



Formulated Systems

# PRODUCT INFORMATION

## PROVISIONAL TECHNICAL DATASHEET

3/30/2011

## HYPERLAST 101/80

### Introduction

HYPERLAST™ C101/80 is a polyether based curative which reacts with HYPERLAST 101 Prepolymer to produce a high performance polyurethane elastomer of 80 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 C101/80 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	0.95 : 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	80	°A
Tensile Strength	BS 903 Pt A2	30	MPa
Elongation at Break	BS 903 Pt A2	475	%
Angle Tear Strength	BS 903 Pt A3	60	N/mm
100% Modulus	BS 903 Pt A2	4.4	MPa
300% Modulus	BS 903 Pt A2	9.5	MPa
DIN Abrasion	DIN 53516	45	mm <sup>3</sup> loss
Compression Set - 25% (22Hr/70°C)	ASTM D395	20	%
Resilience (Lupke Pendulum)	BS 903 Pt A8 MethB	57	%

## **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**

		<b>Shelf life</b>
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  
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[www.dowhyperlast.com](http://www.dowhyperlast.com)

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