

Element14* PDMS 5-A

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Description

Element14 PDMS 5 and Element14 PDMS 10 are low viscosity, linear polydimethylsiloxane polymers with typically dynamic viscosities of 5 and 10mPa•s (cps).

Key Features and Benefits

Silicones differ from organic compounds in both their physical and chemical properties.

- High and low temperature stability
- Oxidative stability
- Chemically inert
- Low flammability
- Low surface tension
- Shear stability
- High compressibility
- Low vapor pressure
- Low odor
- Soft, smooth silky feel
- Non-oily feel
- Spreadability
- Low coefficient of friction
- Lubricious

Typical Physical Properties

	Element14 PDMS 5A	Element14 PDMS 10A
Viscosity, mPa•s (cps)	5	10
Appearance	Clear, colorless liquid	
Acid Number	<=5.0	<=5.0
Color (PtCo)	<=15	<=15
Flash Point, closed cup, °C	>=121	>=170
Viscosity @ 25°C	4.5-5.5	9.0-11.0
Arsenic (ppm)	<=2.0 (every 10th batch)	<=2.0 (every 10th batch)
Heavy Metals (ppm)	<=10.0 (every 10th batch)	<=10.0 (every 10th batch)
Specific Gravity (@ 25°C)	0.912-0.920	0.931-0.939
Refractive Index (@ 25°C)	1.3950-1.3990	1.3980-1.4000
Viscosity Coefficient	0.53-0.57	0.55-0.59
Pour Point, °C	~-100	~-90
Surface Tension, dynes/cm (@ 25°C)	19.7	20.1
Thermal Conductivity, W•m-1•K-1	0.116	0.14
Coefficient of Expansion, 10-3/°C	1.08	1.03
Note: Test data. Actual results may vary.		

Potential Applications

Element14 PDMS 5 and Element14 PDMS 10 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

Patent Status

Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute a permission, inducement or recommendation to practice any invention covered by any patent, without authority from the owner of the patent.

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