



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878

Version 6.0

Immersol™ M

Material: 000000-0488-362

Revision: 09.09.2025

Date of last issue: 27.07.2023

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name : Immersol™ M
Unique Formula Identifier (UFI) : UVG3-Y00Y-1009-KYX6

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture : Optical-precision engineering industry
Industrial and professional use
Immersion oil for metallography, halogen-free, low fluorescence

For application information, consult the processing instructions. Processing instructions or technical information sheet available on request.

1.3 Details of the supplier of the safety data sheet

Manufacturer/supplier : Carl Zeiss Jena GmbH
Oberkochen location
Address : Carl-Zeiss-Straße 22
D-73447 Oberkochen
Telephone : +49 7364 20-0
Technical Information : Chemical and material engineering
Telephone : +49 7364 20-4599
Telefax : +49 7364 20-4521
Product Safety : Chemical and material engineering
E-mail address : SDS@zeiss.com

1.4 Emergency telephone number

Poisoning Control Center : +49 551 19240 (24 hours)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Eye irritation, Category 2 : H319: Causes serious eye irritation.
Long-term (chronic) aquatic hazard, Category 3 : H412: Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)



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Hazard pictograms	:	
Signal word	:	Warning
Hazard statements	:	H319 Causes serious eye irritation. H412 Harmful to aquatic life with long lasting effects.
Precautionary statements	:	Prevention: P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. Response: P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 If eye irritation persists: Get medical advice/ attention.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
octahydro-4,7-methano-1H-indene-5-methanol	57526-50-8 260-789-4 01-2120767048-48	Eye Irrit. 2; H319	>= 50 - < 70
oxydipropyl dibenzoate	27138-31-4	Aquatic Chronic 3;	>= 25 - < 30



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	248-258-5	H412	
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For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : Remove and wash contaminated clothing before re-use.
- If inhaled : In the case of inhalation of aerosol/mist consult a physician if necessary.
- In case of skin contact : Wash off with soap and plenty of water.
If symptoms persist, call a physician.
- In case of eye contact : Immediately flush eye(s) with plenty of water.
Consult a physician.
- If swallowed : Rinse mouth.
Do not give anything to drink or eat.
Do NOT induce vomiting.
Get medical attention.

4.2 Most important symptoms and effects, both acute and delayed

- Risks : Causes serious eye irritation.

4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : No information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media : Carbon dioxide (CO₂)
Dry chemical
Foam
Sand
Water spray jet
- Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

- Specific hazards during fire- : In case of fire formation of carbonoxides and other toxic gas-



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fighting es/vapors is possible.

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

Further information : Use water spray to cool unopened containers.
Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Avoid contact with skin, eyes and clothing.
Ensure adequate ventilation.
Risk of slipping because of leaked / spilled product.

6.2 Environmental precautions

Environmental precautions : Do not flush into surface water or sanitary sewer system.
Avoid subsoil penetration.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material.
Clean contaminated surface thoroughly.

6.4 Reference to other sections

Adequate disposal, For disposal considerations see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Avoid contact with skin and eyes.
Provide sufficient air exchange and/or exhaust in work rooms.
Advice on protection against fire and explosion : Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep tightly closed in a dry and cool place. Keep away from direct sunlight. Keep away from heat.

Advice on common storage : Keep away from food, drink and animal feedingstuffs.
Oxidizing agents



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7.3 Specific end use(s)

Specific use(s) : Apart from the uses mentioned in section 1 no other specific uses are intended.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Personal protective equipment

Eye/face protection : Avoid contact with eyes, if necessary wear eye protection.
Hand protection

Remarks : Avoid contact with skin. Wear protective gloves. Use protective gloves which have been adapted to the respective purpose and are appropriately resistant to chemicals (DIN EN 374). The exact break through time can be obtained from the protective glove producer and this has to be observed.

Skin and body protection : closed work clothing
Respiratory protection : Provide sufficient air exchange and/or exhaust in work rooms.
Protective measures : Take off all contaminated clothing immediately.
Wash hands before breaks and at the end of workday.
Preventive skin protection

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state : liquid
Form : liquid
Colour : colourless
Odour : aromatic
Boiling point/boiling range : > 200 °C
Flash point : 164 °C
Method: ISO 2592
pH : Not applicable
Viscosity



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Viscosity, kinematic : 339 mm²/s (20 °C)
Method: DIN 51562

263 mm²/s (23 °C)
Method: DIN 51562

Solubility(ies)
Water solubility : insoluble

Density : 1.067 g/cm³ (20 °C)
Method: DIN 51757

9.2 Other information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions : None known.

10.4 Conditions to avoid

Conditions to avoid : Keep away from heat.
Keep away from direct sunlight.

