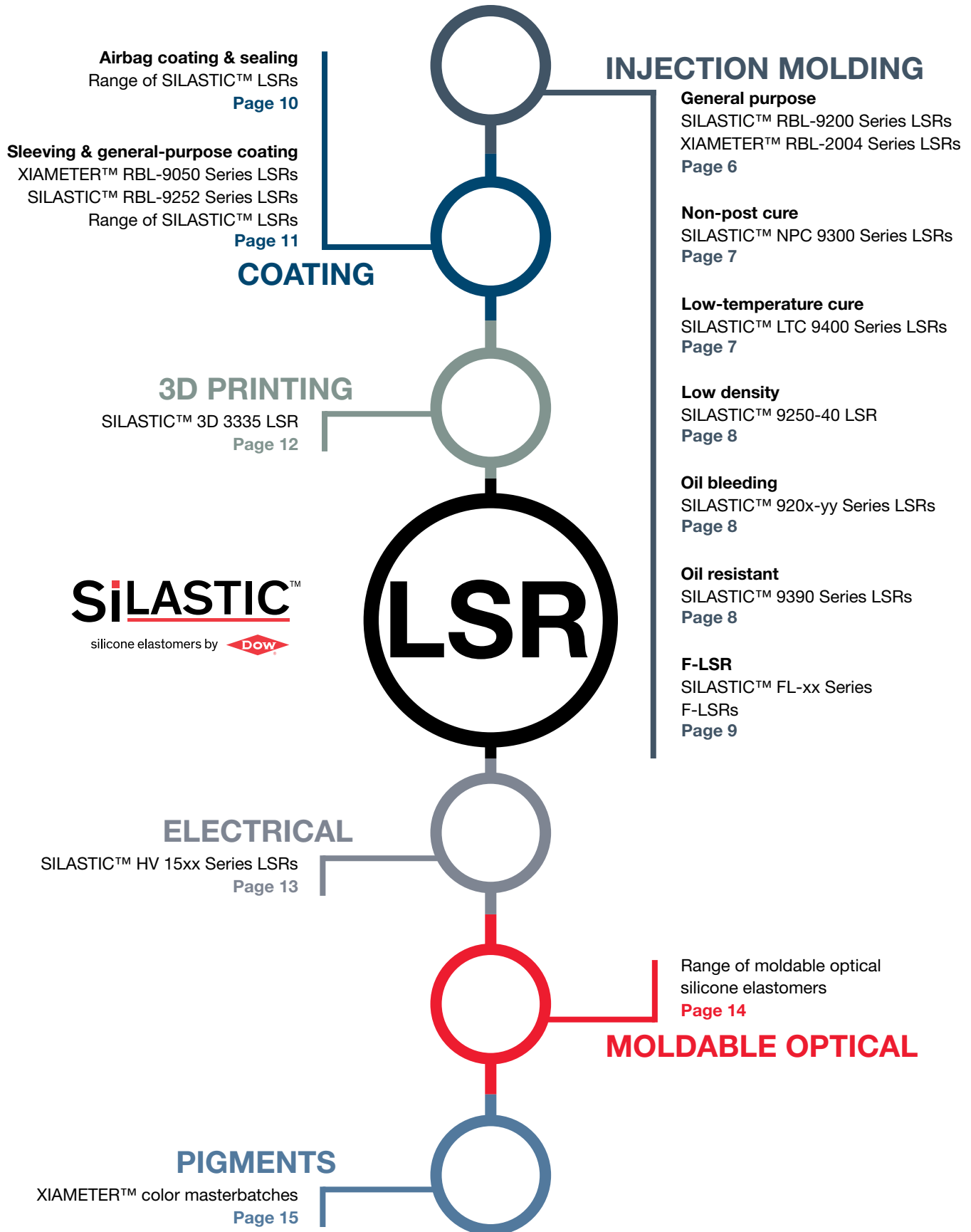


# Liquid silicone rubber product selection guide

EXPAND YOUR POSSIBILITIES



# Contents



## Liquid silicone rubber (LSR) from Dow

Dow's portfolio of liquid silicone rubber includes specific LSR formulations, marketed under multiple brands. Injection-molding grades, coating grades, a 3D printing grade, electrical grades and optical grades are available, as are LSR color masterbatches.

This guide provides detailed technical information on our wide range of LSRs, which even include options that meet requirements for food contact, water contact and infant care applications.

### Why LSR?

LSRs offer a "magic combination" of properties, process and performance to help extend design possibilities for small parts, intricate designs, high precision and overmolding:

- Two-part; 1:1 mix ratio
- Easily mixed
- Quickly heat-cured

Key features of cured LSRs include good mechanical properties and excellent resistance to weathering, extreme temperatures and aging.

Fluoro liquid silicone rubber (F-LSR) combines excellent fuel and oil resistance with LSR processing economy.

### Put us on your team

Dow can provide expert help recommending the right LSR for your application, collaborate to develop custom LSR formulations, and provide broad technical service and support.



## About Dow performance silicones

Dow Performance Silicones, a business unit of Dow, delivers a portfolio of performance-enhancing solutions to serve the diverse needs of customers and industries around the world. The business uses innovative silicon-based technology to provide solutions and ingredients to customers in commercial construction and high performance building, consumer goods, silicone elastomers, and pressure sensitive industries. As a global leader in innovation and silicone technology, we are committed to bringing new and proven solutions to the market that do more for our customers and continue to improve the lives of consumers worldwide. Visit [consumer.dow.com](https://www.consumer.dow.com) to learn more.

# Addressing megatrends with LSRs for a more sustainable world

Dow is committed to delivering solutions that address world challenges as we aspire to redefine the role of business in society. With our world-leading operations performance, we address natural resource efficiency, supply chain optimization, environmental stewardship, and human health and safety. And just as important to us is delivering breakthrough innovations that enable our customers to address the needs of a rapidly changing world.

