

# Baytec® MS-052 (HQEE)

Polyurethane (Polyester, MDI)

Covestro - PUR

## Message:

Baytec MS-052 is a modified diphenylmethane diisocyanate (MDI)-terminated polyester prepolymer used in the manufacture of high-property solid cast polyurethane elastomers. When extended with 1,4-butanediol, this material complies with FDA regulation 21 CFR 177.2600 (Rubber Articles Intended for Repeated Use) and may be used for wet and dry repeated-use food-contact applications. When extended with HQEE, it complies with 21 CFR 177.1680 (Polyurethane Resins) and may be used for repeated-use food contact only with dry foods having no free surface fats or oils. As with any product, use of Baytec MS-052 prepolymer in a given application must be tested (including field testing, etc.) in advance by the user to determine suitability.

General Information			
Agency Ratings	FDA 21 CFR 177.1680		
Forms	Liquid		
Hardness	Nominal Value	Test Method	
Durometer Hardness (Shore A)	93	ASTM D2240	
Mechanical	Nominal Value	Unit	Test Method
Taber Abrasion Resistance (1000 Cycles, 1000 g, H-18 Wheel)	34.0	mg	ASTM D4066
Compression Deflection			ASTM D575
10%	2.90	MPa	ASTM D575
15%	3.96	MPa	ASTM D575
2%	0.483	MPa	ASTM D575
20%	5.03	MPa	ASTM D575
25%	6.21	MPa	ASTM D575
5%	1.58	MPa	ASTM D575
50%	18.4	MPa	ASTM D575
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
100% strain	8.34	MPa	ASTM D412
200% strain	10.6	MPa	ASTM D412
300% strain	12.5	MPa	ASTM D412
Tensile Strength (Break)	26.3	MPa	ASTM D412
Tensile Elongation (Break)	650	%	ASTM D412
Tear Strength			
-- <sup>1</sup>	110	kN/m	ASTM D624
Cracking	65	kN/m	ASTM D1938
Compression Set (70°C, 22 hr)	30	%	ASTM D395
Bayshore Resilience	54	%	ASTM D2632
Additional Information			
Appearance: Straw yellow liquidNCO: 5.10 to 5.50 wt%Flash Point, PMCC: >93°CSpecific Gravity at 80°C: 1.12Specific Gravity at 100°C: 1.11Viscosity at 80°C: 3270 mPa-sViscosity at 100°C: 1660 mPa-sNCO/OH Ratio: 1.15Stoichiometry: 90% TheoryPrepolymer Temperature: 95 to 110°CExtender Temperature: 100 to 110°CMold Temperature: 100 to 110°CPot Life: 10 to 15 minDemold: 60 min			

## NOTE

1. C mould

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### Recommended distributors for this material

## Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

