PRODUCT INFORMATION

Formulated Systems

PROVISIONAL TECHNICAL DATASHEET
9/3/2013

DURAMOULD ET 1045A RED

Introduction

DURAMOULD™ ET 1045A Red is a polyol based curative which reacts with DURAMOULD 5223 Isocyanate prepolymer to produce a polyurethane elastomer with high extensibility. The product has good moisture tolerance and can be used to take masters from stone, plaster, etc.

Component Properties

Polyol Component

Product Reference	DURAMOULD™ ET 1045A Red Polyol
Appearance	Red Liquid at 25°C
Viscosity	500 – 1000 mPa.s at 25°C
Specific Gravity	1.01 – 1.04 at 25°C

Isocyanate Component

Product Reference	DURAMOULD™ 5223 Isocyanate
Appearance	Colourless Liquid at 25°C
Viscosity	4500 – 7500 mPa.s at 25°C
Specific Gravity	1.02 – 1.06 at 25°C

Mixed System

Mixing Ratio	1 : 1 by weight (Polyol : Isocyanate)
Gelometer Gel Time	20’ 0” – 28’ 0” (150g at 25°C)

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

Cured System – Typical Properties

Property	Test Method	Value	Unit
Shore Hardness	ISO 868	45	°A
100% Modulus	ISO 527 Type 5 (2mm)	1.2	MPa
Tensile Strength	ISO 527 Type 5 (2mm)	5.4	MPa
Elongation at Break	ISO 527 Type 5 (2mm)	1000	%
Angle Tear Strength	ISO 34 Pt B, Proc A (2mm)	24	N/mm
Split Tear Strength	ASTM D470	6	N/mm

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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	20 – 30°C
Isocyanate Component	20 – 30°C

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

Recommended Cure Cycle

Product should be fully cured within 24 -– 72 hours at room temperature (25°C), however moulds should not be put into service for 5 -– 7 days.

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 10 – 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.	9 months

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

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Packaging

Polyol Component	25 kg, 200 kg
Isocyanate Component	25 kg, 215 kg

Product Stewardship

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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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