## WATER SCARCITY – SAVING WATER

LSRs formulated to comply with food & water regulations

Water savings

Consistent water delivery

Resilience & reliability

Soft & easy to clean

No rust

Design flexibility for optimum water delivery

Resilience

Self-cleaning

Usable in hot/cold temperatures

Easy to wash

Reusable

Long-lasting

Excellent aging resistance

## MOBILITY –

Safety

Sustained performance in harsh environments

Reliable sealing performance

UV stability

Enables fuel/energy efficiency

Helps create new engine designs

## ENERGY DEMAND – OPTIMIZING DELIVERY

Low energy losses

High reliability

Long lifetime

Low flammability

Watertightness for underground cables

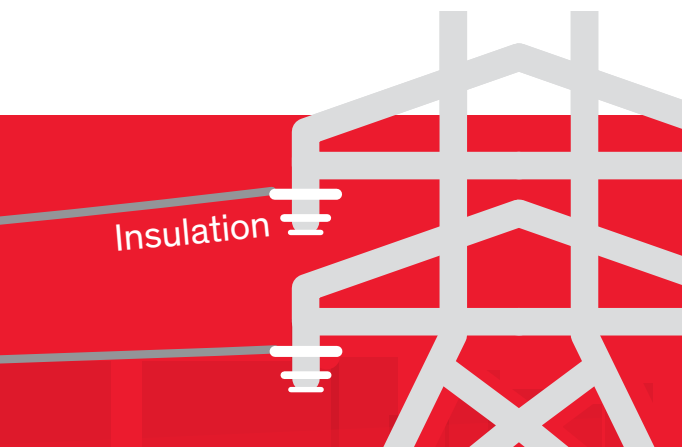
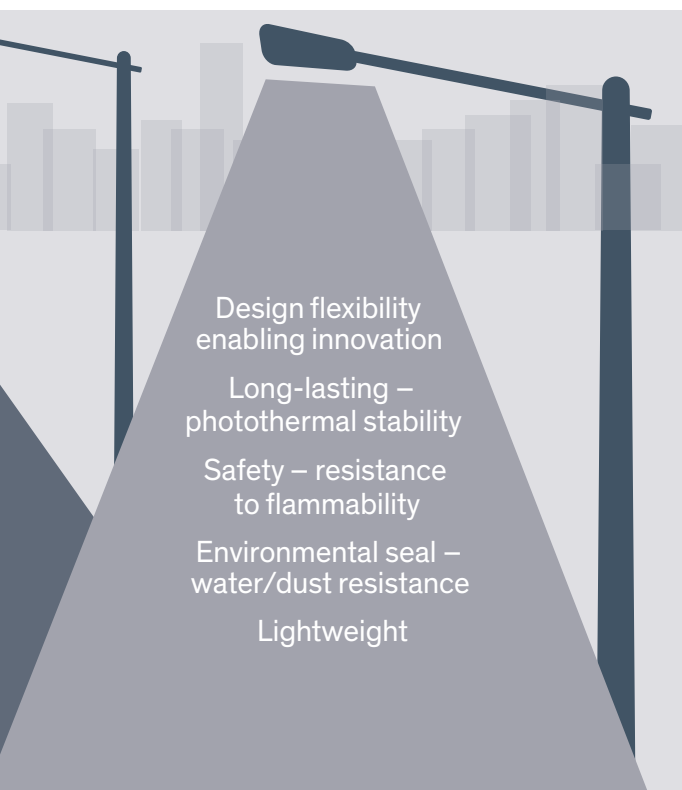
Supply & distribution of renewable energy

High hydrophobicity

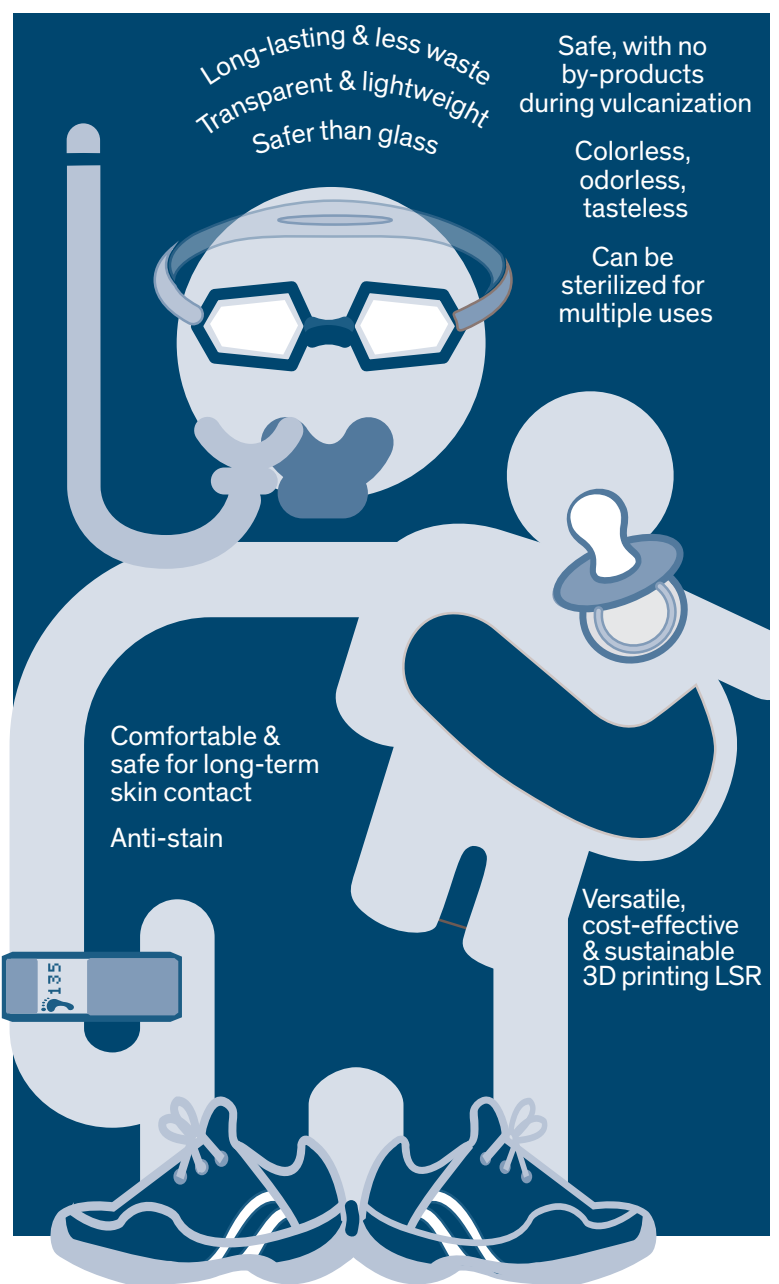
By working together across the value chain, we look to create shared value and accelerate the transition to a sustainable planet with solutions that deliver sustainability performance improvements to conserve resources, support more efficient manufacturing processes, and help consumers live healthier and more convenient lives.

Liquid silicone rubber is a high-performing, long-lasting material that can reliably perform in a variety of harsh environments, enabling the development of products that are safe, adaptable and more sustainable; produce less waste; and require less energy for processing. Here are just some of the many ways LSRs are contributing to everyday life in an ever-more-challenging world.

## ENABLING CONNECTIVITY & SAFETY FOR PEOPLE & VEHICLES



## WELL-BEING – PROTECTING PEOPLE



## General-purpose LSRs

SILASTIC™ RBL-9200 series LSR elastomers and XIAMETER™ RBL-2004 series LSR elastomers are general-purpose injection-molding materials suitable for a wide range of typical silicone rubber applications.

