Liquid Silicone Rubber (LSR)

REVISION: 01 | DATE: 23-SEP-2025

Overview

WICSilicone Liquid Silicone Rubber (LSR) delivers exceptional precision and performance, ideal for intricate molding and high-volume production. This two-part, platinum-cured elastomer cures rapidly and uniformly, offering excellent **dimensional stability**, **flexibility**, and **resistance to extreme temperatures**. **LSR** is particularly suited for high-precision applications in **medical devices,**

Batch-tested | ISO 9001

ASTM / ISO Verified

RoHS / REACH Compliant

Fully traceable | ISO 10993-4

ISO 10993-10 | ISO 10993-5

Property	LSWIC-1060 A/B	Test Method
Hardness (Shore A)	60	DIN 53 505
Tensile Strength (MPa)	6.5	DIN 53 504
Elongation at Break	376%	ASTM-D 624 die B
Tear Strength (N/mm)	25	DIN 53 504
Test Condition C°/min	130°C, 1 min	
Selica Based		
Curing Agent		
Viscosity	20,000 - 200,000 cP (depending on formulation)	
Rebound Resilience (%)	40	DIN 53 512
Specific Gravity (cm^3)	1/24	
Compression set	2.5%	DIN 53 517
Temperature Range	–50°C to +250°C	
Appearance	Transparent	

WIRE IRAN COMPANY

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Features & Benefits

High-Precision LSR Material

Medical-grade liquid silicone rubber designed for high-precision molding in medical, food-contact, and industrial

Biocompatible & Safe

Fully biocompatible, non-toxic, and compliant with FDA and ISO 10993 requirements.

Fast Curing Performance

Rapid curing behavior supports high-volume production with short cycle times.

Low Shrinkage & Dimensional Stability

Minimal shrinkage and excellent dimensional consistency for tight-tolerance medical components.

Thermal & Environmental Resistance

Performs reliably from −50°C to +200°C with resistance to UV exposure, chemicals, and aging.

Custom Hardness & Colors

Available in customized hardness levels and color options for functional and visual product differentiation.

Compliance & Certifications

- **ISO 9001:** Quality Management
- **ISO 10993-4:** Tests for blood-material interactions.
- **ISO 10993-10:** Evaluation for skin irritation and sensitization.
- **ISO 10993-5:** In vitro cytotoxicity testing for medical devices.
- Batch-tested for strength & durability
- Fully traceable batch documentation
- ASTM / ISO standards verified
- **RoHS / REACH compliant**

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Typical Applications

Medical Devices

Precision-molded tubing, seals, valves, and implantable components requiring biocompatibility and accuracy.

Implantable & Patient-Contact Parts

Soft, durable components for long-term or repeated patient contact in regulated medical environments.

Electronics & Electrical

Keypads, connectors, gaskets, and insulation parts with excellent sealing and environmental resistance.

Automotive Precision Seals

High-accuracy gaskets, O-rings, and seals for demanding automotive and mobility applications.

Baby & Infant Products

Safe, food-contact–approved parts for baby care products requiring softness and purity.

Wearables & Smart Devices

Soft-touch, durable housings and seals for wearable electronics and smart consumer products.

Processing & Handling

- Suitable for injection molding and automated dispensing systems
- Two-part platinum-cured system ensures rapid, uniform curing
- Excellent flow, dimensional stability, and release properties for intricate parts
- Compatible with standard LSR processing equipment; optimize curing per part design and thickness
- Mix two-part liquid system at recommended ratio
- Injection mold at 160–200°C; ensure clean, dry molds
- Use accurate metering and mixing for dimensional consistency
- Design vents/runners to avoid air entrapment

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Packaging & Storage

- Supplied in 1 kg, 5 kg, and 20 kg kits (two-part system)
- Shelf life: 12 months in unopened containers
- Store in a cool, dry place, protected from heat, sunlight, and contamination
- Avoid contact between parts until mixing; maintain hygienic handling for medical-grade applications
- Keep containers closed to prevent contamination or premature curing

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