

SILBIONE LSR 4300 Series

Description

SILBIONE Liquid Silicone Rubbers (LSRs) are two-component platinum-catalyzed silicone elastomers designed for liquid injection molding healthcare and medical devices, including applications of less than 30 day implantation in the human body. Available in 01 to 25 durometer Shore A, Elkem Silicones' SILBIONE® LSRs offer the distinctive advantages of easy processing and easy release combined with high performance physical properties. Designed specifically for healthcare applications, SILBIONE® LSRs meet or exceed testing requirements of United States Pharmacopoeia (USP) Class VI. Biocompatibility testing addresses the categories of evaluation for cytotoxicity, skin sensitization and skin irritation specified in ISO 10993 for device use of less than 30 days duration.

- Examples of applications**
- The easy processing and high performance physical properties of the **SILBIONE LSRs** make them suitable for a broad range of applications including:
- Fabrication of healthcare and medical devices, including less than 30 day implantation
 - Skin contact parts like liners
 - Balloons
 - Orthopedic Insoles and cushioning applications
 - Prosthetic liners
 - Rollers

- Key benefits**
- Easy processing and convenient 1:1 mix ratio
 - Excellent mold release for shorter cycle times
 - Superior clarity
 - High performance physicals – high tear and elongation; can be molded into thin-walled parts
 - Rebound resilience characteristics – cushioning and non-tacky
 - Rapid cure at elevated temperatures
 - Can be post-cured, but post cure is not necessary to achieve desired physicals
 - Easily pigmented
 - Soft, skin-like feel when molded

Typical properties

As Supplied:

<i>Properties</i>	4301	4305	4310	4325	4330	4340 HC	4350 HC	4360	4365	4370
Appearance	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear
Extrusion Rate, <i>g/min</i>	550	545	275	135	100	90	85	95	70	70
Specific Gravity	1.07	1.07	1.09	1.11	1.11	1.12	1.12	1.12	1.14	1.14

Press Cure, 5 minutes, 177°C (350°F)

<i>Properties</i>	4301	4305	4310	4325	4330	4340 HC	4350 HC	4360	4365	4370
Hardness, Shore A	1	5	10	23	30	40	50	60	65	70
Tensile strength, Psi	270	480	850	1250	1340	1250	1225	1275	1270	1250
Elongation, %	1100	1050	1020	970	800	660	600	480	470	440
Tear strength, Ppi	45	65	115	180	185	230	270	240	250	230

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Modulus, 100%, Psi	12	19	32	59	83	157	277	380	443	540
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Post-cured, 4 hours, 200°C (392°F)

<i>Properties</i>	4301	4305	4310	4325	4330	4340 HC	4350 HC	4360	4365	4370
Hardness, Shore A	2	4	10	26	31	40	50	61	68	72
Tensile strength, Psi	219	450	750	1198	1350	1250	1275	1250	1196	1200
Elongation, %	800	1000	1060	1035	750	605	530	430	445	440
Tear strength, Ppi	35	60	125	168	205	285	290	235	255	200
Modulus, 100%, Psi	32	20	28	72	200	200	340	400	484	580

Please note: The typical properties are not intended for use in preparing specifications. Please contact our local Sales Department for assistance in writing specifications.

Instruction of use

SILBIONE LSRs are supplied as kit-matched products. Parts A and B components are designed to be mixed in equal parts using standard liquid injection molding processing equipment and techniques. Airless mixing, metering and dispensing equipment are recommended.

- Kit matching, accurate measuring and complete mixing are essential factors in obtaining consistent results.

Regulation

Extensive toxicology testing on SILBIONE® products has demonstrated their adequate biocompatibility and suitability for the recommended applications. SILBIONE LSR 4301 A, SILBIONE LSR 4301 A+B, SILBIONE LSR 4301 B, SILBIONE LSR 4305 A, SILBIONE LSR 4305 B, SILBIONE LSR 4310 A, SILBIONE LSR 4310 A+B, SILBIONE LSR 4310 B, SILBIONE LSR 4325 A, SILBIONE LSR 4325 B, SILBIONE LSR 4330 A, SILBIONE LSR 4330 A+B, SILBIONE LSR 4330 B, SILBIONE LSR 4340 A+B, SILBIONE LSR 4340 HC A, SILBIONE LSR 4340 HC B, SILBIONE LSR 4350 A+B, SILBIONE LSR 4350 HC A, SILBIONE LSR 4350 HC B, SILBIONE LSR 4360 A, SILBIONE LSR 4360 A+B, SILBIONE LSR 4360 B, SILBIONE LSR 4365 A, SILBIONE LSR 4365 B, SILBIONE LSR 4370 A and SILBIONE LSR 4370 B satisfies regulatory requirement in several countries and complies with a number of medical and pharmaceutical regulations. Contact Elkem Silicones for more detailed information.