Typical applications	Available products	Key features	Cure	Shore A hardness ASTM D2240	Elongation, % ASTM D412	Tensile strength, MPa ASTM D412	Tear strength, kN/m ASTM D624 DIE B	Specific gravity ASTM D792	Compression set (22 hr @ 175°C), % ASTM D395		Viscosity @ 10s <sup>-1</sup> , Pa·s CTM 1094	
									NPC <sup>(2)</sup>	PC <sup>(3)</sup>	Part A	Part B
<ul style="list-style-type: none"> <li>Consumer goods articles</li> <li>Food contact applications</li> <li>Water approved applications</li> <li>Infant care</li> <li>Consumer electronics</li> <li>Valves and diaphragms</li> <li>Grommets, seals and gaskets</li> </ul>	SILASTIC™ RBL-9200-20 LSR	<ul style="list-style-type: none"> <li>Unique rheology</li> <li>Improved flowability</li> <li>Longer pot life</li> <li>Translucent</li> <li>Food and water contact</li> </ul>	(1)	17	930	6.2	21	1.10	59	18	120	130
	SILASTIC™ RBL-9200-30 LSR			30	750	7.5	17	1.12	53	17	150	140
	SILASTIC™ RBL-9200-40 LSR			40	640	9.0	40	1.12	56	14	140	140
	SILASTIC™ RBL-9200-50 LSR			50	670	9.0	42	1.13	64	13	150	150
	SILASTIC™ RBL-9200-60 LSR			60	440	9.5	48	1.13	55	15	150	140
	SILASTIC™ RBL-9200-65 LSR			65	410	9.8	39	1.14	51	14	150	150
	SILASTIC™ RBL-9200-70 LSR			70	370	9.6	21	1.14	50	22	200	210
	XIAMETER™ RBL-2004-20 LSR	<ul style="list-style-type: none"> <li>Low compression set (non-post-cured)</li> <li>Translucent</li> </ul>	(1)	20	900	6.5	24	1.08	24	–	130	110
	XIAMETER™ RBL-2004-30 LSR			30	650	8.3	16	1.12	21	–	260	250
	XIAMETER™ RBL-2004-40 LSR			40	740	9.5	35	1.14	16	–	330	320
	XIAMETER™ RBL-2004-45 LSR			45	740	10.9	38	1.14	19	–	290	280
	XIAMETER™ RBL-2004-50 LSR			50	680	10.0	43	1.14	19	–	320	340
	XIAMETER™ RBL-2004-60 LSR			60	500	10.0	50	1.14	25	–	330	320
	XIAMETER™ RBL-2004-65 LSR			65	450	9.6	48	1.15	28	–	320	290
XIAMETER™ RBL-2004-70 LSR	67	420	9.5	42	1.14	–	–	350	340			
XIAMETER™ RBL-2004-75 LSR	73	410	8.9	16	1.15	–	–	520	440			

Cure conditions denote parameters used to test rubber properties and do not reflect actual cure time in the injection-molding process.  
<sup>(1)</sup>NPC 10 min @ 120°C. <sup>(2)</sup>10 min @ 175°C. <sup>(3)</sup>10 min @ 175°C + 4 hr @ 200°C.

## Regulatory compliance

Available products	Food contact		Drinking water						WRAS <sup>(7)</sup>	W270 <sup>(8)</sup>	Infant care <sup>(9)</sup>
	BfR <sup>(4)</sup>	FDA <sup>(5)</sup>	KTW Cold water: 23°C <sup>(6)</sup>		KTW Warm water: 60°C <sup>(6)</sup>		KTW Hot water: 85°C <sup>(6)</sup>				
			Fittings	Sealings	Fittings	Sealings	Fittings	Sealings			
SILASTIC™ RBL-9200-20 LSR	✓	✓								✓	
SILASTIC™ RBL-9200-30 LSR	✓	✓	✓	✓	✓	✓		✓	✓	✓	
SILASTIC™ RBL-9200-40 LSR	✓	✓	✓	✓	✓	✓		✓	✓	✓	
SILASTIC™ RBL-9200-50 LSR	✓	✓	✓	✓	✓	✓		✓	✓	✓	
SILASTIC™ RBL-9200-60 LSR	✓	✓	✓	✓	✓	✓		✓	✓	✓	
SILASTIC™ RBL-9200-65 LSR	✓	✓		✓				✓	✓		
SILASTIC™ RBL-9200-70 LSR	✓	✓	✓	✓	✓	✓				✓	
XIAMETER™ RBL-2004-20 LSR	✓	✓								✓	
XIAMETER™ RBL-2004-30 LSR	✓	✓								✓	
XIAMETER™ RBL-2004-40 LSR	✓	✓								✓	
XIAMETER™ RBL-2004-45 LSR	✓	✓								✓	
XIAMETER™ RBL-2004-50 LSR	✓	✓								✓	
XIAMETER™ RBL-2004-60 LSR	✓	✓								✓	
XIAMETER™ RBL-2004-65 LSR	✓	✓									
XIAMETER™ RBL-2004-70 LSR	✓	✓									
XIAMETER™ RBL-2004-75 LSR	✓	✓									

**Food contact:** <sup>(4)</sup>Formulated to meet BfR XV recommendation. <sup>(5)</sup>Formulated to meet FDA 21 CFR 177.2600.  
**Drinking water:** <sup>(6)</sup>Certified according to KTW Guideline. <sup>(7)</sup>Water Regulations Advisory Scheme approved product. <sup>(8)</sup>Approved according to DVGW Technical Standard W270.  
**Infant care:** <sup>(9)</sup>Materials have been assessed according to: Commission Directive 93/11/EEC of March 15th, 1993 concerning the release of the N-nitrosamines and N-nitrosatable substances from elastomer or rubber teats and soothers; FDA guideline 7117.11 Volatile N-Nitrosamines in Rubber Baby Bottle Nipples - action levels; 21 CFR 177.2600. U.S. Food and Drug Administration (FDA) regulation for rubber articles intended for repeated food contact; Bundesinstitut fuer Risikobewertung (BfR) Recommendation XV on silicone for food contact both Volatile Matter and Extraction Tests.  
 It remains the customer's responsibility to ensure Dow products are suitable for customer's intended use and comply with all laws and regulations applicable to such use. Please contact Dow to confirm that the material produced in your area meets the local regulations.

### LEGEND

Throughout this guide:

- Use of "–" indicates data not available and/or not applicable.
- ASTM: American Society for Testing and Materials. Materials were tested according to Dow Corporate Test Methods (CTMs), which in most cases are similar to the ASTM standard(s) listed. Copies of CTMs are available upon request.

## Non-post cure (NPC) LSRs

SILASTIC™ NPC 9300 series LSRs are low-volatility, high-strength silicone elastomers formulated to meet the requirements of food and infant care regulated applications without the need for post-cure.

