

Element14* PDMS 50-J

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Description

Element14 PDMS medium viscosity oils are linear polydimethylsiloxane polymers with kinematic viscosities of 50, 100, 200, 350, 500 and 1,000 cSt.

Key Features and Benefits

- Low viscosity-temperature change
- Excellent thermal stability
- Oxidation stability
- Chemical inertness
- Low surface tension
- Shear stability
- Good electrical property

Potential Applications

Element14 PDMS medium viscosity oils may be considered for use in several industrial and consumer applications.

- heat and mechanical transfer fluid
- hydraulic fluid
- electrical insulating fluid
- water repellent
- polish ingredient
- mold release agent
- lubricant
- anti-foam
- personal care ingredient
- textile spin finishes
- paints and coatings additive

Typical Property Data

	Specific Gravity (25°C)	Viscosity (25°C) mm ² /s	Volatility (170°C, 2h) %	Viscosity ^{*1} Temperature Coefficient	Refractive Index (n _D ²⁵)	Pour Point °C
Element14 PDMS 50-J	0.960	50	0.3	0.59	1.402	below -50
Element14 PDMS 100-J	0.968	100	0.3	0.59	1.403	below -50
Element14 PDMS 200-J	0.969	200	0.3	0.60	1.403	below -50
Element14 PDMS 350-J	0.970	350	0.3	0.60	1.403	below -50
Element14 PDMS 500-J	0.971	500	0.3	0.60	1.404	below -50
Element14 PDMS 1000-J	0.971	1000	0.3	0.60	1.404	below -50

Note*1: Viscosity Temperature Coefficient=1-Viscosity at 98.9°C/ Viscosity at 37.8°C

*2: 150°C, 24h

	Surface Tension (25°C) mN/m{dyn/cm}	Thermal Conductivity, W/(m•K) {cal/(cm•s•°C)}	Specific Heat J/(g•K){cal/g•°C}				Volume Thermal Expansion 1/K
			(25°C)	(40°C)	(100°C)	(200°C)	
Element14 PDMS 50-J	20.5{20.5}	1.5x10 ⁻¹ {3.5x10 ⁻⁴ }	1.5{0.36}	1.6{0.37}	1.6{0.39}	1.8{0.42}	1.05x10 ⁻³
Element14 PDMS 100-J	20.8{20.8}	1.6x10 ⁻¹ {3.7x10 ⁻⁴ }	1.5{0.36}	1.5{0.36}	1.6{0.38}	1.7{0.41}	0.98x10 ⁻³
Element14 PDMS 200-J	20.9{20.9}	1.6x10 ⁻¹ {3.7x10 ⁻⁴ }	1.5{0.36}	1.5{0.36}	1.6{0.37}	1.7{0.40}	0.96x10 ⁻³
Element14 PDMS 350-J	20.9{20.9}	1.6x10 ⁻¹ {3.7x10 ⁻⁴ }	1.5{0.36}	1.5{0.36}	1.6{0.37}	1.6{0.39}	0.95x10 ⁻³
Element14 PDMS 500-J	21.0{21.0}	1.6x10 ⁻¹ {3.7x10 ⁻⁴ }	1.5{0.36}	1.5{0.36}	1.6{0.37}	1.6{0.39}	0.95x10 ⁻³
Element14 PDMS 1000-J	21.1{21.1}	1.6x10 ⁻¹ {3.7x10 ⁻⁴ }	1.5{0.36}	1.5{0.36}	1.6{0.37}	1.6{0.39}	0.94x10 ⁻³

	Volume Resistivity Ω•cm	Dielectric Strength kV/2.5mm	Dielectric Constant (50Hz)	Dissipation Factor (50Hz)
Element14 PDMS 50-J	above 1x10 ¹⁴	above 35	2.72	below 1x10 ⁻⁴
Element14 PDMS 100-J	above 1x10 ¹⁴	above 35	2.74	below 1x10 ⁻⁴
Element14 PDMS 200-J	above 1x10 ¹⁴	above 35	2.74	below 1x10 ⁻⁴
Element14 PDMS 350-J	above 1x10 ¹⁴	above 35	2.75	below 1x10 ⁻⁴
Element14 PDMS 500-J	above 1x10 ¹⁴	above 35	2.75	below 1x10 ⁻⁴
Element14 PDMS 1000-J	above 1x10 ¹⁴	above 35	2.75	below 1x10 ⁻⁴

Patent Status

Standard copy to come

Product Safety, Handling and Storage

Customers should review the latest Safety Data Sheet (SDS) and label for product safety information, safe handling instructions, personal protective equipment if necessary, emergency service contact information, and any special storage conditions required for safety. Momentive Performance Materials (MPM) maintains an around-the-clock emergency service for its products. SDS are available at www.momentive.com or, upon

request, from any MPM representative. For product storage and handling procedures to maintain the product quality within our stated specifications, please review Certificates of Analysis, which are available in the Order Center. Use of other materials in conjunction with MPM products (for example, primers) may require additional precautions. Please review and follow the safety information provided by the manufacturer of such other materials.

Limitations

Customers must evaluate Momentive Performance Materials products and make their own determination as to fitness of use in their particular applications.

Contact Information

For product prices, availability, or order placement, contact our customer service at [Momentive.com/Customerservice/](https://www.momentive.com/Customerservice/)

For literature and technical assistance, visit our website at: www.momentive.com

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