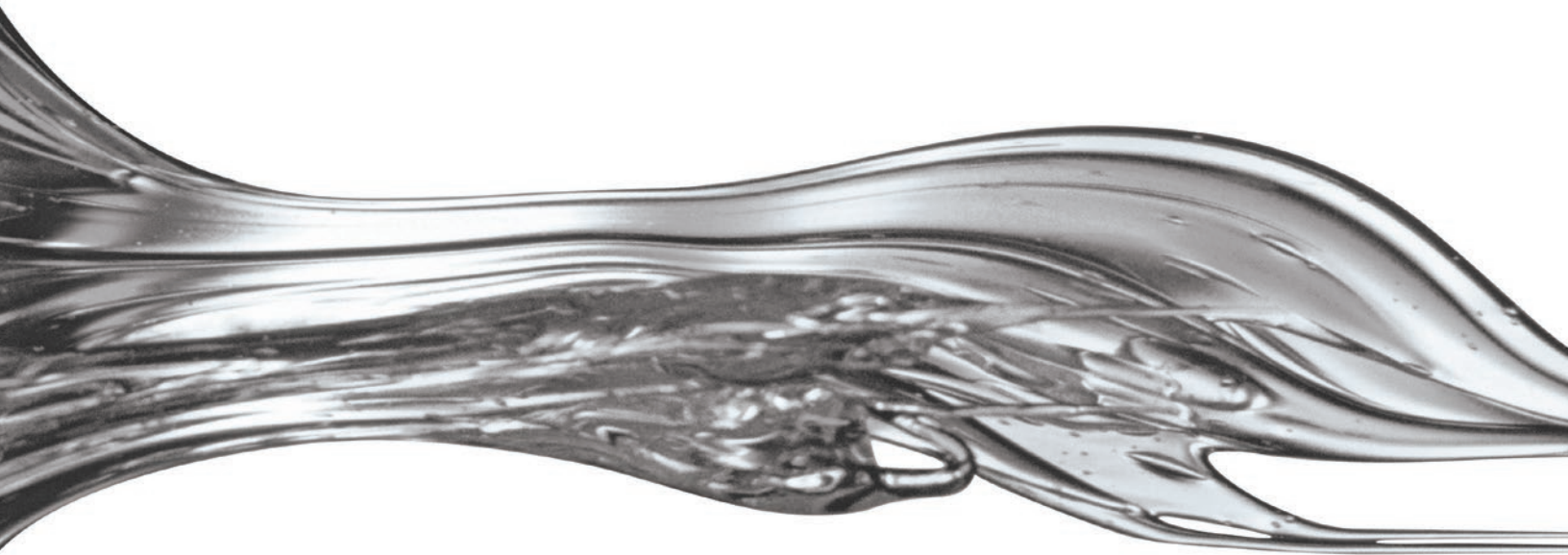


Liquid silicone rubber

Application and product selection guide





Liquid silicone rubber (LSR)

LSRs are pumpable thermoset silicone elastomers that can be processed by molding equipment. They are ideal for intricate designs and close-tolerance parts.

Innovation meets expertise

You want to explore new directions and create the next generation of medical device technology. You have a powerful ally with DuPont. When we are part of your team, you're backed by our expertise and our culture of discovery and innovation, nurtured by six decades of proven performance. You'll find a depth of knowledge not just in silicone chemistry, but in the medical device industry, process technology and regulatory compliance.

Benefits

Product Description

Typical Applications

Silastic™ BioMedical Grade Liquid Silicone Rubber

- DMF (drug master file) access available upon request for select Silastic™ BioMedical Grade materials

- High-quality, consistent materials for critical applications
- Manufactured in a dedicated healthcare facility

Two-part (1:1 by weight), platinum-catalyzed, liquid silicone rubber materials

- Injection molding of precision and intricate parts of medical devices (O-rings, stoppers and closures)
- Mesh or fabric coating

- Improved molding performance
- Formulated to significantly reduce mold fouling
- Enhance throughput and limit cleaning and change-outs over time
- Improved mechanical properties like tear strength and compression set

Dow Corning™ C6 Series LSR

- Highly reproducible and stable materials
- Manufactured in a dedicated healthcare facility

Two-part (1:1 by weight), platinum-catalyzed, liquid silicone rubber materials

- Injection molding of precision and intricate parts of medical devices (O-rings, stoppers and closures)
- Mesh or fabric coating
- Implantation applications ≤29 days

- Improved molding performance
- Formulated to significantly reduce mold fouling
- Enhance throughput and limit cleaning and change-outs over time
- Improved mechanical properties like tear strength and compression set
- No need for post cure to stabilize physical properties
- Manufactured in a dedicated healthcare facility

Dow Corning™ QP1 LSR

- Formulated to reduce mold fouling, resulting in longer run times before cleaning
- Less downtime and greater cost efficiency
- Improved mold release
- No need for post cure
- No need for post cure to stabilize physical properties

Two-part (1:1 by weight), platinum-catalyzed, liquid silicone rubber materials

- Injection molding of precision and intricate parts of medical devices (O-rings, stoppers and closures)
- Mesh or fabric coating
- Implantation applications ≤29 days

- High batch-to-batch consistency means fewer adjustments
- Low viscosity material flows into intricate molds at lower pressures
- Wider process window
- Shortens process cycle time
- Formulated to significantly reduce mold fouling
- Enhance throughput and limit cleaning and change-outs over time
- Greater molding consistency