Typical applications	Available products	Key features	Shore A hardness ASTM D2240	Elongation, % ASTM D412	Tensile strength, MPa ASTM D412	Tear strength, kN/m ASTM D624 DIE B	Specific gravity ASTM D792	Viscosity @ 10s <sup>-1</sup> , Pa·s CTM 1094		Volatile compounds content, % EN 1400:2013 EN 14350-2:2004	Regulatory compliance		
								Part A	Part B		Food contact		Infant care <sup>(4)</sup>
											BfR <sup>(2)</sup>	FDA <sup>(3)</sup>	
<ul style="list-style-type: none"> <li>• Infant care (soothers, teats)</li> <li>• Food contact (cookware, valves, diaphragms)</li> <li>• General consumer articles</li> </ul>	SILASTIC™ NPC 9300-40 LSR	<ul style="list-style-type: none"> <li>• Low volatile content</li> <li>• Eliminates post-cure operations</li> <li>• Enables streamlined processes and part design flexibility</li> <li>• High strength</li> <li>• Unique rheology</li> <li>• Low modulus<sup>(1)</sup></li> </ul>	40	560	8.8	34	1.11	190	190	0.25	✓	✓	✓
	SILASTIC™ NPC 9300-50 LSR		50	500	8.9	45	1.11	190	190	0.25	✓	✓	✓
	SILASTIC™ NPC 9300-70 LSR		67	320	9.6	27	1.12	220	210	0.25	✓	✓	
	SILASTIC™ NPC 9310-50 LSR		50	500	9.5	41	1.10	190	190	0.25	✓	✓	✓



<sup>(1)</sup>Only applicable for SILASTIC™ NPC 9310-50 LSR.

**Food contact:** <sup>(2)</sup>Formulated to meet BfR XV recommendation. <sup>(3)</sup>Formulated to meet FDA 21 CFR 177.2600.

**Infant care:** <sup>(4)</sup>Materials have been assessed according to: Commission Directive 93/11/EEC of March 15th, 1993 concerning the release of the N-nitrosamines and N-nitrosatable substances from elastomer or rubber teats and soothers; FDA guideline 7117.11 Volatile N-Nitrosamines in Rubber Baby Bottle Nipples - action levels; 21 CFR 177.2600. U.S. Food and Drug Administration (FDA) regulation for rubber articles intended for repeated food contact; Bundesinstitut fuer Risikobewertung (BfR) Recommendation XV on silicone for food contact both Volatile Matter and Extraction Tests.

It remains the customer's responsibility to ensure Dow products are suitable for customer's intended use and comply with all laws and regulations applicable to such use. Please contact Dow to confirm that the material produced in your area meets the local regulations.

## Low-temperature cure (LTC) LSRs

SILASTIC™ LTC 9400 series LSRs are low-temperature-curing, high-strength elastomers that enable fast temperature activation in a wide temperature range.

Typical applications	Available products	Key features	Cure	Shore A hardness ASTM D2240	Elongation, % ASTM D412	Tensile strength, MPa ASTM D412	Tear strength, kN/m ASTM D624 DIE B	Specific gravity ASTM D792	Viscosity @ 10s <sup>-1</sup> , Pa·s CTM 1094		Food contact
									Part A	Part B	
											<ul style="list-style-type: none"> <li>• Co-molding of low-melting plastics</li> <li>• Overmolding of the most sensitive components</li> <li>• Consumer goods articles</li> <li>• Grommets, gaskets and seals</li> </ul>
SILASTIC™ LTC 9400-50 LSR	50	460	8.9	40	1.11	160	160	✓			
<ul style="list-style-type: none"> <li>• Thick-walled connectors and seals</li> <li>• Electrical connector seals/gaskets</li> </ul>	SILASTIC™ LTC 9402-50 LSR	<ul style="list-style-type: none"> <li>• Low-temperature curing</li> <li>• Fast deep-section cure at standard elevated temperatures</li> <li>• Oil-filled: 2 wt %</li> <li>• Low compression set</li> </ul>	(1)	50	450	8.9	40	1.11	200	185	
<ul style="list-style-type: none"> <li>• Additive to be used with SILASTIC™ LTC 9400 Series LSRs</li> <li>• Addition through third-stream color dosing</li> </ul>	SILASTIC™ LTC 9400 Acceleration Additive	<ul style="list-style-type: none"> <li>• Typical dosing: 1-3%</li> <li>• Enhanced reactivity at a wide temperature range</li> <li>• Curing profile can be adapted to specific reactivity requirements</li> <li>• Faster cure in thick-walled articles</li> </ul>									✓

Cure conditions denote parameters used to test rubber properties and do not reflect actual cure time in the injection-molding process.

<sup>(1)</sup>NPC 10 min @ 120°C. <sup>(2)</sup>Formulated to meet BfR XV recommendation.



## Low density LSR

SILASTIC™ 9250-40 liquid silicone rubber features low viscosity for optimum processing and high resilience for optimum performance.

Typical applications	Available products	Key features	Cure	Hardness ASTM D2240	Elongation ASTM D412	Tensile strength ASTM D412	Tear strength ASTM D624 B	Specific Gravity ASTM D792	Compression set (22 hr @ 125°C, 150°C, 175°C), %	Viscosity @ 10s <sup>-1</sup> , Pa·s CTM 1094		Food contact	
									ASTM D395	Part A	Part B	BfR <sup>(3)</sup>	FDA <sup>(4)</sup>
<ul style="list-style-type: none"> <li>Food dosing valves</li> <li>Closures and dispensers</li> <li>Seals and gaskets</li> <li>Food contact applications</li> </ul>	SILASTIC™ 9250-40 LSR	<ul style="list-style-type: none"> <li>Low density</li> <li>Low viscosity for enhanced process performance</li> <li>Low compression set for reliable sealing</li> <li>Weight reduction</li> <li>Can be separated from higher density plastics in recycling process</li> </ul>	(1)	39	590	3.4	6	0.97	11, 15, 22	210	190	✓	✓

Cure conditions denote parameters used to test rubber properties and do not reflect actual cure time in the injection-molding process. <sup>(1)</sup> 10 min @ 120°C. <sup>(2)</sup> 10 min @ 175°C + 4 hr @ 200°C. Food contact: <sup>(3)</sup> Formulated to meet BfR XV recommendation. <sup>(4)</sup> Formulated to meet FDA 21 CFR 177.2600.

## Oil-bleeding LSRs

A selection of oil-filled, self-lubricating LSRs is available as SILASTIC™ 920x-yy series LSRs and SILASTIC™ CV 920x-yy Series LSRs. For both, x = oil content and yy = durometer hardness. The two series of LSRs offer a choice of standard and controlled-volatility grades.