10.5 Incompatible materials

Materials to avoid : Oxidizing agents

10.6 Hazardous decomposition products

Hazardous decomposition products : No decomposition if used as directed.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Not classified due to lack of data.



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Components:

octahydro-4,7-methano-1H-indene-5-methanol:

Acute oral toxicity : LD50 (Rat): 2,270 - 3,350 mg/kg
Method: OECD Test Guideline 401

Skin corrosion/irritation

Not classified due to lack of data.

Components:

octahydro-4,7-methano-1H-indene-5-methanol:

Species : Rabbit
Exposure time : 4 h
Method : OECD Test Guideline 404
Result : Mild skin irritation

Serious eye damage/eye irritation

Causes serious eye irritation.

Components:

octahydro-4,7-methano-1H-indene-5-methanol:

Species : Rabbit
Exposure time : 24 h
Method : OECD Test Guideline 405
Result : Moderate eye irritation
Remarks : Mild eye irritation

Respiratory or skin sensitisation

Skin sensitisation

Not classified due to lack of data.

Respiratory sensitisation

Not classified due to lack of data.

Components:

octahydro-4,7-methano-1H-indene-5-methanol:

Species : Guinea pig
Method : OECD Test Guideline 406
Result : Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity

Not classified due to lack of data.

Carcinogenicity

Not classified due to lack of data.



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Reproductive toxicity

Not classified due to lack of data.

STOT - single exposure

Not classified due to lack of data.

STOT - repeated exposure

Not classified due to lack of data.

Aspiration toxicity

Not classified due to lack of data.

11.2 Information on other hazards

Endocrine disrupting properties

Not classified due to lack of data.

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Further information

Product:

Remarks : Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: Ecological information

12.1 Toxicity

Product:

Ecotoxicology Assessment

Acute aquatic toxicity : Harmful to aquatic life with long lasting effects.

Components:

oxydipropyl dibenzoate:

Toxicity to daphnia and other aquatic invertebrates : (Daphnia magna (Water flea)): 2.2 mg/l
Exposure time: 504 h
Method: OECD Test Guideline 211

Ecotoxicology Assessment

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.



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12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

Components:

octahydro-4,7-methano-1H-indene-5-methanol:

Partition coefficient: n-octanol/water : log Pow: 3.7 - 4.2 (25 °C)

oxydipropyl dibenzoate:

Partition coefficient: n-octanol/water : log Pow: 3.9 (20 °C)

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Components:

octahydro-4,7-methano-1H-indene-5-methanol:

Assessment : Not persistent, bioaccumulative, and toxic (PBT).
Not very persistent and very bioaccumulative (vPvB).

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

No data available

12.7 Other adverse effects

Product:

Additional ecological information : Do not flush into surface water or sanitary sewer system.
Avoid subsoil penetration.
Adequate disposal



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Components:

oxydipropyl dibenzoate:

Additional ecological information : Do not discharge into sewerage system, surface water or soil.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : In accordance with local and national regulations.
Contaminated packaging : Dispose of as unused product.
Offer rinsed packaging material to local recycling facilities.

SECTION 14: Transport information

14.1 UN number or ID number

ADR : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good
IATA : Not regulated as a dangerous good

14.2 UN proper shipping name

ADR : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good
IATA : Not regulated as a dangerous good

14.3 Transport hazard class(es)

ADR : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good
IATA : Not regulated as a dangerous good

14.4 Packing group

ADR : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good
IATA (Cargo) : Not regulated as a dangerous good
IATA (Passenger) : Not regulated as a dangerous good



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14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Not applicable

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	:	Conditions of restriction for the following entries should be considered: Number on list 3
Regulation (EU) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals	:	Not applicable
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	Not applicable
Regulation (EU) No 2024/590 on substances that deplete the ozone layer	:	Not applicable
Regulation (EU) 2019/1021 on persistent organic pollutants (recast)	:	Not applicable
REACH - List of substances subject to authorisation (Annex XIV)	:	Not applicable
Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.	:	Not applicable

15.2 Chemical safety assessment

Not required.

SECTION 16: Other information

Full text of H-Statements

H319	:	Causes serious eye irritation.
H412	:	Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Eye Irrit.	:	Eye irritation



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ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonised System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organisation for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Other information : complete revision
Sources of key data used to compile the Safety Data Sheet : Reg. 1272/2008, Annex VI
TRGS 900
TRGS 903
International dangerous goods regulations
Supplier details

Classification of the mixture:

Eye Irrit. 2 H319
Aquatic Chronic 3 H412

Classification procedure:

Calculation method
Calculation method



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The information provided in 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

MT / EN