

10205

Systems: Footwear

10205 is three components polyester based polyurethane system designed for the manufacturing of medium density midsole with outstanding hydrolysis resistance.

APPLICATIONS

- Specially designed for shoe sole with density of 390 – 430 kg/m³ with good hydrolysis resistant properties

TYPICAL PROPERTIES

Materials	Typical Properties	Method	Unit	Value
A5201	Viscosity (@60° C)	QC0-I002-T025	cps	Approx 1,100
B9800	Isocyanate content		(% by weight)	18.7 – 19.7
	Viscosity (@60° C)	QC0-I002-T025	cps	100 – 200
C5103	Mixture of catalyst, chain extenders, cell regulators and foaming agent			
D5002H	Hardener			

PREPARATION OF PRODUCTS

A5201 must be warmed at 45-50 °C for 12-24 hr. before mixing with C5103 (25-30°C) for about 15 min. at 400-500 rpm or others depend on size of mixer

B9800 should be warmed at 40-45 °C for 12-24 hr. prior to its use. It should have a clear 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)
A5201	100.00
C5103	8.24

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FOAMING FORMULATION ON MACHINE

100 pbw the above mixture at working temperature of 45±5°C
 75 - 80 pbw B9800 at working temperature of 45±5°C
 Mold temperature 55-60°C

FOAMING CHARACTERISTICS (at 40°C)

Foam Properties	Unit	Hand mix method
Cream time	sec.	7 - 9
Gel time	sec., approx.	20
Demold time	-	Min. 6 - 7
Free rise density	kg/m ³ , approx.	220 - 240

TYPICAL PROPERTIES OF FINISHED PRODUCTS

Physical Properties	Unit	Value
Molded density	kg/m ³	390 - 430
Hardness	Shore C, approx.	50 - 55
Tensile strength	kg/cm ² , approx.	30
Elongation at break	%	≥350
Tensile strength retention after Hydrolysis	70°C / 7 days 100% RH, %	≥70

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ADJUST MIXING RATIO TO VARY SOLE HARDNESS

Physical Properties	Value	Value	Value
Molded density g/cc about	0.39 – 0.42	0.39 – 0.42	0.39 – 0.42
Hardness shore C	50 – 60	60 – 65	65 – 70
(depend on processing and mold)			
Weight of A5201, kg.	20	20	20
Weight of C5103, kg.	1.65	1.65	1.65
Weight of D5002H, kg.	-	0.5	1.0
Polyol : Isocyanate (B9800) Ratio	80	100 : 90	100 : 104

* Weight of water adjust depend on the condition in each factory recommend to adjust to get ratio of molded density/Free rise density = 2.0 but free rise density is not less than 210 kg/m³.

PACKAGE

Material can be supplied in 200 litre drum and 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.

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