



SILASTIC™ RBL-2004-30 Liquid Silicone Rubber

30.0 Shore durometer, 1 to 1 mix, molding and injection molding LSR

Features & Benefits

- High transparency
- Low compression set
- Formulated to meet FDA21 CFR 177.2600 and BfR, XV
- Part design flexibility
- Short cycle time
- Superior mechanical properties NPC
- USP Class VI and ISO 10993¹ compliant

Applications

This product is designed to provide excellent performances on molding processes. The excellent balance between pot life and short cycle time associated with superior mechanical properties and transparency make it a product of choice to applications such as:

- General purpose
- Food contact (e.g. cooking ware, valves, diaphragms)
- Infant care (e.g. baby nipples)
- Parts for medical devices²
- Grommets, gaskets, seals, connectors

¹Intracutaneous test, cytotoxicity, and sensitization.

²Certain limitation may apply, please refer to the Limitation section.

Typical Properties

Specification Writers: These values are not intended for use in preparing specifications.

CTM ¹	ASTM ²	Property	Unit	Result ³
0364		Extrusion rate Part A	g/min	83
0364		Extrusion rate Part B	g/min	80
	D792	Specific gravity		1.119
As molded				
	D2240	Hardness	Shore A	29.8
	D412 DIE C	Tensile strength	MPa	8.2
			Psi	1185

1. CTM: Corporate Test Method, copies of CTMs are available on request.

2. ASTM: American Society for Testing and Materials.

3. NPC: non post-cure with initial cure conditions of 5 min at 150°C (302°F)

Typical Properties (Cont.)

CTM	ASTM	Property	Unit	Result
	D412 DIE C	Elongation	%	986.8
	D624 DIE B	Tear strength	kN/m	17.4
			ppi	94
	DIN ⁴ 53517	Compression set after 22 hours at 175°C (347°F)	%	21.2

4. DIN: Deutsche Industrie Norm.

Description

SILASTIC™ RBL-2004-30 Liquid Silicone Rubber is an LSR developed to give excellent process performances. This product belongs to the SILASTIC™ RBL-2004 Series which answers the needs of special applications where high clarity, high mechanical properties and short cycle time are required.

Thanks to its rheology this product offers short curing times; however, this characteristic does not affect the pot life of materials when components A and B are mixed together.

How to Use

Mixing and De-airing

The A and B components are supplied strained and de-aired to be used as lot matched kits. Mix parts A and B in a 1:1 ratio. Meter mix equipment which pumps, meters and mixes the two components without the incorporation of air is strongly recommended for production. If air bubbles are entrapped during mixing the mixture must be thoroughly de-gassed under vacuum.

Pot Life

When parts A and B are mixed the mixture will remain usable for 72 hours at 25°C (77°F).

Cleaning

The uncured silicone can readily be removed by most hydrocarbon solvents. Polar solvents, such as ketones and alcohols, are not suitable.

Curing

SILASTIC™ RBL-2004-30 Liquid Silicone Rubber cures rapidly at elevated temperatures. A 2 mm crosssection requires 6–10 seconds at 200°C (392°F). The cure time depends on the thickness and the cure temperature used. Cure can be inhibited by contact with certain materials such as amines, sulphur and organotin complexes.

Pigmentation

This is normally carried out during mixing and dispensing of the two components.

XIAMETER™ Color Master Batches are recommended with normal addition levels of 2 to 4% based on total volume.

Handling Precautions

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE SAFETY DATA SHEET IS AVAILABLE ON THE DOW WEBSITE AT DOW.COM, OR FROM YOUR DOW SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CUSTOMER SERVICE.

Usable Life and Storage

Product should be stored at or below 32°C (90°F) in original, unopened containers.

Regulatory Compliance

Food Contact

Silicone Rubber contains FDA and BfR permitted ingredients making it suitable for food contact applications. SILASTIC™ RBL-2004-30 Liquid Silicone Rubber complies with food additive regulation 177.2600 and BfR, XV, which covers rubber articles intended for repeated food contact, provided the rubber is processed using recommended conditions. If your processing conditions vary from these conditions then this product MAY not be in compliance with these regulations. Manufacturers should do their own testing to evaluate the level of total extractives for this product as formulated by them and processed under their specific conditions.

Infant Care

SILASTIC™ RBL-2004-30 Liquid Silicone Rubber has 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.

Biocompatibility

SILASTIC™ RBL-2004-30 Liquid Silicone Rubber has been assessed according to:

- USP Class VI
- ISO 10993 - Intracutaneous test (irritation)
- ISO 10993 - Cytotoxicity
- ISO 10993 - Sensitization

It remains the customer's responsibility to ensure Dow's products are suitable for customer's intended use and comply with all laws and regulations applicable to such use.

Limitations

Dow has certain APPLICATION RESTRICTIONS. Please refer to the Dow Application policy below for specific restrictions.

<https://www.dow.com/en-us/support/product-safety.html>

Dow requests that customers considering use of Dow products in medical applications notify Dow so that appropriate assessments may be conducted. Dow does not endorse or claim suitability of its products for specific medical applications. It is the responsibility of the medical device or pharmaceutical manufacturer to determine that the Dow product is safe, lawful, and technically suitable for the intended use.

Health and Environmental Information

To support customers in their product safety needs, Dow has an extensive Product Stewardship organization and a team of product safety and regulatory compliance specialists available in each area.

For further information, please see our website, dow.com or consult your local Dow representative.

Disposal Considerations

Dispose in accordance with all local, state (provincial) and federal regulations. Empty containers may contain hazardous residues. This material and its container must be disposed in a safe and legal manner.

It is the user's responsibility to verify that treatment and disposal procedures comply with local, state (provincial) and federal regulations. Contact your Dow Technical Representative for more information.

Product Stewardship

Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products - from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Customer Notice

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow.

dow.com

NOTICE: No freedom from infringement of any patent owned by Dow or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, Customer is responsible for determining whether products and the information in this document are appropriate for Customer's use and for ensuring that Customer's workplace and disposal practices are in compliance with applicable laws and other government enactments. The product shown in this literature may not be available for sale and/or available in all geographies where Dow is represented. The claims made may not have been approved for use in all countries. Dow assumes no obligation or liability for the information in this document. References to "Dow" or the "Company" mean the Dow legal entity selling the products to Customer unless otherwise expressly noted. NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.