Typical applications	Available products	Key features	Cure	Shore A hardness ASTM D2240	Oil content, wt %	Elongation, % ASTM D412	Tensile strength, MPa ASTM D412	Tear strength, kN/m ASTM D624 DIE B	Specific gravity ASTM D792	Compression set (22 hr @ 175°C), %	Viscosity @ 10s <sup>-1</sup> , Pa·s CTM 1094	
										ASTM D395	NPC <sup>(2)</sup>	Part A
<ul style="list-style-type: none"> <li>Automotive connector seals</li> <li>Electrical connections</li> <li>Weatherpack seals</li> </ul>	SILASTIC™ 9202-30 LSR	<ul style="list-style-type: none"> <li>Oil filled</li> <li>Low compression set</li> <li>Low viscosity</li> <li>Unique rheology</li> <li>Opaque</li> </ul>	(1)	30	2	570	5.9	17	1.11	16	185	155
	SILASTIC™ 9201-50 LSR			50	1	400	7.2	40	1.12	21	180	140
	SILASTIC™ 9202-50 LSR			50	2	390	6.7	44	1.12	24	185	150

Cure conditions denote parameters used to test rubber properties and do not reflect actual cure time in the injection-molding process. <sup>(1)</sup>10 min @ 120°C. <sup>(2)</sup>10 min @ 175°C. <sup>(3)</sup>Compression set after 70 hr @ 150°C. <sup>(4)</sup>JIS 6249 (Japanese Industrial Standard).

## Oil-resistant LSRs

SILASTIC™ 9390 series LSRs provide good oil resistance in an off-white, injection-molding-grade elastomer for a range of air- and fluid-sealing applications.

Typical applications	Available products	Key features	Cure	Shore A hardness ASTM D2240	Elongation, % ASTM D412	Tensile strength, MPa ASTM D412	Tear strength, kN/m ASTM D624 DIE B	Specific gravity ASTM D792	Extrusion rate, g/min MIL-S-8802D	Compression set (70 hr @ 150°C), % ASTM D395	Oil immersion (70 hr @ 150°C), % volume change ASTM D471	
										ASTM D395	NPC <sup>(1)</sup>	ASTM 1
<ul style="list-style-type: none"> <li>Oil-resistant applications</li> <li>Seals, O-rings, diaphragms</li> </ul>	SILASTIC™ 9390-50 LSR	<ul style="list-style-type: none"> <li>Good oil resistance</li> <li>Low compression set</li> <li>Off-white</li> </ul>	(1)	50	460	6.2	15	1.37	130	13	4	35
	SILASTIC™ 9390-70 LSR			68	240	8.0	16	1.47	60	20	5	32

Cure conditions denote parameters used to test rubber properties and do not reflect actual cure time in the injection-molding process. <sup>(1)</sup>5 min @ 176°C. MIL: U.S. Military Specification.



## Fluoro liquid silicone rubbers (F-LSRs)

SILASTIC™ brand F-LSRs are designed for use in harsh environments involving fuel, oil or aggressive fluids. With xx = durometer hardness, these F-LSRs are available as the fully (100%) fluorinated SILASTIC™ FL-xx-9201 series. These F-LSRs combine the fluid resistance of fluorosilicone rubber with the processing ease of liquid silicone rubber using standard injection-molding equipment.

Typical applications	Available products	Key features	Cure	Shore A hardness ASTM D2240	Elongation, % ASTM D412	Tensile strength, MPa ASTM D412	Tear strength, kN/m ASTM D624 DIE B	Specific gravity ASTM D792	Compression set (22 hr @ 175°C), % ASTM D395		Viscosity @ 10s <sup>-1</sup> , Pa.s CTM 1094	
									NPC <sup>(3)</sup>	PC <sup>(4)</sup>	Part A	Part B
<ul style="list-style-type: none"> <li>Solvent-resistant and chemically resistant parts</li> <li>Gaskets and membranes for demanding sealing applications</li> </ul>	SILASTIC™ FL 30-9201 F-LSR	<ul style="list-style-type: none"> <li>Fully (100%) fluorinated</li> <li>Excellent resistance to fuels and oils</li> <li>Retain elasticity at low temperatures (Tg -68°C)</li> <li>Light yellow</li> </ul>	(1)	30	550	9.4	16	1.44	21	10	520	340
	SILASTIC™ FL 40-9201 F-LSR			40	470	9.2	16	1.44	17	11	770	790
	SILASTIC™ FL 60-9201 F-LSR		(2)	60	220	6.5	14	1.42	21	11	850	850

Cure conditions denote parameters used to test rubber properties and do not reflect actual cure time in the injection-molding process.

<sup>(1)</sup>10 min @ 120°C. <sup>(2)</sup>10 min @ 120°C + 4 hr @ 200°C. <sup>(3)</sup>10 min @ 175°C. <sup>(4)</sup>10 min @ 175°C + 4 hr @ 200°C.



### Fluid resistance

Available products	Fluid resistance (168 hr), volume swell % ASTM D471					
	IRM 903 150°C	RME Biodiesel 49°C	Ref F Diesel 40°C	Ref C 60°C	FAM B 60°C	Dexron III 125°C
SILASTIC™ FL 30-9201 F-LSR	3	4	3	25	34	1
SILASTIC™ FL 40-9201 F-LSR	2	3	3	23	32	1
SILASTIC™ FL 60-9201 F-LSR	2	3	2	21	29	1

## LSRs for airbag coating & sealing

LSRs for airbag coating applications include a selection of low- to medium-viscosity products designed for use on flat-fabric (cut-and-sewn) and one-piece-woven (OPW) airbag designs. An engineered SILASTIC™ seam sealant is available for use on cut-and-sewn airbags.



Typical applications	Available products	Key features	Cure	Shore A hardness ASTM D2240	Elongation, % ASTM D412	Tensile strength, MPa ASTM D412	Tear strength, kN/m ASTM D624 DIE B	Specific gravity ASTM D792	Viscosity @ 10s <sup>-1</sup> , Pa.s CTM 0050	
									Part A	Part B
• Flat fabric	SILASTIC™ LCF 3600 Coating	<ul style="list-style-type: none"> <li>• Unprimed adhesion to polyamide and polyester fabric</li> <li>• Low coefficient of friction</li> <li>• Excellent flame-extinguishing</li> </ul>	<sup>(1)</sup>	45	180	3.8	5.5	1.07	30	7.5
	SILASTIC™ LCF 4630 Coating	<ul style="list-style-type: none"> <li>• Low stiffness</li> <li>• Excellent adhesion to polyamide and polyester fabric</li> </ul>	<sup>(1)</sup>	27	660	5.0	8.1	1.06	45	43
• Seam sealant	SILASTIC™ SE 6777 LSR US	<ul style="list-style-type: none"> <li>• Excellent adhesion to silicone coated fabric</li> <li>• Mechanical resistance</li> <li>• High elongation</li> <li>• Room temperature cure</li> </ul>	<sup>(2)</sup>	14	1,300	4.8	–	1.21	250	260
• One-piece woven (OPW)	SILASTIC™ LCF 3760 Coating	<ul style="list-style-type: none"> <li>• Very high elongation; low elastic modulus</li> <li>• Unprimed adhesion to polyamide and polyester fabric</li> <li>• Low coat weights</li> </ul>	<sup>(3)</sup>	9	1,450	5.7	12.0	1.05	170	200
	SILASTIC™ DY-35-3115	<ul style="list-style-type: none"> <li>• Unprimed adhesion to polyamide and polyester fabric</li> </ul>	<sup>(3)</sup>	25	940	6.0	13.0	–	200	330
	SILASTIC™ 3715 Topcoat	<ul style="list-style-type: none"> <li>• Low coefficient of friction; prevents blocking</li> </ul>	–	–	–	–	–	–	–	–

Cure conditions denote parameters used to test rubber properties and do not reflect actual cure time in the coating process.  
<sup>(1)</sup>3 min @ 196°C. <sup>(2)</sup> 24 hr @ 25°C. <sup>(3)</sup>10 min @ 120°C.



