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Erapol XLE70D

POLYETHER (PTMEG) TDI PREPOLYMER –
LOW FREE TDI CONTENT

TECHNICAL DATASHEET

Erapol XLE70D is a new generation of liquid isocyanate terminated pre-polymer based on 100% PTMEG polyether polyol with low viscosity and extremely low free isocyanate content (less than 0.1%).

Polymers made from **Erapol XLE70D** exhibit outstanding abrasion, impact and chemical resistance, along with high load bearing capacity and low heat build-up in dynamic applications.

Application

Typical uses of this polymer include forklift truck tyres, roles and gears, die pads etc.

Product Specification

| | |
|---|--------------------|
| % NCO | 9.00 ± 0.20 |
| Specific Gravity at 70°C (g/cm ³) | 1.03 |
| Viscosity at 80°C (cps) | 400 - 700 |
| Colour | Clear, light amber |

Mixing and Curing Conditions

| | | XLE70D / MOCA |
|-------------------------|--------|---------------|
| Erapol XLE70D | (pph) | 100 |
| MOCA Level | (pph) | 27.2 |
| Recommended % Theory | | 95 |
| Erapol Temperature | (°C) | 60 - 70 |
| Curative Temperature | (°C) | 110 - 120 |
| Pot Life | (mins) | 2 - 3 |
| Demould Time at 100°C | (mins) | 30 |
| Post Cure Time at 100°C | (hrs) | 16 |

Note: pph MOCA is 95% theory based on midpoint NCO.



Physical Properties

Properties presented below are to be used as a guide and not intended for specification purposes.

| | | XLE70D / MOCA | TEST METHOD |
|------------------------------------|----------------------|---------------|-------------|
| Hardness | (Shore D) | 70 ± 3 | AS1683.15 |
| Tensile Strength | MPa (psi) | 50 (7252) | AS1683.11 |
| 200% Modulus | MPa (psi) | 47 (6817) | AS1683.11 |
| Elongation | (%) | 220 | AS1683.11 |
| Angle Tear Strength, Die C | kN/m (pli) | 148.6 (848) | AS1683.12 |
| Trouser Tear Strength | kN/m (pli) | 39.3 (224) | AS1683.12 |
| DIN Resilience | (%) | 51 | DIN 53512 |
| DIN Abrasion Resistance 10N | (mm ³) | 84 | AS1683.21 |
| Cured Specific Gravity | (g/cm ³) | 1.19 | AS1683.4 |

Processing Procedure

1. **Erapol XLE70D** should be heated to 65 ± 5°C and thoroughly degassed at -95 kpa of vacuum until excessive foaming stops.
2. The curative should be added to **XLE70D**, the MOCA must first be melted at 110 – 120°C. After adding the curative, mix thoroughly being careful not to introduce air into the mixture.
3. Pour mixed materials into moulds, which have been preheated to 100°C and pre-coated with release agent.

Adhesion

Adhesion of Erapol based elastomers to various substrates is at best marginal if a primer is not used. Please consult Era Polymers for specific recommendations to improve adhesion.

Handling Precautions

Consult the product's material safety data sheet (MSDS) for specific hazard and handling information before use.

Erapol XLE70D contains small amounts of free TDI. Therefore the product 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.

