

FSL 7586/40

FSL7586/40

Description

FSL 7586/40 is a translucent two-component silicone rubber for use in liquid injection molding to produce high performance elastomeric parts with selflubricating properties. The lubricating effect is achieved by a fluid, which exudes from the cured rubber over an extended period of time, ranging from a few hours to one day. The material is translucent, but easily pigmentable. Due to certain fluorine content in the polymer, FSL 7586/40 is suitable for applications exposed to lubricants, automotive fuels and solvents. Compared to standard liquid silicone rubbers without fluorine content the oil and fuel resistance of FSL 7586/40 is greatly improved.

FSL 7586/40 is particularly suitable for the manufacturing of parts, where improved resistance to automotive fluids is needed like connector gaskets or parts in air-intake systems. Parts made from FSL 7586/40 can generally be used in technical applications but do not comply with regulations applicable for parts, which are intended for the pharmaceutical or food industry.

Key Features and Benefits

- Low compression set
- Self-lubricating
- Fast curing
- Improved resistance to oils and fuels
- High thermal stability
- Excellent low temperature flexibility
- UV- and ozone resistant
- Easily colourable

Typical Physical Properties

		FSL 7586/40		
			comp A	comp B
Appearance			translucent	translucent
Fluid Content		%	5	5
Viscosity, $\gamma = 10 \text{ s}^{-1}$ at 20°C	C DIN 53 018	Pa • s	700	700

The pot-life of the mixture of the two components (closed vessel) at 20°C is three days. Increased temperatures reduce the pot-life.

The mechanical properties were measured on test sheets (2 mm). These were produced by mixing the components A & B in 1:1 ratio and curing the resulting mixture 10 min at 175°C.

		FSL 7586/40		
			as cured	Injection molding plus post curing 30 min at 200°C
Density	DIN 53 479 A	g/cm ³	1.23	1.23
Hardness	DIN 53 505	Shore A	40	40
Tensile Strength	DIN 53 504 S2	N/mm ²	5.5	5.6
Elongation at break	DIN 53 504 S2	%	380	400
Tear Strength	ASTM D 624 die B	N/mm	20	n.a.
Comp. Set 22h at 175°C	ISO 815	%	17	18

Fluid Resistance Data

	Hardness Change [Shore A]	Tensile Change [%]	Elongation Change [%]	Volume Change [%]
3 d 150 °C				
IRM 903	- 6	- 26	- 21	+ 9
Castrol "SLX OW30" ¹⁾	- 3	- 12	- 11	- 0.1
Mobil "OW30" ²⁾	- 2	- 14	- 11	+ 2.2
BP "C20" ³⁾	- 3	- 22	- 8	+ 2.4
3 d 120 °C				
Diesel (EN 590)	- 13	- 47	- 26	+ 21
RME – Bio diesel	- 8	- 41	- 35	+ 17
3d 70 °C + 24h RT				
Fuel C	+ 5	+ 41	+ 25	- 11

1) Available from Deutsche Castrol Vertriebsgesellschaft mb, Hamburg

2) Available from ExxonMobil Cooperation

3) Available from Deutsche BP AG

These typical data are only intended as a guide and should not be used in preparing specifications.

Processing Recommendations

FSL 7586/40 is a kit-matched product. As such, work time (pot-life), cure time, and final cured properties can only be assured if the batch numbers on the A component and B component are identical and the material is mixed at a ratio of 1:1. Pumping and meter-mixing systems for FSL 7586/40 and appropriate injection moulding machines are available from a number of manufacturers, most of whom will provide a complete integrated system (exclusive of the mould itself). The self-lubrication effect is, however, affected by several factors, which are specific for each article. The diffusion process depends on:

- Ratio of volume to surface area

- Degree of cross linking
- Type and concentration of pigment added

For further information please contact Momentive performance materials.

Containers

FSL 7586/40 is available in 20 kg pails.

Patent Status

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

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

Email

commercial.services@momentive.com

Telephone

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

*Silopren™ es una marca comercial de Momentive Performance Materials Inc.

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