

# Hapflex™ 663-3

Thermoplastic

Hapco Inc.

Message:

The Hapflex 500 series offers a full range of soft durometers, from 45 - 95 Shore A, while the Hapflex 600 series yields harder durometers on the Shore D scale ranging from 50 - 70 Shore D. All are relatively fast, room curing, flexible systems that do not require post curing, but can be accelerated with moderate heat for faster curing. Most Hapflex 500 & 600 products are offered in 2 speeds: a standard 30-45 minute working time, and a 3-6 minute working time for fast demold.

The Hapflex elastomers are low viscosity, making them easy to handle and pour, yet still provide precise duplications of surface details surface finishes. In addition, the Hapflex elastomers are virtually shock resistant and unbreakable, making them exceptionally well suited for permanent molds, parts or master patterns that will not crack or chip during use or storage. A major advantage is the superior abrasion resistance properties of the Hapflex elastomers.

Precision tracing patterns, roll coverings, fixtures, flexible parts, forming dies, bending tools, and a variety of foundry applications are just a few examples of Hapflex applications.

General Information	
Features	Fast Cure
	Good Abrasion Resistance
	Good Flexibility
	Good Toughness
	Low Shrinkage
	Low Viscosity
	Moisture Resistant
	Shock Resistant
Uses	Gaskets
	Liners
	Molds/Dies/Tools
	Patterns
	Rollers
Appearance	Red
Forms	Liquid
Processing Method	Casting
	Machining
	Thermoforming
	Vacuum Casting

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.04	g/cm <sup>3</sup>	ASTM D4669
Molding Shrinkage - Flow	0.30 to 0.50	%	ASTM D2566
Weight - per cubic inch	17	g	
Gel Time <sup>1</sup> (25°C)	3.0	min	ASTM D2971

Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	60		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	138	MPa	ASTM D638
Tensile Strength	19.3	MPa	ASTM D638
Tensile Elongation (Break)	230	%	ASTM D638
Flexural Modulus	170	MPa	ASTM D790
Flexural Strength	11.4	MPa	ASTM D790
Elastomers	Nominal Value	Unit	Test Method
Tear Strength <sup>2</sup>	73.6	kN/m	ASTM D624
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	120	J/m	ASTM D256
Unnotched Izod Impact	No Break		ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	96.0	°C	
1.8 MPa, Unannealed	63.0	°C	
Thermoset	Nominal Value	Unit	Test Method
Thermoset Components			
Part A	Mix Ratio by Weight: 100, Mix Ratio by Volume: 100		
Part B	Mix Ratio by Weight: 60, Mix Ratio by Volume: 55		
Thermoset Mix Viscosity (25°C)	1560	cP	ASTM D4878
Demold Time (21°C)	20 to 35	min	Internal Method
NOTE			
1.	100 g		
2.	Die C		

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### 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