## LSRs for sleeving applications & general-purpose coating

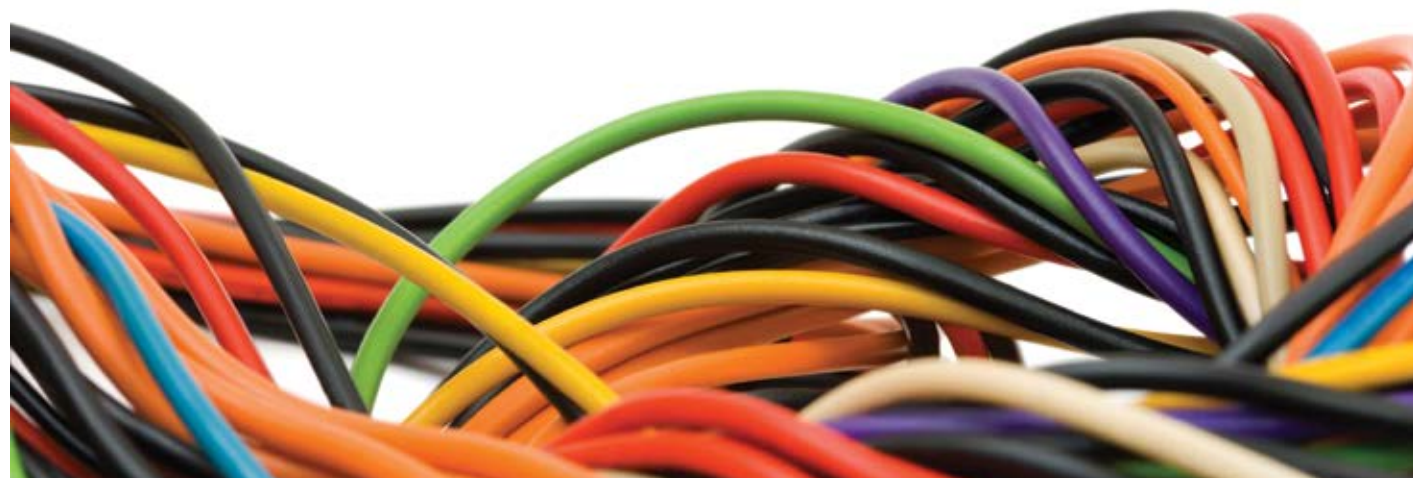
LSRs for sleeving applications provide a range of elastomers suitable for electrical and thermal protection of wires and cables. These LSRs are available in low to medium viscosities to meet a wide range of processing requirements.

Typical applications	Available products	Key features	Cure	Shore A hardness ASTM D2240	Elongation, % ASTM D412	Tensile strength, MPa ASTM D412	Tear strength, kN/m ASTM D624 DJE B	Specific gravity ASTM D792	Viscosity @ 10s <sup>-1</sup> , Pa.s CTM 0050		Food contact	
									Part A	Part B	BfR <sup>(3)</sup>	FDA <sup>(4)</sup>
<ul style="list-style-type: none"> <li>Fabric coating</li> <li>Electrical wire sleeving</li> </ul>	XIAMETER™ RBL-9050-30P LSR	<ul style="list-style-type: none"> <li>Very low viscosity</li> <li>Unprimed adhesion to glass</li> <li>Suitable for dip coating</li> <li>Transparent</li> <li>Two part; 10:1 mix ratio</li> </ul>	(1)	47	150	6.4	2.5	1.03	3			
	XIAMETER™ RBL-9050-50P LSR			48	160	7.5	3.8	1.03	5			
<ul style="list-style-type: none"> <li>Fabric coating</li> <li>Electrical wire sleeving</li> <li>Suitable for food contact</li> </ul>	SILASTIC™ RBL-9252-150P LSR	<ul style="list-style-type: none"> <li>Good clarity</li> <li>Unprimed adhesion to glass</li> <li>Formulated to meet BfR XV and FDA 21 CFR 177.2600</li> <li>Translucent</li> <li>Two part; 10:1 or 1:1 mix ratio</li> </ul>	(1)	37	340	4.4	5.0	1.07	15			
	SILASTIC™ RBL-9252-250P LSR			33	450	5.0	7.0	1.09	25			
	SILASTIC™ RBL-9252-500P LSR			36	480	6.0	10.0	1.11	55	75		
	SILASTIC™ RBL-9252-900P LSR			38	520	6.6	15.0	1.12	100	100		
<ul style="list-style-type: none"> <li>Insulation wrap</li> <li>Protective clothing</li> </ul>	SILASTIC™ LSR 9151-200P	<ul style="list-style-type: none"> <li>Good flame retardancy</li> <li>Off-white</li> <li>Two part; 10:1 mix ratio</li> </ul>	(1)	40	200	1.3		1.26	25			
	SILASTIC™ LSR 9451-1000P			(2)	30	310	1.0		1.23	85		
<ul style="list-style-type: none"> <li>Electrical wire sleeving</li> </ul>	SILASTIC™ 590 EU LSR	<ul style="list-style-type: none"> <li>Good flame resistance</li> <li>UL listed (V0)</li> </ul>	(2)	35	570	7.0	11.0	1.23	80	90		

Cure conditions denote parameters used to test rubber properties and do not reflect actual cure time in the coating process.

<sup>(1)</sup>10 min @ 120°C. <sup>(2)</sup>5 min @ 171°C.

**Food contact:** <sup>(3)</sup>Formulated to meet BfR XV recommendation. <sup>(4)</sup>Formulated to meet FDA 21 CFR 177.2600.

