

## 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 <sup>2</sup> /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 <sup>1</sup>	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 <sup>13</sup>

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.

