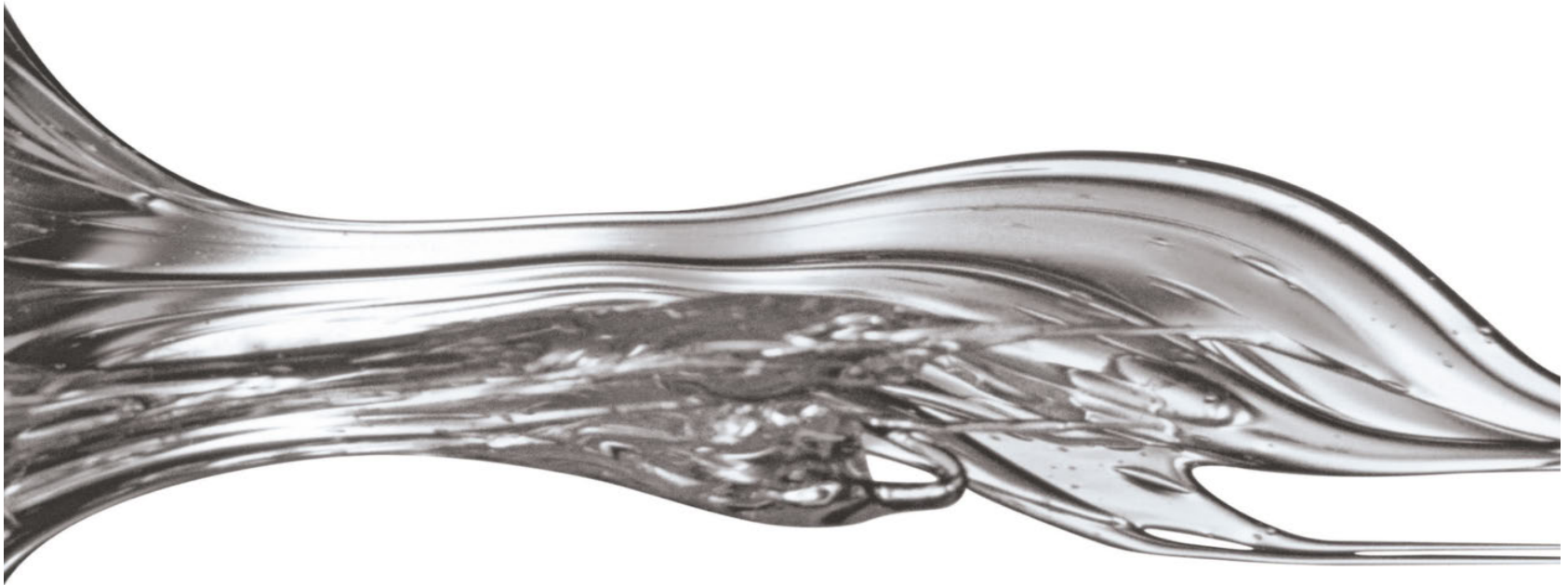


Liquid silicone rubber

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

Products

Biocompatibility Testing

Select European
Pharmacopeia
3.1.9

	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	Food Grade Compliance*	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:
www.dupont.com/healthcare.html

For country-level information, visit:
www.dupont.com/corporate-functions/our-company/global-locations.html

Call us at these regional locations:

North America
+1 833-3-DUPONT
(833-338-7668)

EMEA
+800-3876-6838
+001 571 209 2351

Asia Pacific
+400 885 1888
+86 21 3862-2888

Latin America
+52 55 5722 1150
+01800 849 7514

CAUTION: DO NOT USE DUPONT MATERIALS IN MEDICAL APPLICATIONS INVOLVING PERMANENT IMPLANTATION IN THE HUMAN BODY OR PERMANENT CONTACT WITH INTERNAL BODILY FLUIDS OR TISSUES. DO NOT USE DUPONT MATERIALS IN MEDICAL APPLICATIONS INVOLVING BRIEF OR TEMPORARY IMPLANTATION IN THE HUMAN BODY OR PERMANENT CONTACT WITH INTERNAL BODILY FLUIDS OR TISSUES UNLESS THE MATERIAL HAS BEEN PROVIDED DIRECTLY BY DUPONT UNDER A CONTRACT THAT EXPRESSLY ACKNOWLEDGES THE CONTEMPLATED USE.

The information, suggestions and data contained herein are intended only as an informational guide to assist you in making preliminary selections of materials and are not intended to be all-inclusive or final. Because DuPont cannot anticipate or control the many different conditions under which this information, data, suggestions or materials may be used, DuPont does not guarantee the applicability or the accuracy of this information or the suitability of the information, data, suggestions, or materials in any given situation. The information, data, or suggestions are not intended to substitute for any testing you may need to conduct to determine for yourself the suitability of a particular material for a particular purpose. DuPont makes no guarantee of results and assumes no obligation or liability whatsoever in connection with this information. Such information, data or suggestions are to be used and relied upon at user's own discretion and risk. DuPont makes no warranties, express or implied, and disclaims any and all direct and indirect liability for damages or losses resulting from or relating to the use of any information, suggestion, data, or materials described herein. Statements concerning the use of the products or formulations described herein are not to be construed as recommending the infringement of any patent, copyright, designs or other intellectual property and no liability for infringement arising out of such use is assumed by DuPont. None of this information is to be considered as a license to operate under, or recommendation to infringe, any patents.

DuPont reserves the right not to sell Special Control and Premium Control products for selected applications.

Although these products are tested against certain USP Class VI and ISO 10993 standards, DuPont makes no representation or warranty of suitability of its products for particular healthcare or medical applications or any other representations or warranties based on such testing.

The information set forth herein is furnished free of charge and is based on technical data that DuPont believes to be reliable. It is intended for use by persons having technical skill at their own discretion and risk. DuPont makes no warranties, express or implied, and assumes no liability in connection with any use of this information.

DuPont™, the DuPont Oval Logo, and all products, unless otherwise noted, denoted with ™, SM or ® are trademarks, service marks or registered trademarks of affiliates of DuPont de Nemours, Inc.

© 2019 DuPont de Nemours, Inc. All rights reserved.