Technical Data Sheet

SILASTIC™ 3730 Liquid Silicone Rubber

FEATURES

- Solventless
- Flowable
- Fast curing
- Easily pigmentable
- Excellent unprimed adhesion to polyamide fabric
- Soft, flexible, high strength coating

SILASTIC™ 3730 Liquid Silicone Rubber is a two part liquid silicone rubber for fabric coating

APPLICATIONS

- Designed for application to fabrics using conventional knife coating ranges

TYPICAL PROPERTIES

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

Test*	Property	Unit	Result		
			Part A	**Part B**	**Mixed 1:1**
CTM 0176B	Appearance		Transparent viscous liquid		
CTM 0050FE	Viscosity,10 rpm	mPa.s	160,000	200,000	180,000
ASTM D792	Specific gravity		1.10	1.10	1.10
	Solids content**				> 98
Rubber properties, measured on a 2 mm test sheet cured 10 minutes / 120°C					
ASTM D412 Die C	Elongation at break	%	600		
ASTM D412 Die C	Tensile strength	Mpa	7.0		
ASTM D624B	Tear strength	kN/m	40		
ASTM D2240	Durometer hardness	Shore A	30		

*Materials were tested according to Corporate Test Methods (CTM), which in most cases are similar to the ASTM standard listed above. Copies of CTMs are available on request.
**2 g sample heated in an aluminum dish for 2 hours at 170°C.

HOW TO USE

Mixing

The A and B components are supplied strained and de-aired. Mix parts A and B in a 1:1 +/- 0.05 ratio by weight. Manual weighing and mixing using a propeller mixer is suitable for small volumes. Meter mix equipment which pumps, meters and mixes the two components without the incorporation of air is strongly recommended for production. In either case, air entrainment should be avoided by careful choice of mixer blade design and mixing speed. It is not normally necessary to vacuum de-air the mixture prior to use.

Pot Life

Mixed Parts A and B will remain usable for 24 hours at 25°C (77°F).

Cure

The mixed liquid silicone rubber (LSR) should be applied to the fabric and cured in an oven using a temperature/time schedule to achieve sufficient adhesion and coating ageing properties. In order to do this, the highest feasible temperature should be chosen that does not discolor the fabric unacceptably. The exact cure schedule depends significantly on the thermal transfer efficiency of the oven and fabric dwell time in the oven, as well as on the coating thickness applied. A suggested cure is 190°C for 1 minute, but lower temperature for a longer time may be suitable. A minimum temperature of 150°C is recommended.

Whatever cure schedule is chosen, the

stability of coating adhesion to ageing is critical. If the temperature is too low, initial adhesion may be acceptable, but it may not survive an accelerated ageing cycle. Hence the recommendation to select a high coating temperature and experimentally reduce temperature or increase running speed to optimize efficiency while maintaining adhesion and aged adhesion. Additionally, the fabric should be clean and dry and free from oils, dirt and loose impediments that may compromise the integrity of the cured coating.

During cure of LSRs, low levels of volatile materials are evolved, and although not significant in comparison to solvent based materials, these volatiles can condense in the extraction system over a long period of time. Hence it is still necessary to maintain a low level of extraction in the cure ovens, and to monitor the flue gas ducting for condensate and degradation products (silica) that collect and are mixed with other volatiles coming from the fabric.

Cure can be inhibited by contact with certain materials such as amines, sulphur and tin complexes. The effect on the coating is to prevent complete cure, with the result that the coating feels sticky. Low levels of inhibition may not result in stickiness, but can reduce adhesion, and in some cases this can be recovered by further heating.

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

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

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 WWW.CONSUMER.DOW.COM, OR FROM YOUR DOW SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CUSTOMER SERVICE.

USABLE LIFE AND STORAGE

When stored at or below 40°C in the original unopened containers, this product has a usable life of 12 months from the date of production.

PACKAGING INFORMATION

This product is supplied in pails (20 kg) and in drums (205 kg).

Samples are available in kits of 2 kg.

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, www.consumer.dow.com or consult your local Dow representative.

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