



# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:  
GB/T 16483-2008, GB/T 17519-2013

**Product Name** Resolve Immersion Oil - Low Viscosity  
**Revision date** 03-Jan-2024  
**Issuing Date** 10-Nov-2014

**SDS Number** 100000000103465  
**Version** 3

## 1. Identification

### Product identifier

**Product Name** Resolve Immersion Oil - Low Viscosity

### Other means of identification

**SDS Number** 100000000103465  
**Catalogue Number** M2000, M3000, M4000, M5000  
**Product Code(s)** M2000, M3000, M4000, M5000  
**Pure substance/mixture** Mixture

### Details of the supplier of the safety data sheet

#### Manufacturer

Richard-Allan Scientific  
4481 Campus Drive  
Kalamazoo, MI 49008  
1-800-522-7270

**E-mail address** No information available

### Emergency telephone number

**Emergency telephone number** Chemtrec China: 4001-204937

**Emergency telephone number** China

### Recommended use of the chemical and restrictions on use

**Recommended use** In vitro diagnostics  
**Restrictions on use** No information available

## 2. Hazard(s) identification

### **Emergency Overview**

Very toxic to aquatic organisms

VERY TOXIC TO AQUATIC ORGANISMS; MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT

**Appearance** light yellow

**Physical state** Liquid

**Odor** Odorless

### Classification of the substance or mixture

Acute toxicity - Dermal	Category 5
Hazardous to the Aquatic Environment - Acute Hazard	Category 1
Hazardous to the Aquatic Environment - Chronic Hazard	Category 1

**Label elements**



**Signal word**

Warning

**Hazard statements**

May be harmful in contact with skin  
Very toxic to aquatic life with long lasting effects

**Precautionary statements**

**Prevention**

Avoid release to the environment

**Response**

Call a POISON CENTER or doctor/physician if you feel unwell  
Collect spillage

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Physical and chemical hazards**

Not applicable.

**Health hazards**

Immediate Health Effects: Not applicable.  
Chronic effects: Not applicable.

**Environmental hazards**

Dangerous for the environment This material is a water pollutant. Keep out of drains, sewers, ditches and waterways. Minimize use of water to prevent environmental contamination

**Other hazards which do not result in classification**

Not applicable

### 3. Composition/information on ingredients

**Substance**

Not applicable.

**Mixture**

Chemical name	Weight-%	CAS No.
White mineral oil	51-54	8042-47-5
Hydrogenated terphenyls	27 - 33	61788-32-7
Polybutene	7 - 10	9003-29-6
Polyphenyls, quater- and higher, partially hydrogenated	3 - 6	68956-74-1

Terphenyls	1 - 4	26140-60-3
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#### 4. First-aid measures

##### Description of necessary first aid measures

<b>Inhalation</b>	Remove to fresh air.
<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
<b>Skin contact</b>	Wash skin with soap and water.
<b>Ingestion</b>	Clean mouth with water and drink afterwards plenty of water.
<b><u>Most important symptoms/effects, acute and delayed</u></b>	No information available.
<b><u>For emergency responders</u></b>	No information available.
<b><u>Note to physicians</u></b>	Treat symptomatically.

#### 5. Fire-fighting measures

##### Extinguishing media

<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Unsuitable extinguishing media</b>	No information available.
<b><u>Specific hazards arising from the chemical</u></b>	No information available.
<b><u>Special protective actions for fire-fighters</u></b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

#### 6. Accidental release measures

##### Personal precautions, protective equipment and emergency procedures

<b>Personal precautions</b>	Ensure adequate ventilation.
<b>For emergency responders</b>	Use personal protection recommended in Section 8.
<b><u>Environmental precautions</u></b>	See Section 12 for additional Ecological Information.
<b><u>Methods and material for containment and cleaning up</u></b>	Prevent further leakage or spillage if safe to do so. Pick up and transfer to properly labeled containers.
<b><u>Precautions to prevent secondary hazards</u></b>	Clean contaminated objects and areas thoroughly observing environmental regulations.

## 7. Handling and storage

**Precautions for safe handling** Handle in accordance with good industrial hygiene and safety practice. See Section 8 for information on appropriate personal protective equipment.

**Conditions for safe storage, including any incompatibilities** Keep containers tightly closed in a dry, cool and well-ventilated place.

**Incompatible materials** None known based on information supplied.

## 8. Exposure controls/personal protection

### Occupational exposure limits

Chemical name	China	ACGIH TLV
Hydrogenated terphenyls - 61788-32-7	-	TWA: 0.5 ppm nonirradiated
Terphenyls - 26140-60-3	-	Ceiling: 5 mg/m <sup>3</sup>

**Note** See section 16 for terms and abbreviations

### Biological occupational exposure limits

No data available

### Monitoring and observation processes

No applicable information was found.

### Engineering controls

Showers  
Eyewash stations  
Ventilation systems.

