV Authorization List:** Not listed.



**.Chemical Safety Assessment:** A Chemical Safety Assessment has not been carried out.

**.(EC) 1272/2008 Annex VI Table 3.1 & 3.2:**

Skin Sens. 1: H317, STOT SE 2; H371, STOT RE 2: H373, Aquatic Acute2: H401, Aquatic Chronic 2: H411

## **16. Other information**

**DISCLAIMER:** This information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other material. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

### **References:**

GHS (the 4<sup>th</sup> version & the 5<sup>th</sup> version)

SS586 - 1: 2008

SS586 - 2: 2008

SS586 - 3: 2008

### **Full description of some acronyms:**

**GHS-Globally Harmonized System of Classification and Labelling of Chemicals**

**CAS-Chemical Abstracts Service**

**EINECS-European Inventory of Existing Commercial Chemical Substances**

**IMO-International Maritime Organization**

**IMDG-International Maritime Dangerous Goods**

**IATA-International Air Transport Association**

**ICAO-International Civil Aviation Organization**

**TSCA-Toxic Substance Control Act**

**OSHA-Occupational Safety and Health Administration**

**ACGIH- American Conference of Governmental Industrial Hygienists**

**The issuing date of the latest version:** September 11, 2013

**SDS Version:** 1.0

\*\*\*\*\*The End\*\*\*\*\*