

LIM™ 8040

Description

LIM* 8040 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

Typical Physical Properties

<u>Property</u>		<u>A Component</u>	<u>B Component</u>
Appearance		Translucent	Translucent
Density	g/cm ³	1.08	1.08

The pot-life of the mixed components (closed container) at 20°C is three days, Increased temperatures reduce the pot-life.

		As molded (30 s 177°C)	Post-baked (1h / 177°C)
Hardness	Shore A	43	46
Tensile strength	MPa	5.2	5.6
Elongation at break	%	385	375
Tensile Modulus 100%	MPa	1.2	1.6
Tear Strength, Die B	KN/m	37.8	30.2
<u>Compression Set @ 150°C</u>			
168 hours	%	67	27
1000 hours	%	76	35
Thermal Conductivity	W/m-K	0.19	0.19
Dielectric Strength	kV/mm	20	20
Dielectric Constant		2.85	2.85
Dissipation Factor		0.003	0.003
Volume Resistivity	Ω-cm	2.9×10^{14}	2.9×10^{14}

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

Processing Recommendations

Ready-to-use mixtures (of the components A and B) are fed directly to the injection-molding machine from the original containers by means of a metering and mixing unit. The mixture, consisting of the two components in the ratio 1:1, is injected into the heated mold. At mold temperatures of 170°C - 230°C, the addition-crosslinking silicone rubber typically vulcanizes, without any dissociation products, within a few seconds.

High curing speed and easy demolding can help enable fully automated production of a large number of articles in short cycle times.

Regulatory Compliance

- A representative sample of an analogous product to LIM 8040 met the requirements of USP Class VI and ISO 10993 under Good Laboratory Practices (GLP)
- Listed as UL 94 HB (File No. E205753)
- The ingredients are listed in the BfR recommendation XV “Silicones” ⁽¹⁾
- Compositionally compliant with 21 CFR 177.2600 – Rubber articles intended for repeated use⁽²⁾

(1) Producer of the final article needs to test and confirm that the final product meets the extraction limits of BfR XV or corresponding EU legislation.

(2) It is the responsibility of the user to determine that the final product complies with the extractive limitations and other requirements of 21 CFR 177.2600, under their specific manufacturing procedures

Patent Status

Standard copy to come

Product Safety, Handling and Storage

Standard copy to come

Limitations

Standard copy to come

Contact Information

Email

commercial.services@momentive.com

Telephone

Americas	Latin America	EMEAI- Europe, Middle East, Africa & India	ASIA PACIFIC
+1 800 295 2392	Brazil	Europe	China
Toll free*	+55 11 4534 9650	+390510924300	800 820 0202

+704 805 6946 Direct Number	Direct Number	Direct number	Toll free +86 21 3860 4892 Direct number
All American countries	Mexico +52 55 2169 7670 Direct Number	India, Middle East & Africa + 91 44 71212207 Direct number	Japan +81 3 5544 3111 Direct number
		*All Middle Eastern countries, Africa, India,	Korea +82 2 6201 4600

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

DISCLAIMER:

THE MATERIALS, PRODUCTS AND SERVICES OF MOMENTIVE PERFORMANCE MATERIALS INC. AND ITS SUBSIDIARIES AND AFFILIATES (COLLECTIVELY “SUPPLIER”), ARE SOLD SUBJECT TO SUPPLIER’S STANDARD CONDITIONS OF SALE, WHICH ARE INCLUDED IN THE APPLICABLE DISTRIBUTOR OR OTHER SALES AGREEMENT, PRINTED ON THE BACK OF ORDER ACKNOWLEDGMENTS AND INVOICES, AND AVAILABLE UPON REQUEST. ALTHOUGH ANY INFORMATION, RECOMMENDATIONS, OR ADVICE CONTAINED HEREIN IS GIVEN IN GOOD FAITH, SUPPLIER MAKES NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, (i) THAT THE RESULTS DESCRIBED HEREIN WILL BE OBTAINED UNDER END-USE CONDITIONS, OR (ii) AS TO THE EFFECTIVENESS OR SAFETY OF ANY DESIGN INCORPORATING ITS PRODUCTS, MATERIALS, SERVICES, RECOMMENDATIONS OR ADVICE. EXCEPT AS PROVIDED IN SUPPLIER’S STANDARD CONDITIONS OF SALE, SUPPLIER AND ITS REPRESENTATIVES SHALL IN NO EVENT BE RESPONSIBLE FOR ANY LOSS RESULTING FROM ANY USE OF ITS MATERIALS, PRODUCTS OR SERVICES DESCRIBED HEREIN. Each user bears full responsibility for making its own determination as to the suitability of Supplier’s materials, services, recommendations, or advice for its own particular use. Each user must identify and perform all tests and analyses necessary to assure that its finished parts incorporating Supplier’s products, materials, or services will be safe and suitable for use under end-use conditions. Nothing in this or any other document, nor any oral recommendation or advice, shall be deemed to alter, vary, supersede, or waive any

provision of Supplier's standard Conditions of Sale or this Disclaimer, unless any such modification is specifically agreed to in a writing signed by Supplier. No statement contained herein concerning a possible or suggested use of any material, product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right of Supplier covering such use or design, or as a recommendation for the use of such material, product, service or design in the infringement of any patent or other intellectual property right.

*LIM™ é uma marca registrada da Momenive Performance Materials Inc.

The use of the "™" symbol designates registered or unregistered trademarks of Momenive Performance Materials Inc. or its affiliated companies. Momenive and the Momenive logo are trademarks of Momenive Performance Materials Inc.