Product Information

DOW CORNING

DOW CORNING® 710 Fluid

FEATURES

- Retains its properties after continuous use at temperatures up to 260°C in closed systems
- Shows very low volatility even at elevated temperatures
- Highly resistant to oxidation and gumming
- Exhibits good radiation resistance by remaining serviceable after doses of up to 200 megarads at room temperature
- No change in physical properties after thousands of hours operation at 250°C in a closed system

Polyphenylmethylsiloxane

APPLICATIONS

- Lubricant for timing devices, instruments, bearings operating at 0°C to 260°C.
- Good base oil for high temperature greases thickened with molybdenum disulphide.
- Heat exchange fluid in high temperature baths and in heat treating baths for metals.

TYPICAL PROPERTIES

Specification writers: These values are not intended for use in preparing specifications. Please contact your local Dow Corning sales representative prior to writing specifications on this product.

Parameter	Unit	Value
Color		Colourless to light straw
Viscosity at 25°C	mm^2/s	500
Specific gravity at 25°C/15.6°C		1.11
Flash point - open cup	°C	302
Volatility 4 hours/ 250°C	%	3.0
Vapour pressure at 25°C	kPa	Negligible
Vapour pressure at 149°C	kPa	0.01
Vapour pressure at 232°C	kPa	0.2
Vapour pressure at 260°C	kPa	0.5
Vapour pressure at 288°C	kPa	1.3
Vapour pressure at 316°C	kPa	2.9
Vapour pressure at 371°C	kPa	11.0
Thermal decomposition point	°C	370
Spontaneous ignition temperature	°C	488
Freeze point	°C	-22
Coefficient of expansion (0°C to 154°C)	1/K	0.00043
Sound velocity at 25°C	m/s	1370
Compressability at 34.5MPa	%	1.70
Compressability at 69MPa	%	3.15
Compressability at 138MPa	%	5.50
Thermal conductivity at 50°C	W/(m.K)	0.14
Specific heat at 40°C	kJ/kg. K	1.52
Specific heat at 100°C	kJ/kg. K	1.64
Specific heat at 200°C	kJ/kg. K	1.84
Molecular weight, average		2600
Refractive index at 25°C		1.533
Surface tension at 25°C	mN/m	28.5
Electric strength[1]	kV/mm	14
Permittivity at 25°C 100Hz		2.95
Permittivity at 25°C 100kHz		2.95

TYPICAL PROPERTIES (continued)

Parameter	Unit	Value
Dissipation factor at 25°C 100Hz		0.002
Dissipation factor at 25°C 100kHz		0.0002
Volume resistivity	ohm.cm	$1x10^{13}$

1. 2.5 mm gap, rapid rise.

HANDLING PRECAUTIONS

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED. BEFORE HANDLING, READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE SAFETY DATA SHEET IS AVAILABLE FROM YOUR LOCAL DOW CORNING SALES REPRESENTATIVE.

USABLE LIFE AND STORAGE

When stored at or below 60°C in the original unopened containers, this product has a usable life of 60 months from the date of production.

LIMITATIONS

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

HEALTH AND ENVIRONMENTAL INFORMATION

To support customers in their product safety needs, Dow Corning has an extensive Product Stewardship organization and a team of Health, Environment and Regulatory Affairs specialists available in each area.

For further information, please consult your local Dow Corning representative.

WARRANTY INFORMATION - PLEASE READ CAREFULLY

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that Dow Corning's products are safe, effective, and fully satisfactory for the intended end use. Dow Corning's sole warranty is that the product will meet the Dow Corning sales specifications in effect at the time of shipment. Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted. Dow Corning specifically disclaims any other express or implied warranty of fitness for a particular purpose or merchantability. Unless Dow Corning provides you with a specific, duly signed endorsement of fitness for use, Dow Corning disclaims liability for any incidental or consequential damages. Suggestions of use shall not be taken as inducements to infringe any patent.