### Individual protection measures, such as personal protective equipment

**Eye/face protection** No special protective equipment required.

**Skin and body protection** No special protective equipment required.

**Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

**Appearance** light yellow  
**Color** No information available  
**Physical state** Liquid  
**Odor** Odorless  
**Odor threshold** No information available

Property	Values	Remarks • Method
<b>pH</b>	No data available	None known
<b>Melting point / freezing point</b>	No data available	None known
<b>Boiling point / boiling range</b>	No data available °C	

Flash point	148.89 °C	
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	&lt; 0.1 mmHg	
Vapor density	5	
Relative density	0.92	
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Hyphen	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

**Additional information**

Explosive properties	No information available
Oxidizing properties	No information available

## 10. Stability and reactivity

**Stability** Stable under normal conditions.

**Possibility of hazardous reactions** None under normal processing.

**Sensitivity to mechanical impact** None.  
**Sensitivity to static discharge** None.

**Conditions to avoid** None known based on information supplied.

**Incompatible materials** None known based on information supplied.

**Hazardous decomposition products** Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

## 11. Toxicological information

**Acute toxicity**

**Numerical measures of toxicity**

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	6,134.50 mg/kg
ATEmix (dermal)	2,120.30 mg/kg
ATEmix (inhalation-gas)	99,999.00 mg/l
ATEmix (inhalation-dust/mist)	99,999.00 mg/l
ATEmix (inhalation-vapor)	99,999.00 mg/l

**Unknown acute toxicity**

13.1 % of the mixture consists of ingredient(s) of unknown acute oral toxicity  
57 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity  
100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)  
 100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
White mineral oil	> 5000 mg/kg ( Rat )	-	-
Hydrogenated terphenyls	> 10000 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	> 4.7 mg/L ( Rat ) 4 h
Polybutene	-	> 2000 mg/kg ( Rat )	> 19171 mg/m <sup>3</sup> ( Rat ) 4 h
Terphenyls	> 5000 mg/kg ( Rat )	> 5000 mg/kg ( Rabbit )	> 3.8 mg/L ( Rat ) 4 h

<b>Skin corrosion/irritation</b>	No information available.
<b>Serious eye damage/eye irritation</b>	No information available.
<b>Respiratory or skin sensitization</b>	No information available.
<b>Germ cell mutagenicity</b>	No information available.
<b>Carcinogenicity</b>	No information available.
<b>Reproductive toxicity</b>	No information available.
<b>Specific target organ toxicity (single exposure)</b>	No information available.
<b>Specific target organ toxicity (repeated exposure)</b>	No information available.
<b>Target organ effects</b>	Liver. Respiratory system. hematopoietic system. Eyes. Kidney. Skin.
<b>Aspiration hazard</b>	No information available.

**12. Ecological information**

<b>Ecotoxicity</b>	Very toxic to aquatic life with long lasting effects.
<b>Unknown aquatic toxicity</b>	0.1 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical name	Algae/aquatic plants	Fish	Crustacea
White mineral oil	-	LC50: >10000mg/L (96h, Lepomis macrochirus)	-
Hydrogenated terphenyls	EC50: >0.53mg/L (96h, Pseudokirchneriella subcapitata)	LC50: >0.53mg/L (96h, Lepomis macrochirus) LC50: >0.53mg/L (96h, Oncorhynchus mykiss) LC50: >0.53mg/L (96h, Pimephales promelas)	EC50: =0.011mg/L (48h, Daphnia magna)
Polybutene	-	-	EC50: >100mg/L (48h, Daphnia magna)
Terphenyls	EC50: =0.02mg/L (96h,	LC50: >0.11mg/L (96h, Lepomis	EC50: >0.11mg/L (48h, Daphnia

	Pseudokirchneriella subcapitata)	macrochirus) LC50: >0.11mg/L (96h, Oncorhynchus mykiss) LC50: >0.11mg/L (96h, Pimephales promelas)	magna)
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**Persistence and degradability** No information available.

**Bioaccumulative potential** There is no data for this product.

Chemical name	Partition coefficient
White mineral oil	>6
Polybutene	7.6 - 7.8

**Mobility in soil** No information available.

Other adverse effects

### 13. Disposal considerations

**Waste chemicals** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

### 14. Transport information

**IMDG** Not regulated  
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information available

**IATA** Not regulated

**China** Not regulated

**Special precautions for user**  
Please refer to the applicable dangerous goods regulations for additional information

### 15. Regulatory information

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

**National regulations**

**Law of the People's Republic of China on Prevention and Control of Occupational Diseases**

Catalog of occupational hazard factors: Not applicable.  
Catalog of occupational diseases: Not applicable.

**Regulations on the Control over Safety of Hazardous Chemicals**

Inventory of hazardous chemicals Not applicable.

GB 18218-2009 Identification of major hazard installations for dangerous chemicals Not applicable

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**List of hazardous chemicals under priority management** Not applicable

**Regulations on Labor Protection in Workplaces Where Toxic Substances Are Used**  
Inventory of highly toxic goods Not applicable

**Regulations for Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals**  
List of toxic chemicals severely restricted for import and export in China Not applicable

**Measures for the Environmental Management of New Chemical Substances**  
**IECSC - China Inventory of Existing Chemical Substances** Contact supplier for inventory compliance status.

#### **International Regulations**

**The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable

**The Stockholm Convention on Persistent Organic Pollutants** Not applicable

**The Rotterdam Convention** Not applicable

## **16. Other information**

**Issuing Date** 10-Nov-2014

**Revision date** 03-Jan-2024

**Revision Note** The symbol (\*) in the margin of this SDS indicates that this line has been revised.

#### **Abbreviations and acronyms**

**Legend** Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
C	Carcinogen		

#### **Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)  
U.S. Environmental Protection Agency ChemView Database  
European Food Safety Authority (EFSA)  
EPA (Environmental Protection Agency)  
Acute Exposure Guideline Level(s) (AEGl(s))  
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
U.S. Environmental Protection Agency High Production Volume Chemicals  
Food Research Journal  
Hazardous Substance Database  
International Uniform Chemical Information Database (IUCLID)  
Japan GHS Classification  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
Organization for Economic Co-operation and Development Screening Information Data Set  
RTECS (Registry of Toxic Effects of Chemical Substances)  
World Health Organization

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**Disclaimer**

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**End of Safety Data Sheet**