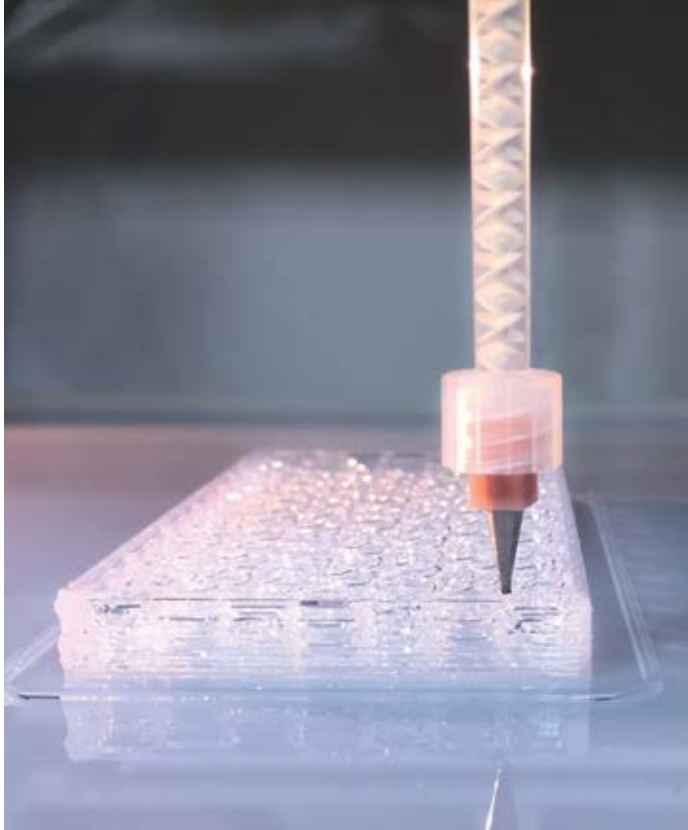


## LSRs for 3D printing

SILASTIC™ 3D 3335 Liquid Silicone Rubber is a 1:1 mix LSR designed for Liquid Additive Manufacturing (LAM) 3D printing. It combines the performance benefits of silicone rubber with the design and processing advantages of additive manufacturing. The material is very transparent, which is ideal for applications where clarity and transparency are vital attributes. Compatible color packs and precision dosing equipment also give designers the ability to 3D-print this high-performing LSR in a range of standard colors.

Typical applications	Available product	Key features	Cure	Shore A hardness ASTM D2240 <sup>(2)</sup>	Elongation, % ASTM D412	Tensile strength, MPa ASTM D412	Tear strength, kN/m ASTM D624 DIE B	Specific gravity ASTM D792	Viscosity @ 10s <sup>-1</sup> , Pa.s CTM 0050	
									Part A	Part B
<ul style="list-style-type: none"> <li>Preparation of silicone rubber prototypes with properties that are comparable to injection-molded components</li> <li>Low-volume or highly customized manufacturing of complex parts</li> <li>New design options in automotive, consumer care, cookware, lighting and other applications where traditional LSRs are used</li> </ul>	SILASTIC™ 3D 3335 LSR	<ul style="list-style-type: none"> <li>Low viscosity</li> <li>Unique rheology</li> <li>High clarity (water clear)</li> <li>Allows part design flexibility</li> <li>Enables achievement of mechanical properties closely matching those of molded LSR</li> <li>Direct transfer into high-volume injection-molding processes</li> <li>High-performance silicone elastomer parts – customized and/or new designs</li> </ul>	(1)	50	480	9.5	45	1.12	158	159

<sup>(1)</sup>Cure conditions: 3D printed – IR heat cured. <sup>(2)</sup>Test specimen printed in dimensions specified by referred ASTM method.



## Electrical-grade LSRs

Electrical-grade LSRs provide a selection of specialty elastomers for power transmission and distribution applications.

Typical applications	Available products	Key features	Cure	Shore A hardness ASTM D2240	Elongation, % ASTM D412	Tensile strength, MPa ASTM D412	Tear strength, kN/m ASTM D624, DIE B	Specific gravity ASTM D792	Viscosity @ 10s <sup>-1</sup> , Pa.s CTM 0050		Volume resistivity, ohm.cm IEC 60093	Tracking resistance, kV IEC 60587
									Part A	Part B		
<ul style="list-style-type: none"> <li>Hollow-core insulators</li> </ul>	SILASTIC™ HV 1541-10P LSR	<ul style="list-style-type: none"> <li>Very low viscosity</li> <li>Suitable for casting</li> <li>Room temperature cure</li> <li>Excellent tracking resistance</li> <li>Two part; 9:1 mix ratio</li> <li>Gray</li> </ul>	(1)	34	420	5.3	14	1.10	7	7	1.00E+15	1A4.5
<ul style="list-style-type: none"> <li>Hollow-core insulators</li> <li>Rod insulators</li> <li>Arrestors</li> <li>Cable accessories</li> </ul>	SILASTIC™ HV 1551-55P LSR	<ul style="list-style-type: none"> <li>Low viscosity</li> <li>Suitable for low-pressure molding</li> <li>Excellent tracking resistance</li> <li>High tear strength</li> <li>Clear and gray</li> </ul>	(2)	42	470	6.8	31	1.09	60	65	1.00E+15	1A4.5
	SILASTIC™ HV 1551-95P LSR	<ul style="list-style-type: none"> <li>Medium viscosity</li> <li>Excellent tracking resistance</li> <li>High elongation</li> <li>Clear and gray</li> </ul>		44	620	8.0	31	1.08	100	90	1.00E+15	1A4.5
<ul style="list-style-type: none"> <li>Hollow-core insulators</li> <li>Solid-core insulators</li> </ul>	SILASTIC™ HV 1552-30 LSR	<ul style="list-style-type: none"> <li>Low viscosity</li> <li>Suitable for low-pressure molding</li> <li>Excellent tracking resistance</li> <li>Excellent processing</li> <li>Fast vulcanization</li> <li>Blue gray</li> </ul>	(3)	32	450	6.0	23	1.13	20	20	1.00E+15	1A4.5
<ul style="list-style-type: none"> <li>High-voltage cable accessories</li> <li>Terminations</li> <li>Cold shrink</li> </ul>	SILASTIC™ HV 1510-40 LSR	<ul style="list-style-type: none"> <li>Suitable for injection molding</li> <li>Good tracking resistance</li> <li>High elongation</li> <li>Clear</li> </ul>	(2)	40	860	10.5	38	1.13	240	240	2.00E+15	1A3.5
<ul style="list-style-type: none"> <li>Medium-voltage cable accessories</li> <li>Terminations</li> <li>Cold shrink</li> </ul>	SILASTIC™ HV 1519-40 LSR	<ul style="list-style-type: none"> <li>Suitable for injection molding</li> <li>Good tracking resistance</li> <li>High elongation</li> <li>Gray</li> </ul>	(2)	38	880	10.4	34	1.13	260	260	5.00E+14	1A3.5
<ul style="list-style-type: none"> <li>Cold shrink</li> <li>Electrical stress-control devices</li> <li>Electrically conductive moldings</li> </ul>	SILASTIC™ HV 1523-30 LSR	<ul style="list-style-type: none"> <li>Low volume resistivity</li> <li>Suitable for injection molding</li> <li>High elongation</li> <li>Black</li> </ul>	(4)	36	660	6.0	30	1.04	380	420	8.00E+01	–

Cure conditions denote parameters used to test rubber properties and do not reflect actual cure time in the molding process.

