LIM™ 8040

Silicone Rubber, LSR

Momentive Performance Materials Inc.

Message:

LIM8040 liquid silicone rubber is a 2-component liquid injection moulding material, which offers primerless adhesion to a wide range of substrates including metals and engineering plastics. Full bond strength is reached immediately after de-moulding. This makes LIM 8040 the optimal choice for cost-efficient manufacturing of high numbers of articles in integrated processes such as multicomponent injection moulding or insert-moulding. If properly processed, parts made from LIM 8040 can meet the requirements for food contact. The requirements are determined in 21CFR FDA paragraph 177.2600 'Rubber articles intended for repeated use. It also has been successfully tested for USP class VI. Both applications usually require a postcure.
Key Features and Benefits
Primer-less adhesion to many substrates
Maximum adhesion immediately after de-moulding
High temperature stability
Excellent stability and flexibility at low temperatures
Outstanding ageing behavior and weathering resistance
Good dielectric and mechanical properties
Easy pigmentable due to translucent colour
Potential Applications
LIM 8040 is particularly suitable for the manufacturing of parts, where engineering plastics and elastomeric materials need to be combined in an overmolding or co-molding process such as:
sealing elements,
automotive connectors,
membranes,
vibration dampening elements

General Information	
Features	Food Contact Acceptable
	Good Adhesion
	Good Colorability
	Good Thermal Stability
	Good Weather Resistance
	Low Temperature Flexibility
Uses	Automotive Applications
	Connectors
	Membranes
	Seals
Agency Ratings	FDA 21 CFR 177.2600
	USP Class VI
Forms	Liquid
Processing Method	Liquid Injection Molding (LIM)
	Multi Injection Molding

Thermal	Nominal Value	Unit

Thermal Conductivity [1]	0.19	W/m/K
Uncured Properties	**Nominal Value**	**Unit**
Color		
-- [2]	Translucent	
-- [3]	Translucent	
Density		
-- [4]	1.08	g/cm³
-- [5]	1.08	g/cm³
Pot Life (20°C)	4300	min
Cured Properties	**Nominal Value**	**Unit**
Shore Hardness		
Shore A [6]	43	
Shore A [7]	46	
Tensile Modulus		
100% Secant [8]	1.20	MPa
100% Secant [9]	1.60	MPa
Tensile Strength		
-- [10]	5.20	MPa
-- [11]	5.60	MPa
Tensile Elongation at Break		
-- [12]	380	%
-- [13]	390	%
Compression Set		
150°C, 168 hr [14]	27	%
150°C, 1000 hr [15]	35	%
150°C, 168 hr [16]	67	%
150°C, 1000 hr [17]	76	%
Tear Strength		
Die B [18]	30.2	kN/m
Die B [19]	37.8	kN/m
Electric Strength		
-- [20]	20	kV/mm
-- [21]	20	kV/mm
Relative Permittivity		
-- [22]	2.85	
-- [23]	2.85	
Volume Resistivity		
-- [24]	2.9E+14	ohms·cm
-- [25]	2.9E+14	ohms·cm
Dissipation Factor		
-- [26]	3.0E-3	
-- [27]	3.0E-3	

NOTE	
1.	Postbaked 1 hr @ 177°C (350°F)
2.	Part B
3.	Part A
4.	Part B
5.	Part A
6.	As Molded 30 sec @ 177°C (350°F)
7.	Postbaked 1 hr @ 177°C (350°F)
8.	As Molded 30 sec @ 177°C (350°F)
9.	Postbaked 1 hr @ 177°C (350°F)
10.	As Molded 30 sec @ 177°C (350°F)
11.	Postbaked 1 hr @ 177°C (350°F)
12.	Postbaked 1 hr @ 177°C (350°F)
13.	As Molded 30 sec @ 177°C (350°F)
14.	Postbaked 1 hr @ 177°C (350°F)
15.	Postbaked 1 hr @ 177°C (350°F)
16.	As Molded 30 sec @ 177°C (350°F)
17.	As Molded 30 sec @ 177°C (350°F)
18.	Postbaked 1 hr @ 177°C (350°F)
19.	As Molded 30 sec @ 177°C (350°F)
20.	Postbaked 1 hr @ 177°C (350°F)
21.	As Molded 30 sec @ 177°C (350°F)
22.	Postbaked 1 hr @ 177°C (350°F)
23.	As Molded 30 sec @ 177°C (350°F)
24.	Postbaked 1 hr @ 177°C (350°F)
25.	As Molded 30 sec @ 177°C (350°F)
26.	Postbaked 1 hr @ 177°C (350°F)
27.	As Molded 30 sec @ 177°C (350°F)

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