

Silopren® LSR 7005

Silicone Rubber, LSR
Momentive Performance Materials Inc.

Message:

Silopren LSR 7005 liquid silicone rubber is a two-component, high-transparency, low-hardness, low-viscosity, fast-cure speed and ultra clear liquid silicone rubber (LSR). Providing good optical clarity, Silopren LSR 7005 liquid silicone rubber combines typical LSR properties, such as high temperature stability and flowability, with excellent UV and blue light stability. As a result, optical parts produced using this material can exhibit excellent durability and maintain optical clarity, even if exposed to high temperatures or UV light. The very low hardness and low modulus help enable easy assembling and coupling of molded optical elements. Silopren LSR 7005 liquid silicone rubber is designed to be processed through LSR injection molding technology, which can help to produce high precision optical parts even in large quantities at a high efficiency.

Key Features and Typical Benefits

- Optical Clarity
- Durability
- Design Freedom
- Potential Applications
- Optical interfaces
- Rain light sensors
- Camera systems
- Optical sensors
- Other transparent applications

General Information			
Features	Durable		
	Fast Cure		
	Good Color Stability		
	Good Colorability		
	Good Crack Resistance		
	Good Mold Release		
	Good Thermal Stability		
	Good UV Resistance		
	High Clarity		
	High Flow		
	High Heat Resistance		
	Low Hardness		
	Low Viscosity		
Uses	Optical Applications		
Appearance	Clear/Transparent		
Forms	Liquid		
Processing Method	Liquid Injection Molding (LIM)		
Physical	Nominal Value	Unit	Test Method
Density	0.980	g/cm ³	JIS K6249
Molding Shrinkage - Flow	2.2	%	JIS K6249
Water Absorption (Equilibrium)	< 0.10	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method

Durometer Hardness (Shore A)	5		JIS K6249
Elastomers	Nominal Value	Unit	Test Method
Tensile Strength	0.300	MPa	JIS K6249
Tensile Elongation (Break)	210	%	JIS K6249
Thermal	Nominal Value	Unit	
CLTE - Flow (40 to 90°C)	3.3E-4	cm/cm/°C	
Optical	Nominal Value	Unit	Test Method
Refractive Index	1.410		
Transmittance			
2000 μm, 400 nm	93.0	%	
2000 μm, 700 nm	94.0	%	
Haze	< 1.0	%	ASTM D1003
Abbe Number	50.0		
Thermoset	Nominal Value	Unit	
Thermoset Components			
Part A	Mix Ratio by Weight: 1.0		
Part B	Mix Ratio by Weight: 1.0		
Uncured Properties	Nominal Value	Unit	
Color			
-- ¹	Clear/Transparent		
-- ²	Clear/Transparent		
Viscosity			
23°C ³	50	Pa·s	
23°C ⁴	53	Pa·s	
23°C ⁵	55	Pa·s	
Curing Time (130°C)	0.25	hr	
Pot Life (23°C)	2900	min	
NOTE			
1.	Part B		
2.	Part A		
3.	Part B		
4.	Mixed		
5.	Part A		

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