

SAFETY DATA SHEET

Creation Date 19-May-2015

Revision Date 19-May-2015

Revision Number 1

1. Identification

Product Name Resolve Immersion Oil

Cat No. : M2004; M3004; M4004; M5004, M-2117

Synonyms No information available

Recommended Use Laboratory chemicals.

Uses advised against No Information available

Details of the supplier of the safety data sheet

Company Richard Allan Scientific A Subsidiary of Thermo Fisher Scientific 4481 Campus Drive Kalamazoo, MI 49008 Tel: (800) 522-7270	Emergency Telephone Number Chemtrec US: (800) 424-9300 Chemtrec EU: 001 (202) 483-7616
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2. Hazard(s) identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Specific target organ toxicity (single exposure) Target Organs - Respiratory system.	Category 3
Specific target organ toxicity - (repeated exposure) Target Organs - Liver, Kidney.	Category 2

Label Elements

Signal Word
Warning

Hazard Statements

May cause respiratory irritation
May cause damage to organs through prolonged or repeated exposure



Precautionary Statements

Prevention

Do not breathe dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area

Response

Get medical attention/advice if you feel unwell

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

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

Storage

Store in a well-ventilated place. Keep container tightly closed

Store locked up

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

None identified

3. Composition / information on ingredients

Component	CAS-No	Weight %
White mineral oil	8042-47-5	20 - 24
Polyphenyls, quater- and higher, partially hydrogenated	68956-74-1	1 - 2
Hydrogenated terphenyls	61788-32-7	20 - 25
Polybutene	9003-29-6	48 - 51
Terphenyls	26140-60-3	1 - 4

4. First-aid measures

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes.
Inhalation	Move to fresh air.
Ingestion	Do not induce vomiting.
Most important symptoms/effects	No information available.
Notes to Physician	Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media	Water spray. Carbon dioxide (CO ₂). Dry chemical. alcohol-resistant foam.
Unsuitable Extinguishing Media	No information available
Flash Point	148.89 °C / 300 °F
Method -	No information available
Autoignition Temperature	No information available
Explosion Limits	
Upper	No data available
Lower	No data available
Sensitivity to Mechanical Impact	No information available
Sensitivity to Static Discharge	No information available

Specific Hazards Arising from the Chemical

Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products

Carbon monoxide (CO) Carbon dioxide (CO₂)

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

Health 2	Flammability 1	Instability 0	Physical hazards -
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6. Accidental release measures

Personal Precautions Ensure adequate ventilation. Use personal protective equipment.

Environmental Precautions See Section 12 for additional ecological information.

Methods for Containment and Clean Up Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

7. Handling and storage

Handling Ensure adequate ventilation.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls / personal protection**Exposure Guidelines**

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Hydrogenated terphenyls	TWA: 0.5 ppm	(Vacated) TWA: 0.5 ppm (Vacated) TWA: 5 mg/m ³	TWA: 0.5 ppm TWA: 5 mg/m ³
Terphenyls	Ceiling: 5 mg/m ³	Ceiling: 1 ppm Ceiling: 9 mg/m ³ (Vacated) Ceiling: 0.5 ppm (Vacated) Ceiling: 5 mg/m ³	IDLH: 500 mg/m ³

Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
Hydrogenated terphenyls	TWA: 0.5 ppm TWA: 4.9 mg/m ³	TWA: 0.5 ppm TWA: 5 mg/m ³	TWA: 0.5 ppm
Terphenyls	Ceiling: 0.53 ppm Ceiling: 5 mg/m ³	Ceiling: 0.5 ppm	CEV: 5 mg/m ³

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH IDLH: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

Engineering Measures Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Eye/face Protection Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State	Liquid
Appearance	Light yellow
Odor	Odorless
Odor Threshold	No information available
pH	No information available
Melting Point/Range	No data available
Boiling Point/Range	No information available
Flash Point	148.89 °C / 300 °F
Evaporation Rate	No information available
Flammability (solid,gas)	No information available
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	No information available
Vapor Density	No information available
Relative Density	0.92
Solubility	No information available
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	No information available
Decomposition Temperature	No information available
Viscosity	No information available

10. Stability and reactivity

Reactive Hazard	None known, based on information available
Stability	Stable under normal conditions.
Conditions to Avoid	Incompatible products. Excess heat.
Incompatible Materials	Strong oxidizing agents
Hazardous Decomposition Products	Carbon monoxide (CO), Carbon dioxide (CO ₂)
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.

