



PRODUCT INFORMATION

PROVISIONAL TECHNICAL DATASHEET

3/30/2011

HYPERLAST 101/90

Introduction

HYPERLAST™ C101/90 is a polyether based curative which reacts with HYPERLAST 101 Prepolymer to produce a high performance polyurethane elastomer of 90 Shore A hardness. Other curatives are available within the HYPERLAST 101 series, to cover the range 60 - 95 Shore A. These polyurethane elastomers exhibit excellent properties including tensile strength, resilience, low temperature flexibility and hydrolysis resistance.

Polyol Component

Product Reference	HYPERLAST C101/90 Polyol
Appearance	White Solid at 25 °C
Viscosity	200 – 300 cps at 40 °C
Specific Gravity	0.97 – 0.99 at 40 °C

Isocyanate Component

Product Reference	HYPERLAST 101 Prepolymer
Appearance	Pale Straw Liquid at 25 °C
Viscosity	500 – 1000 cps at 40 °C
Specific Gravity	1.1 – 1.14 at 40 °C

Mixed System

Mixing Ratio	0.68 : 1 by weight (Polyol : Isocyanate)
Gel Time	4' 30" – 6' 00" (100 gms at 40 °C)

Cured System – Typical Properties

Property	Test Method	Value	Unit
Shore Hardness	BS EN ISO 868	90	°A
Tensile Strength	BS 903 Pt A2	34	MPa
Elongation at Break	BS 903 Pt A2	450	%
Angle Tear Strength	BS 903 Pt A3	95	N/mm
100% Modulus	BS 903 Pt A2	9.0	MPa
300% Modulus	BS 903 Pt A2	16	MPa
DIN Abrasion	DIN 53516	45	mm ³ loss
Compression Set - 25% (22Hr/70°C)	ASTM D395	26	%
Resilience (Lupke Pendulum)	BS 903 Pt A8 MethB	51	%

Processing Details

The following information is given as a guide to processing this product. It is recommended that optimum conditions for a specific application are determined experimentally. Our Technical Service Department can offer more detailed advice.

Recommended Processing Temperatures

Polyol Component	35 – 40 °C
Isocyanate Component	25 – 40 °C
Mould Temperature	80 – 95 °C
Typical Demould Time	20 – 30 mins

Recommended Cure Cycle

To ensure rapid attainment of physical properties the demoulded article should be post cured at 80 °C for 16 - 24 hours in an evenly heated oven.

Additional Processing Details

More detailed information is contained in our document 'HYPERLAST 101 Series Handling and Processing Guide'.

Storage and Handling

		Shelf life
Polyol Component	Store in tightly sealed containers at a temperature of 0 - 30 °C. Raise to the processing temperature and mix well before use. Avoid contact with moisture. Storage at low temperatures may result in freezing of the polyol component, should this occur it should be melted out by raising to the processing temperature and mixed thoroughly before use.	12 months
Isocyanate Component	Store in tightly sealed containers at a temperature of 15 - 30 °C. Avoid contact with moisture. Storage below the recommended minimum temperature may result in freezing of the Isocyanate. If the Isocyanate does not fully melt out when raised to the processing temperature it may be necessary to re-melt at a temperature of 60 - 70 °C following the procedures laid down in the information sheet 'ISOCYANATES - HAZARDS AND SAFE HANDLING PROCEDURES'.	6 months

More detailed information on the storage and handling of polyurethane components can be obtained by contacting our Technical Service Department.

Packaging

Polyol Component	25 Kgs, 200 Kgs
Isocyanate Component	25 Kgs, 200 Kgs

Safety Considerations

Customer should refer to the Dow product Material Safety Data Sheet (MSDS) to understand the hazards of the product and safe handling guidance.

Customer Notice

Dow encourages its customers to review their applications of Dow products from the standpoint of human health and environmental quality. For further information about safety considerations for your product/application, please contact your Dow Sales representative.

Contact Information:

For more information
contact:

www.dowhyperlast.com

Notice: No freedom from any patent owned by Dow or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, Customer is responsible for determining whether products and the information in this document are appropriate for Customer's use and for ensuring that Customer's workplace and disposal practices are in compliance with applicable laws and other government enactments. Dow assumes no obligation or liability for the information in this document. NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.