Technical Data Sheet

XIAMETER™ RBL-2004-65 Liquid Silicone Rubber

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

Features & Benefits

- High transparency
- High tear strength
- Formulated to meet FDA 21 CFR 177.2600 and BfR, XV
- Part design flexibility
- Short cycle time

Applications

This product is designed to provide excellent performances on injection 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 for applications such as:

- Seals
- Gaskets
- Grommets
- Keypads
- Drip irrigation (membranes)

Typical Properties

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

CTM[1]	ASTM[2]	Property	Unit	XIAMETER™ RBL-2004-65 Liquid Silicone Rubber Value NPC[3]
1094		Viscosity Part A, 10.0 1/S	Pa.s	320
1094		Viscosity Part B, 10.0 1/S	Pa.s	290
0022		Specific gravity		1.15
		As molded		
	D2240	Hardness	Shore A	63
	D412 DIE C	Tensile Strength	MPa Psi	9.6 1390
	D412 DIE C	Elongation	%	450
	D624 DIE B	Tear strength	kN/m ppi	49 227
0085		Compression set after 22 hours at 175°C (347°F)	%	28

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 10 min at 120°C (248°F).

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Description

XIAMETER™ RBL-2004-65 Liquid Silicone Rubber is an LSR developed to give excellent process performances.

This product belongs to the XIAMETER™ RBL-2004 Liquid Silicone Rubber 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

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
XIAMETER™ RBL-2004-65 Liquid Silicone Rubber cures rapidly at elevated temperatures. A 2 mm cross-section 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.

Food Contact

XIAMETER™ RBL-2004-65 Liquid Silicone Rubber contains FDA and BfR-permitted ingredients, making it suitable for food contact applications.

XIAMETER™ RBL-2004-65 Liquid Silicone Rubber complies with FDA food additive regulation 177.2600 and BfR, XV, which cover rubber articles intended for repeated food contact, provided the rubber is processed using the conditions recommended by these regulations. If your processing conditions vary from these conditions, this product MAY NOT comply 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.

For further details on the suitability of this product for food contact applications, please refer to the Food Regulatory Profile.

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 35°C (95°F) in original, unopened containers.

Limitations

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

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.

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