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Eracast RT45A

TDI POLYETHER MOULDING MATERIAL

TECHNICAL DATASHEET

Eracast RT45A is a medium performance cold castable polyurethane elastomer. The product is free from MOCA (methylene-bis-ortho-chloroaniline) and flammable solvents, which produces an economical elastomer with good toughness and high elongation and good chemical resistance.

It offers advantages in that it can be readily processed and cured at room or elevated temperatures. The convenient mix ratio and low viscosity allow easy processing.

Application

Applications and uses include: flexible moulds, concrete moulds and stamp pads, cast in place linings, sound dampening applications and casters.

Product Specifications

	ISOCYANATE PREPOLYMER (A)	POLYOL CURATIVE (B)
Specific Gravity at 25°C	1.08	1.02
Viscosity at 25°C (cPs)	4700 – 5300	240 – 440
Appearance	Clear, straw liquid	Amber liquid

Mixing and Curing Conditions

Isocyanate Prepolymer (A)	(pbw)	100
Polyol Curative (B)	(pbw)	100
Recommended % Theory		95
Prepolymer (A) Temperature	(°C)	20 – 30
Curative (B) Temperature	(°C)	20 – 30
Pot Life at 25°C	(mins)	10 – 14
Post Cure Time at 25°C	(hours)	24

*The above results are based on 200 grams of mixed sample at 25°C.



This information is of general nature and is supplied without recommendation of guarantee. It does not make claim to be free from patent infringement. Properties shown are typical and do not imply specification tolerances. Era Polymers cannot accept liability for loss or damage through use. Whilst these technical details are based on expert knowledge, practical experience and laboratory testing, successful application depends upon the nature and conditions in which the products are supplied. Users must, by comprehensive testing, evaluate this product in their own application.

Physical Properties

The properties presented below are an average based on several determinations and should not be used for specification purposes.

		RT45A	TEST METHOD
Hardness	(Shore A)	45 ± 5	AS1683.15
Tensile Strength	(MPa)	7.1	AS1683.11
100% Modulus	(MPa)	1.6	AS1683.11
200% Modulus	(MPa)	2.0	AS1683.11
300% Modulus	(MPa)	2.3	AS1683.11
Angle Tear Strength, Die C	(kN/m)	27.5	AS1683.12
Trouser Tear Strength	(kN/m)	13.3	AS1683.12
Elongation	(%)	>2000	AS1683.11
Rebound Resilience	(%)	44.1	DIN 53512
DIN Abrasion Resistance, 10N	(mm ³)	1080	AS1683.21
Cured Specific Gravity	(g/cm ³)	1.06	AS1683.4
Linear shrinkage*	(%)	0.1	

* The linear shrinkage is based on a rectangular slab measuring 500mm x 45mm x 14mm

Processing Procedure

Eracast RT45A products can be processed by hand or machine dispensing equipment. Do not cast this material when the Part A or Part B temperature is below 20°C as it will take too long to cure.

NOTE: Both Part A and Part B components are moisture sensitive. Once opened, containers should be purged with nitrogen, if they are to be stored for a period of time.

The Part B (curative) should be mechanically mixed for a minimum of 30 minutes as it contains polyols and catalysts. If a pre-weighted kit is not used, a set of accurate scales should be used and a mixing container to weight the isocyanate and then the polyol.

The product when cast should not be moved until completely dry and the end user must consider when this will occur. Before commencing a job, conduct a small test to check cure conditions may be needed - refer to Era Polymers.

Handling Precautions

Eracast RT45A should be used in well-ventilated areas. Avoid breathing in vapours and protect skin and eyes from contact.

In case of skin contact, immediately remove excess, wash with soap and water. For eye contact, immediately flush with water for at least 15 minutes. Call a physician.

If nose, throat or lungs become irritated from breathing in vapours, remove exposed person to fresh air. Call a physician.



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