Biocompatibility Testing

Products

Products	Biocompatibility Testing									Select European Pharmacopeia 3.1.9		Food Grade Compliance*					
	Cytotoxicity	Mutagenicity/Genotoxicity	Hemolysis	Skin Sensitization	Pyrogenicity (USP)	90-Day Implant	30-Day Implant	7-Day Implant	USP Class V and VI	Substance Soluble in Hexane	Volatile Matter	Hardness, Shore A	Tensile Strength (MPa/psi)	Elongation at Break (%)	Tear Strength, Die B (kN/m/ppi)	Relative Density	
Silastic™ 7-6830 BioMedical Grade Liquid Silicone Rubber ¹	•	•	•	•	•	•	•	•	•	•	•	30	8.8/1280	790	24.1/140	1.13	
Silastic™ 7-6840 BioMedical Grade Liquid Silicone Rubber ¹	•	•	•	•	•	•	•	•	•	•	•	40	9.8/1430	700	36.8/210	1.13	
Silastic™ Q7-4840 BioMedical Grade Liquid Silicone Rubber ¹	•	•	•	•	•	•	•	•	•	•	•	44	9.4/1370	540	36.8/210	1.12	
Silastic™ Q7-4850 BioMedical Grade Liquid Silicone Rubber ¹	•	•	•	•	•	•	•	•	•	•	•	50	10.1/1470	630	45.1/260	1.15	
Silastic™ 7-4860 BioMedical Grade Liquid Silicone Rubber ¹	•	•	•	•	•	•	•	•	•	•	•	60	8.8/1280	540	50.9/290	1.10	
Silastic™ 7-4870 BioMedical Grade Liquid Silicone Rubber ¹	•	•	•	•	•	•	•	•	•	•	•	66	9.5/1380	420	47.4/270	1.15	
Silastic™ Q7-7840 BioMedical Grade Liquid Silicone Rubber ¹	•	•	•	•	•	•	•	•	•	•	•	40	9.3/1360	750	30.7/175	1.14	
Silastic™ Q7-7850 BioMedical Grade Liquid Silicone Rubber ¹	•	•	•	•	•	•	•	•	•	•	•	50	9.0/1310	660	48.2/275	1.13	
Silastic™ Q7-7870 BioMedical Grade Liquid Silicone Rubber ¹	•	•	•	•	•	•	•	•	•	•	•	67	9.4/1370	415	45.6/260	1.14	
Dow Corning™ C6-530 Liquid Silicone Rubber	•			•			•	•	•	•	•	30	8.2/1190	830	26.3/150	1.13	
Dow Corning™ C6-540 Liquid Silicone Rubber	•			•			•	•	•	•	•	40	8.9/1290	740	42.1/240	1.13	
Dow Corning™ C6-550 Liquid Silicone Rubber	•			•			•	•	•	•	•	50	10.4/1520	660	44.7/255	1.14	
Dow Corning™ C6-560 Liquid Silicone Rubber	•			•			•	•	•	•	•	60	8.8/1280	540	50.9/290	1.10	
Dow Corning™ C6-570 Liquid Silicone Rubber	•			•			•	•	•	•	•	65	9.1/1320	440	54.4/310	1.15	
Dow Corning™ C6-740 Liquid Silicone Rubber	•		•	•			•	•	•	•	•	40	8.6/1250	680	30.7/175	1.14	
Dow Corning™ C6-750 Liquid Silicone Rubber	•		•	•			•	•	•	•	•	50	8.8/1280	610	42.1/240	1.13	
Dow Corning™ C6-770 Liquid Silicone Rubber	•		•	•			•	•	•	•	•	67	9.3/1360	450	42.1/240	1.14	
Dow Corning™ QP1-20 Liquid Silicone Rubber	•			•			•	•				20	5.6/810	650	18.4/105	1.12	
Dow Corning™ QP1-30 Liquid Silicone Rubber	•			▲			•	•				30	5.7/830	625	18.4/105	1.13	
Dow Corning™ QP1-40 Liquid Silicone Rubber	•			▲			•	•				40	7.5/1090	580	31.6/180	1.14	
Dow Corning™ QP1-45 Liquid Silicone Rubber	•			▲			•	•				45	7.8/1140	485	38.6/220	1.13	
Dow Corning™ QP1-50 Liquid Silicone Rubber	•			▲			•	•				50	8.6/1260	510	41.2/235	1.13	
Dow Corning™ QP1-60 Liquid Silicone Rubber	•			▲			•	•				60	9.6/1400	460	50.9/290	1.14	
Dow Corning™ QP1-70 Liquid Silicone Rubber	•			▲			•	•				68	9.7/1420	405	44.7/255	1.14	
Dow Corning™ QP1-75 Liquid Silicone Rubber	•			•			•	•				73	8.9/1300	400	15.8/90	1.16	
Dow Corning™ QP1-230 Liquid Silicone Rubber	•			•			•	•				30	6.8/990	630	15.8/90	1.12	
Dow Corning™ QP1-240 Liquid Silicone Rubber	•			▲			•	•				40	8.0/1160	540	36.8/210	1.11	
Dow Corning™ QP1-250 Liquid Silicone Rubber	•			▲			•	•				50	8.2/1200	495	47.4/270	1.12	
Dow Corning™ QP1-260 Liquid Silicone Rubber	•			▲			•	•				60	8.6/1400	390	50.1/290	1.12	
Dow Corning™ QP1-270 Liquid Silicone Rubber	•			•			•	•				68	9.5/1390	325	54.4/310	1.14	

¹ Use of this material for implantation ≥ 30 days requires indemnification
 * Contact your DuPont representative for area-specific information

▲ Biocompatibility potential based on test data from analogous materials



To learn more about DuPont's healthcare solutions visit:
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