



SAFETY DATA SHEET

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

Version 3.0

Immersol Sil 406

Material: 000000-0572-364

Revision: 07.07.2025

Date of last issue: 04.08.2023

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

1.1 Product identifier

Product name : Immersol™ Sil 406
Substance name : Polydimethylsiloxane

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

Use of the Sub-
stance/Mixture : Life Sciences, Scientific research and development
Industrial and professional use
Immersion fluid, halogen-free

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)

Not a hazardous substance or mixture.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required.



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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

3.1 Substances

Substance name : Polydimethylsiloxane

Components

Remarks : No hazardous ingredients

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : If symptoms occur or if in doubt, seek medical advice.

If inhaled : Move to fresh air.

In case of skin contact : Remove immediately adhering matter.
Wash off with soap and water.

In case of eye contact : Immediately flush eye(s) with plenty of water.
If eye irritation persists, consult a specialist.

If swallowed : Clean mouth with water and drink afterwards plenty of water.
Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

None known.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : No information available.



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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Water mist
Dry chemical
Foam
Carbon dioxide (CO₂)
Sand

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : In case of fire formation of hazardous vapors possible.
In the event of fire and/or explosion do not breathe fumes.

5.3 Advice for firefighters

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

Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
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 : No special precautions required.
Sweep up to prevent slipping hazard.

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 : Take up mechanically and dispose of according to the local legal regulations.

6.4 Reference to other sections

Adequate disposal, For disposal considerations see section 13.



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SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Advice on safe handling : No special handling advice required.
Avoid contact with skin and eyes.
- Advice on protection against fire and explosion : Normal measures for preventive fire protection.
- Hygiene measures : When using, do not eat, drink or smoke. Wash hands before breaks and at the end of workday. Keep working clothes separately.

7.2 Conditions for safe storage, including any incompatibilities

- Requirements for storage areas and containers : No special storage conditions required. Keep away from food, drink and animal feedingstuffs.

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.
- Hand protection
- Remarks : Not required. Avoid contact with skin.
- Skin and body protection : Keep working clothes separately.
- Respiratory protection : Not required; except in case of aerosol formation.
- Protective measures : Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- Physical state : liquid
- Colour : colourless, clear



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Odour	:	odorless
Melting point/ range	:	-50 °C
Flash point	:	> 300 °C Method: ISO 2592
Auto-ignition temperature	:	410 °C Method: EN 14522
Decomposition temperature	:	> 250 °C
pH	:	ca. 7.0
Viscosity		
Viscosity, dynamic	:	1,000 mPa s (25 °C) Method: DIN 53019
Viscosity, kinematic	:	1000 mm ² /s (25 °C) Method: DIN 53019
Solubility(ies)		
Water solubility	:	(20 °C) practically insoluble
Density	:	ca. 0.97 g/cm ³ (25 °C) Method: DIN 51757

9.2 Other information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No decomposition if used as directed.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : None known.

10.4 Conditions to avoid

Conditions to avoid : None known.

10.5 Incompatible materials



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Materials to avoid : None known.

10.6 Hazardous decomposition products

Hazardous decomposition products : > 150 °C
small amounts of formaldehyde

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.

Product:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Remarks: value of literature

Acute dermal toxicity : LD50 (Rat): > 2,008 mg/kg
Remarks: value of literature

Skin corrosion/irritation

Based on available data, the classification criteria are not met.

Product:

Species : Rabbit
Result : No skin irritation

Serious eye damage/eye irritation

Based on available data, the classification criteria are not met.

Product:

Species : Rabbit
Result : No eye irritation

Respiratory or skin sensitisation

Skin sensitisation

Based on available data, the classification criteria are not met.

Respiratory sensitisation

Based on available data, the classification criteria are not met.

Product:

Test Type : Maximisation Test
Species : Guinea pig
Method : OECD Test Guideline 406
Result : Does not cause skin sensitisation.



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Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Product:

Germ cell mutagenicity- Assessment : In vitro tests did not show mutagenic effects

Carcinogenicity

Based on available data, the classification criteria are not met.

Product:

Carcinogenicity - Assessment : Animal testing did not show any carcinogenic effects.

Reproductive toxicity

Not classified due to lack of data.

Product:

Reproductive toxicity - Assessment : Animal testing did not show any effects on fertility.

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

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.



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SECTION 12: Ecological information

12.1 Toxicity

Product:

- Toxicity to fish : LC50 (Fish): > 1,000 mg/l
Exposure time: 96 h
Test Type: static test
Method: value of literature
Remarks: > max. solubility in water
- NOEC (Oncorhynchus mykiss): > 10,000 mg/l
Method: value of literature
Remarks: 28 d
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 0.0001 mg/l
Exposure time: 48 h
Test Type: static test
Method: value of literature
Remarks: > max. solubility in water
- NOEC (Daphnia magna (Water flea)): > 500 mg/l
Method: value of literature
Remarks: 21 d
- Toxicity to algae/aquatic plants : IC50 (Skeletonema costatum (marine diatom)): > 100,000 mg/l
Exposure time: 72 h
Test Type: static test
Method: value of literature

Ecotoxicology Assessment

- Acute aquatic toxicity : This product has no known ecotoxicological effects.
- Chronic aquatic toxicity : This product has no known ecotoxicological effects.

12.2 Persistence and degradability

Product:

- Physico-chemical removability : Remarks: substance/mixture is non-soluble (in water)
The product can be eliminated from water by abiotic processes, e.g. adsorption on activated sludge.

12.3 Bioaccumulative potential

Product:

- Bioaccumulation : Remarks: Bioaccumulation is unlikely.



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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.

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.

12.7 Other adverse effects

Product:

Environmental fate and pathways : Adsorbs on soil.
Additional ecological information : Ecological injuries are not known or expected under normal use.
Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Can be landfilled or incinerated, when in compliance with local regulations.

Contaminated packaging : In accordance with local and national regulations.

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



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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

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) : Not applicable

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 (EC) 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 : Not applicable



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(Annex XIV)

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 other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIIC - 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 Harmonized 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 Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; 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 - Organization 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



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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

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.

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