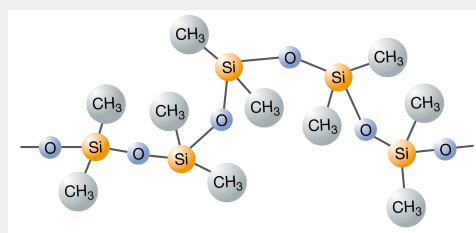


# HELISOL® XA

## Linear Silicone Fluids

HELISOL® XA is a linear, non-reactive poly-dimethylsiloxane with a viscosity of approx. 20 mm<sup>2</sup>/s. Due to its chemical structure, HELISOL® XA has an outstanding property profile, which sets it apart from organic materials such as mineral oils.



## Properties

HELISOL® XA is a clear, odorless and colorless liquid.

- high heat resistance
- low pourpoint
- lower density than water
- low viscosity
- long life
- low fouling potential
- non-corrosive
- no hazard classification

## Specific features

- Fluid
- Good heat stability
- Heat resistant
- Silicone Fluid
- Stable upon heating

## Technical data

### General Characteristics

Property	Condition	Value	Method
Appearance	-	colorless, clear	-
Boiling point	1013 mbar	393 °C	EG-Method A.2
Density	25 °C	+/- 0,02 0.95 g/cm <sup>3</sup>	DIN 51757
Dissipation factor	25 °C	-	-
Flash point	-	225 °C	Pensky-Marten
Heat of combustion	-	24.1 kJ/g	DIN 51900
Ignition temperature	-	369 °C	EN 14522
Odor	-	odorless	-
Pour point	-	< -55 °C	DIN ISO 3016
Solubility in water	-	virtually insoluble	-
Surface tension	-	19.92 mN/m	-
Thermal conductivity	25 °C	0.1451 W/m.K	-
Upper explosion limit	-	not applicable	-
Viscosity, kinematic	25 °C	18 - 22 mm <sup>2</sup> /s	DIN 51562
Viscosity, kinematic	-50 °C	approx. 120 mm <sup>2</sup> /s	DIN 51562
Water content	-	< 150 ppm	DIN 51777
pH	-	~ 7	specific method

These figures are only intended as a guide and should not be used in preparing specifications.

## After Extendet Use

Property	Value	Method
Appearance	colorless to dark-brown, clear	-
Boiling point	283 °C	EG-Method A.2
Cloud point <sup>(1)</sup>	-36 °C	DIN ISO 3016
Density	0.94 g/cm <sup>3</sup>	DIN 51757
Flash point	60 °C	Pensky-Marten
Heat of combustion	23.9 kJ/g	DIN 51900
Ignition temperature	364 °C	EN 14522
Odor	musty	-
Operating temperature <sup>(2)</sup>	-40 - 425 °C	-
Solubility in water	virtually insoluble	-
Surface tension	18.97 mN/m	-
Thermal conductivity	0.1317 W/m.K	-
Upper explosion limit	not applicable	-
Viscosity, kinematic	approx. 8 mm <sup>2</sup> /s	-
Viscosity, kinematic	approx. 50 mm <sup>2</sup> /s	DIN 51562
Water content	< 150 ppm	DIN 51777
pH	~ 7	specific method

<sup>1</sup>Liquid becomes cloudy or turbid

<sup>2</sup>only when used as intended in CSP application

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All the information provided is in accordance with the present state of our knowledge. Nonetheless, we disclaim any warranty or liability whatsoever and reserve the right, at any time, to effect technical alterations. The information provided, as well as the product's fitness for an intended application, should be checked by the buyer in preliminary trials. Contractual terms and conditions always take precedence. This disclaimer of warranty and liability also applies particularly in foreign countries with respect to third parties' rights.

Comprehensive instructions are given in the corresponding Material Safety Data Sheets. They are available on request from WACKER subsidiaries or may be downloaded via WACKER web site <http://www.wacker.com>.

## Applications

- Renewable Energies

## Application details

- heat transfer fluid in closed systems under inert conditions from -40 °C up to 425 °C.
- recommended use in liquid phase
- maximum permitted working temperature: 425 °C

maximum permitted film temperature: 450 °C

## Packaging and storage

### Packaging

0.5 kg bottle

5 kg can

25 kg drum

200 kg drum

- 950 kg IBC

### Storage

Maximum temperature allowed during storage and transportation: 50 °C

A temporary increase in temperature during transport does not impair quality. Actively cooled transport guide can be dispensed with.

The 'Best use before end' date of each batch is shown on the product label.

Storage beyond the date specified on the label does not necessarily mean that the product is no longer usable. In this case however, the properties required for the intended use must be checked for quality assurance reasons.

## Safety notes

### Reactivity; Chemical stability; Possibility of hazardous reactions

No hazardous reactions known if properly stored.

When it is used as intended (up to 425 °C), amounts (< 25%) of a mixture of D-cyclic siloxanes (including octamethylcyclotetrasiloxane (D4, CAS 556-67-2) and decamethylcyclopentasiloxane (D5, CAS 541-02-6)) are formed. This depresses the flash point and increases the vapor pressure.

### Conditions to avoid

Permeation of oxygen and water or any contamination at operating temperature.

### Incompatible materials

None known.

### Hazardous decomposition products

When it is used as intended (up to 425 °C), it has been found that in the absence of oxygen and after relatively long operating times, extremely small quantities of methane, hydrogen and volatile silanes (tetramethylsilane, CAS 75-76-3 and trimethylsilane, CAS 993-07-7) may be produced, which further depress the flash point.

Comprehensive instructions are given in the corresponding Material Safety Data Sheets. They are available on request from WACKER subsidiaries or may be printed via WACKER web site <http://www.wacker.com>.

## QR Code HELISOL® XA



**For technical, quality or product safety questions, please contact:**

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