11. Toxicological information

Acute Toxicity

Oral LD50	Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.
Dermal LD50	Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.
Vapor LC50	Based on ATE data, the classification criteria are not met. ATE > 20 mg/l.

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
White mineral oil	>5000 mg/kg (Rat)	>3000 mg/kg (Rabbit)	Not listed
Hydrogenated terphenyls	10200 mg/kg (Rat)	6800 mg/kg (Rabbit)	4.3 mg/L (Rat) 4 h
Terphenyls	Not listed	12500 mg/kg (Rabbit)	Not listed

Toxicologically Synergistic Products No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation	No information available
Sensitization	No information available

Carcinogenicity

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
White mineral oil	8042-47-5	Not listed	Not listed	Not listed	Not listed	Not listed
Polyphenyls, quater- and higher, partially hydrogenated	68956-74-1	Not listed	Not listed	Not listed	Not listed	Not listed
Hydrogenated terphenyls	61788-32-7	Not listed	Not listed	Not listed	Not listed	Not listed
Polybutene	9003-29-6	Not listed	Not listed	Not listed	Not listed	Not listed
Terphenyls	26140-60-3	Not listed	Not listed	Not listed	Not listed	Not listed

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure Respiratory system

STOT - repeated exposure Liver Kidney

Aspiration hazard No information available

Symptoms / effects, both acute and delayed No information available

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
White mineral oil	Not listed	10000 mg/L LC50 96 h	Not listed	Not listed
Hydrogenated terphenyls	0.53 mg/L EC50 > 96 h	0.53 mg/L LC50 96 h	Not listed	0.011 mg/L EC50 = 48 h
Terphenyls	0.02 mg/L EC50 = 96 h	0.11 mg/L LC50 96 h	Not listed	0.11 mg/L EC50 > 48 h

Persistence and Degradability No information available

Bioaccumulation/ Accumulation No information available.

Mobility

Component	log Pow
White mineral oil	6

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT Not regulated

TDG Not regulated

IATA Not regulated

IMDG/IMO Not regulated

15. Regulatory information

All of the components in the product are on the following Inventory lists: Australia X = listed China Canada The product is

classified and labeled according to EC directives or corresponding national laws The product is classified and labeled in accordance with Directive 1999/45/EC Europe TSCA Philippines

International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
White mineral oil	X	X	-	232-455-8	-		X	X	X	X	X
Polyphenyls, quater- and higher, partially hydrogenated	X	X	-	273-316-1	-		X	-	X	X	-
Hydrogenated terphenyls	X	X	-	262-967-7	-		X	X	X	X	X
Polybutene	X	X	-	-	-	products derived from But-1-ene or But-2-ene, consisting of 50% w/w or more of species of the same molecular weight	X	X	X	X	X
Terphenyls	X	X	-	247-477-3	-		X	X	X	X	X

Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313 Not applicable

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act Not applicable

Clean Air Act Not applicable

OSHA Occupational Safety and Health Administration
Not applicable

CERCLA
Not applicable

California Proposition 65 This product does not contain any Proposition 65 chemicals

State Right-to-Know

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Hydrogenated terphenyls	X	X	X	-	-
Terphenyls	X	X	X	-	X

U.S. Department of Transportation

Reportable Quantity (RQ): N
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security

This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade Slight risk, Grade 1

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

WHMIS Hazard Class D2B Toxic materials



16. Other information

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Revision Summary This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of SDS