Limitations

Please consult your local ELKEM SILICONES sales office.

Packaging

- SILBIONE LSR 4301 A is available in
 - Drum of 200 KG (441 LB)
 - Pail of 18 KG (39.69 LB)
- SILBIONE LSR 4301 A+B is available in
 - Piece of 1 PC
- SILBIONE LSR 4301 B is available in
 - Drum of 200 KG (441 LB)
 - Pail of 18 KG (39.69 LB)
- SILBIONE LSR 4305 A is available in
 - Pail of 18 KG (39.69 LB)
 - Drum of 200 KG (441 LB)
- SILBIONE LSR 4305 B is available in
 - Pail of 18 KG (39.69 LB)
 - Drum of 200 KG (441 LB)

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- SILBIONE LSR 4310 A is available in
 - Pail of 18 KG (39.69 LB)
 - Drum of 200 KG (441 LB)
- SILBIONE LSR 4310 A+B is available in
 - Piece of 1 PC
- SILBIONE LSR 4310 B is available in
 - Pail of 18 KG (39.69 LB)
 - Drum of 200 KG (441 LB)
- SILBIONE LSR 4325 A is available in
 - Pail of 18 KG (39.69 LB)
 - Drum of 200 KG (441 LB)
- SILBIONE LSR 4325 B is available in
 - Pail of 18 KG (39.69 LB)
 - Drum of 200 KG (441 LB)
- SILBIONE LSR 4330 A is available in
 - Drum of 200 KG (441 LB)
 - Pail of 18 KG (39.69 LB)
- SILBIONE LSR 4330 A+B is available in
 - Piece of 1 PC
- SILBIONE LSR 4330 B is available in
 - Drum of 200 KG (441 LB)
 - Pail of 18 KG (39.69 LB)
- SILBIONE LSR 4340 A+B is available in
 - Piece of 1 PC
- SILBIONE LSR 4340 HC A is available in
 - Pail of 18 KG (39.69 LB)
 - Drum of 200 KG (441 LB)
- SILBIONE LSR 4340 HC B is available in
 - Pail of 18 KG (39.69 LB)
 - Drum of 200 KG (441 LB)
- SILBIONE LSR 4350 A+B is available in
 - Piece of 1 PC
- SILBIONE LSR 4350 HC A is available in
 - Pail of 18 KG (39.69 LB)
 - Drum of 200 KG (441 LB)
- SILBIONE LSR 4350 HC B is available in
 - Pail of 18 KG (39.69 LB)
 - Drum of 200 KG (441 LB)
- SILBIONE LSR 4360 A is available in
 - Pail of 18 KG (39.69 LB)
 - Drum of 200 KG (441 LB)
 - Activity unit
- SILBIONE LSR 4360 B is available in
 - Pail of 18 KG (39.69 LB)
 - Drum of 200 KG (441 LB)
 - Activity unit
- SILBIONE LSR 4365 A is available in
 - Drum of 200 KG (441 LB)
 - Pail of 18 KG (39.69 LB)
- SILBIONE LSR 4365 B is available in
 - Drum of 200 KG (441 LB)
 - Pail of 18 KG (39.69 LB)
- SILBIONE LSR 4370 A is available in
 - Drum of 200 KG (441 LB)

SILBIONE LSR 4300 Series

- Pail of 18 KG (39.69 LB)
- SILBIONE LSR 4370 B is available in
 - Drum of 200 KG (441 LB)
 - Pail of 18 KG (39.69 LB)

Storage and shelf life

When stored in its original packaging:

