

# 10161

## Systems: Footwear

10161 is an outstanding quality grade polyurethane system designed primarily for high quality Safety shoe sole or Outsole. It has a good flexibility, high tensile strength, and elongation.

### APPLICATIONS

- This system is used chiefly for the production of sport shoe sole which are molded directly to the uppers (injection process).

### TYPICAL PROPERTIES

Materials	Typical Properties	Method	Unit	Value
<b>A8113</b>	<b>Viscosity (@60° C)</b>	QC0-I002-T025	cps	1,100 – 1,250
<b>B9802</b>	<b>Isocyanate content</b>	-	% by weight	21.1 – 21.6
	<b>Viscosity (@60° C)</b>	QC0-I002-T025	cps	≈ 170
<b>C5503</b>	Mixture of catalyst, chain extenders, cell regulators and foaming agent.			

### PREPARATION OF PRODUCTS

A8113 must be warmed at 45 - 50°C for 12 - 24 hour before mixing with C5503 at 25 - 30 °C for about 15 minute or others depend on size of mixer.

B9802 should be warmed at 45 - 50 °C for 12 - 24 hour prior to its use. It has a clear to turbid solution appearance. The temperature of components in the production tanks should be 40 - 50°C to ensure good processing.

### MIXING RATIO BY WEIGHT

Materials	A : C Ratio (pbw)
A8113	90.38
C5503	9.62

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### FOAMING FORMULATION ON MACHINE

100 pbw the above mixture (Polyol and Catalyst) at working temperature 40±5°C

74 - 76 pbw B9802 at working temperature 40±5°C (\*The optimum ratio of Component B can be slightly different as per working condition)

**\*\* Mold temperature 50-55°C**

### FOAMING CHARACTERISTICS (at 40°C)

Foam Properties	Unit	Hand mix method
Cream time	Sec., approx.	12 – 14
Gel time	Sec., approx.	21 – 31
Tack free time	Sec., approx.	40 – 45
Demold time	approx.	6 – 7
Free rise density	Kg/m <sup>3</sup> , approx.	230 – 260

### TYPICAL PROPERTIES OF FINISHED PRODUCTS

Physical Properties	Unit	Value
Molded density	kg/m <sup>3</sup>	400 – 550
Hardness	Shore C, approx.	65 – 85
Tensile strength	Kg/cm <sup>2</sup> , approx	50
Elongation at break	%, approx.	>390
Flex resistance	(25 °C), 30,000 cycles	No Cut Growth

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### PACKAGE

Material can be supplied in 200 litre drum or 20 litre can.

### STORAGE AND HANDLING

The components are sensitive to moisture and should therefore, at all times, be kept in sealed drums. Storage temperatures should be within the range 20 – 25 °C to ensure maximum shelf life.

**NOTICE:** The information presented herein, while not guaranteed, is, to the best of our knowledge true and accurate. No warranty or guarantee, express or implied, is made regarding the performance or stability of any product, since the manner of use and conditions of storage and *handling* are beyond our control.