(1)10 min @ 120°C + 2 hr @ 120°C. (2)10 min @ 120°C. (3)20 min @ 105°C. (4)10 min @ 120°C + 4 hr @ 200°C.

IEC: International Electrotechnical Commission.

## Moldable optical silicones

New-generation LED lighting concepts with silicone optical resins from Dow help increase design freedom and energy efficiency from high-performance buildings to outdoor-area illumination to advanced automotive styling. Compared to organic options, these specialty silicone liquid resins can maintain outstanding optical properties without yellowing with age under high temperatures.

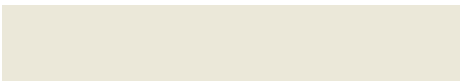




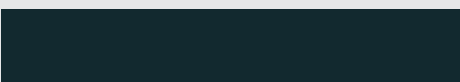

Typical applications	Available products	Key features	Shore A hardness ASTM D2240	Elongation, % ASTM D412	Tensile strength, MPa ASTM D412	Transmission (3.2 mm thickness) reflectance	Refractive index (633 nm), %	Volume resistivity, ohm.cm	Agency listing
• Optical components	SILASTIC™ MS-0002 Moldable Silicone	<ul style="list-style-type: none"> <li>Fast curing</li> <li>Translucent</li> </ul>	65	270	9.0	Transmission: <ul style="list-style-type: none"> <li>75% @ 450 nm</li> <li>89% @ 760 nm</li> </ul>	-	-	<ul style="list-style-type: none"> <li>UL 94</li> <li>UL 746</li> </ul>
• Primary or secondary lenses, light pipes, light guides, and other optic devices	SILASTIC™ MS-1002 Moldable Silicone	<ul style="list-style-type: none"> <li>Lighter than glass</li> <li>Good mold flow; excellent feature reproduction</li> <li>Optically clear</li> </ul>	72	80	11.2	Transmission: <ul style="list-style-type: none"> <li>89% @ 380 nm</li> <li>91% @ 450 nm</li> <li>94% @ 760 nm</li> </ul>	1.41	1.00E+18	<ul style="list-style-type: none"> <li>UL 94</li> <li>UL 746A</li> <li>UL 746C(f1)</li> </ul>
	SILASTIC™ MS-1003 Moldable Silicone		Transmission: <ul style="list-style-type: none"> <li>91% @ 380 nm</li> <li>92% @ 450 nm</li> <li>93% @ 760 nm</li> </ul>	1.41	1.00E+16	<ul style="list-style-type: none"> <li>UL 94</li> <li>UL 746A</li> <li>UL 746C(f1)</li> </ul>			
• Secondary optics such as lens clusters, light guides, light pipes and free-form collimators	SILASTIC™ MS-4007 Moldable Silicone	<ul style="list-style-type: none"> <li>High light transmittance with low light attenuation coefficient</li> <li>Lighter than glass</li> <li>Excellent surface feature replication</li> <li>Optically clear</li> </ul>	70	100	11.7	Transmission: <ul style="list-style-type: none"> <li>91% @ 380 nm</li> <li>93% @ 450 nm</li> <li>94% @ 760 nm</li> </ul>	1.41	1.00E+14	<ul style="list-style-type: none"> <li>UL 94</li> <li>UL 746</li> <li>UL 746C(f1)</li> </ul>
• Secondary optics, lens clusters, light pipes, light guides and free-forms collimators	SILASTIC™ MS-4002 Moldable Silicone	<ul style="list-style-type: none"> <li>High light transmittance with low light attenuation coefficient</li> <li>Lighter than glass</li> <li>Excellent surface feature replication</li> <li>Smooth surface feeling</li> <li>Optically clear</li> </ul>	84	60	11.7	Transmission: <ul style="list-style-type: none"> <li>89% @ 380 nm</li> <li>92% @ 450 nm</li> <li>93% @ 760 nm</li> </ul>	1.42	1.00E+14	<ul style="list-style-type: none"> <li>UL 94</li> <li>UL 746A</li> <li>UL 746C(f1)</li> </ul>
• LED lamp and luminaire applications	SILASTIC™ MS-4022 Moldable Silicone	<ul style="list-style-type: none"> <li>High light transmittance with low attenuation coefficient</li> <li>High thermal stability</li> <li>Smooth, low-tack plasticlike surface</li> <li>Optically clear</li> </ul>	85	52	11.0	Transmission: <ul style="list-style-type: none"> <li>87% @ 380 nm</li> <li>90% @ 450 nm</li> <li>93% @ 760 nm</li> </ul>	1.42	1.00E+16	<ul style="list-style-type: none"> <li>UL 94</li> <li>UL 746A</li> <li>UL 746C(f1)</li> </ul>
• White reflector in lighting applications	SILASTIC™ MS-2002 Moldable Silicone	<ul style="list-style-type: none"> <li>High reflectance</li> <li>High-temperature stability</li> <li>UV aging resistance</li> <li>White reflecting</li> </ul>	84	65	8.6	Reflectance: <ul style="list-style-type: none"> <li>97% @ 450 nm</li> <li>98% @ 555 nm</li> <li>99% @ 630 nm</li> </ul>	NA	3.00E+15	<ul style="list-style-type: none"> <li>UL 94</li> <li>UL 746A</li> <li>UL 746C(f1)</li> </ul>

All values indicated above for cured materials are after 1 hr post-curing at 150°C.



## LSR color masterbatches

LSR color masterbatches consist of heat-stable, cadmium-free coloring pigments dispersed in crosslinkable fluid. The XIAMETER™ brand options from Dow are specifically designed and formulated for addition to LSRs using dedicated metered mixing equipment. All are translucent LSR with 2% color masterbatch.

Available products	Description	Appearance <sup>(1)</sup>
XIAMETER™ RBL-9105 White Color Masterbatch	Provides shade similar to RAL 9010	
XIAMETER™ RBL-9105 Green Color Masterbatch	Provides shade similar to RAL 6025	
XIAMETER™ RBL-9105 Red Color Masterbatch	Provides shade similar to RAL 2002	
XIAMETER™ RBL-9105 Gray Color Masterbatch	Provides shade similar to RAL 7031	
XIAMETER™ RBL-9105 Blue Color Masterbatch	Provides shade similar to RAL 5019	
XIAMETER™ RBL-9105 Black Color Masterbatch	Provides shade similar to RAL 9011	
XIAMETER™ RBL-9105 Red Iron Oxide Color Masterbatch	Provides shade similar to RAL 3013	

<sup>(1)</sup>The color swatches shown here are computer-generated and are not necessarily a precise representation of the actual masterbatch colors. The RAL color reference index is the only specification to which we refer.



## Learn more



Dow has manufacturing, warehousing, customer service, and science and technology resources strategically located worldwide to meet your needs for high-performance LSRs. Rely on our materials innovation, application expertise, broad technical services, and global supply capabilities with local support.

For more information about our LSR materials and capabilities, visit [www.dow.com/elastomers](http://www.dow.com/elastomers).



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