SILBIONE LSR 4301 A may be stored for up to 12 months from its date of manufacturing.
 SILBIONE LSR 4301 A+B may be stored for up to 12 months from its date of manufacturing.
 SILBIONE LSR 4301 B may be stored for up to 12 months from its date of manufacturing.
 SILBIONE LSR 4305 A may be stored at temperatures between -5°C / 23°F and 30°C / 86°F for up to 12 months from its date of manufacturing.
 SILBIONE LSR 4305 B may be stored at temperatures between -5°C / 23°F and 30°C / 86°F for up to 12 months from its date of manufacturing.
 SILBIONE LSR 4310 A may be stored at temperatures between -5°C / 23°F and 30°C / 86°F for up to 12 months from its date of manufacturing.
 SILBIONE LSR 4310 A+B may be stored for up to 12 months from its date of manufacturing.
 SILBIONE LSR 4310 B may be stored at temperatures between -5°C / 23°F and 30°C / 86°F for up to 12 months from its date of manufacturing.
 SILBIONE LSR 4325 A may be stored at temperatures between -5°C / 23°F and 30°C / 86°F for up to 12 months from its date of manufacturing.
 SILBIONE LSR 4325 B may be stored at temperatures between -5°C / 23°F and 30°C / 86°F for up to 12 months from its date of manufacturing.
 SILBIONE LSR 4330 A may be stored at temperatures between -5°C / 23°F and 30°C / 86°F for up to 12 months from its date of manufacturing.
 SILBIONE LSR 4330 A+B may be stored for up to 12 months from its date of manufacturing.
 SILBIONE LSR 4330 B may be stored at temperatures between -5°C / 23°F and 30°C / 86°F for up to 12 months from its date of manufacturing.
 SILBIONE LSR 4340 A+B may be stored for up to 12 months from its date of manufacturing.
 SILBIONE LSR 4340 HC A may be stored at temperatures between -5°C / 23°F and 30°C / 86°F for up to 12 months from its date of manufacturing.
 SILBIONE LSR 4340 HC B may be stored at temperatures between -5°C / 23°F and 30°C / 86°F for up to 12 months from its date of manufacturing.
 SILBIONE LSR 4350 A+B may be stored for up to 12 months from its date of manufacturing.
 SILBIONE LSR 4350 HC A may be stored at temperatures between -5°C / 23°F and 30°C / 86°F for up to 12 months from its date of manufacturing.
 SILBIONE LSR 4350 HC B may be stored at temperatures between -5°C / 23°F and 30°C / 86°F for up to 12 months from its date of manufacturing.
 SILBIONE LSR 4360 A may be stored at a temperature below 40°C / 104°F for up to 12 months from its date of manufacturing.
 SILBIONE LSR 4360 A+B may be stored for up to 12 months from its date of manufacturing.
 SILBIONE LSR 4360 B may be stored for up to 12 months from its date of manufacturing.
 SILBIONE LSR 4365 A may be stored for up to 12 months from its date of manufacturing.
 SILBIONE LSR 4365 B may be stored for up to 12 months from its date of manufacturing.
 SILBIONE LSR 4370 A may be stored for up to 12 months from its date of manufacturing.
 SILBIONE LSR 4370 B may be stored for up to 12 months from its date of manufacturing.
 Comply with the storage instructions and expiration date marked on the packaging. Beyond this date, Elkem Silicones no longer guarantees that the product meets the sales specifications.

Safety

Please consult the Safety Data Sheet of:

SILBIONE LSR 4301 A, SILBIONE LSR 4301 A+B, SILBIONE LSR 4301 B, SILBIONE LSR 4305 A, SILBIONE LSR 4305 B, SILBIONE LSR 4310 A, SILBIONE LSR 4310 A+B, SILBIONE LSR 4310 B, SILBIONE LSR 4325 A, SILBIONE LSR 4325 B, SILBIONE LSR 4330 A, SILBIONE LSR 4330 A+B, SILBIONE LSR 4330 B, SILBIONE LSR 4340 A+B, SILBIONE LSR 4340 HC A, SILBIONE LSR 4340 HC B, SILBIONE LSR 4350 A+B, SILBIONE LSR 4350 HC A, SILBIONE LSR 4350 HC B, SILBIONE LSR 4360 A, SILBIONE LSR 4360 A+B, SILBIONE LSR 4360 B, SILBIONE LSR 4365 A, SILBIONE LSR 4365 B, SILBIONE LSR 4370 A and SILBIONE LSR 4370 B

SILBIONE LSR 4300 Series

Visit our website www.elkem.com/silicones/

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