



PRODUCT INFORMATION

PROVISIONAL TECHNICAL DATASHEET

9/22/2014

Introduction

HYPERLAST™ EMH 85A is a two component sprayable elastomer. This material can be applied to a wide variety of substrates at ambient temperature and its rapid reaction time produces a sprayed film which is touch dry in seconds. The system is designed for use through 1:1 volumetric spray equipment.

HYPERLAST EMH 85A

Here we describe the use of HYPERLAST EMH 85A polyol with two alternative prepolymers to give the option of a fast or a slow gellation time – allowing the ability to modify spraying quality and physical performance depending on requirements and environment of use.

Component Properties

Polyol Component

Product Reference	HYPERLAST™ EMH 85A
Appearance	Amber liquid at 25°C
Viscosity	350 – 650 cps at 25°C
Specific Gravity	1.01 – 1.03 at 25°C

Isocyanate Component

Product Reference	HYPERLAST™ EMH 85A Prepolymer
Appearance	Amber liquid at 25°C
Viscosity	1500 – 2500 cps at 25°C
Specific Gravity	1.11 – 1.13 at 25°C

Isocyanate Component

Product Reference	HYPERLAST™ LE 5612 Prepolymer
Appearance	Amber liquid at 25°C
Viscosity	700 – 1300 cps at 25°C
Specific Gravity	1.09 – 1.11 at 25°C

Mixed System

Mixing Ratio	0.91:1 by weight (Polyol:Prepolymer)
Gel Time	0' 5" - 0' 10" (using HYPERLAST™ EMH 85A Prepolymer)
Gel Time	0'25" -0' 45 (using HYPERLAST™ LE 5612 Prepolymer)

These are typical values and should not be construed as specifications.

Cured System – Typical Properties when sprayed with named Prepolymer

Property	Test Method	Value with HYPERLAST™ EMH 85A Prepolymer	Value with HYPERLAST™ LE 5612 Prepolymer	Unit
Shore Hardness	ISO 868	85	85	°A
Tensile Strength	ISO 527 type 5 @ 2.5 mm thick	11.5	13.3	MPa
100% Modulus	ISO 527 type 5 @ 2.5 mm thick	4.5	5.5	MPa
Elongation at Break	ISO 527 type 5 @ 2.5 mm thick	320	700	%
Angle Tear Strength	ISO 34	38	50	N/mm
Nicked Crescent Tear Strength)	ASTM D624	45	50	N/mm
Density	BS 903 Pt A1	950	950	Kg/m ³
Cold Flex Temperature	BS 2782 Meth 150B	-40	-40	°C

These are typical values and should not be construed as specifications.

Processing Details

Please Note: It is essential that the polyol component is thoroughly rolled / mixed before use.

Strong turbulence and mixing with air should be kept to a minimum by adopting a careful mixing technique (e.g. drum/keg rolling) or using low air introducing mixers. It is recommended that any air introduced during mixing is subsequently removed through degassing by either machine or vacuum chamber. It is the responsibility of the customer to ensure that the product is mixed and degassed sufficiently for use.

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	Refer to our Technical Service Department for temp °C
Isocyanate Component	Refer to our Technical Service Department for temp °C

These are typical values and should not be construed as specifications.

Recommended Cure Cycle

24 – 48 hours at room temperature to reach full cure.

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 0 - 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 'Safe Handling – Pure, Modified and Polymeric MDI' Form No. 109-01224X-1009P&M.	12 months

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

Packaging

Polyol Component	25 kg, 200 kg
Isocyanate Component	25 kg, 220 kg

Product Stewardship

The Dow Chemical Company and its subsidiaries (“Dow”) has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our Product Stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our Product Stewardship program rests with each and every individual involved with Dow products — from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Safety Considerations

Safety Data Sheets (SDS) are available from The Dow Chemical Company (Dow). SDS are provided to help customers satisfy their own handling, safety and disposal needs, and those that may be required by locally applicable health and safety regulations. SDS sheets are updated regularly. Therefore, please request and review the most current SDS before handling or using any product. Copies of the SDS are available on request through the nearest Dow Sales office.

Customer Notice

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to help ensure that Dow products are not used in ways for which they were not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products.

Contact information:

For more information about this product please call The Dow Chemical Company.

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