# Isothane Elastomer A755
# Polyurethane Elastomer

## PRODUCT DESCRIPTION

Isothane Elastomer A755 is a polyether based resin system which, when combined with Isothane M15 Prepolymer, will produce a polyurethane elastomer of 55-60°A hardness. Elastomer A755 is cold castable, free from MOCA, mercury based catalysts, TDI and flammable solvents.

Elastomer A755 can be readily processed and cured at room or elevated temperatures. The convenient mix ratio and low viscosity allow easy processing.

## USES

Elastomer A755 is suitable for most moulding and casting applications. Typical uses include the production of medium sized castings and medium dimension mould production. The products excellent resistance to hydrolysis lends itself to marine and other wet environment uses.

## TYPICAL PROPERTIES

| | Elastomer A755 | M15 PREPOLYMER |
|---|---|---|
| **Appearance** | Free flowing liquid | Pale brown liquid |
| **Viscosity @ 25°C (cPs)** | 1200 – 1300 | 130 -170 |
| **Specific Gravity** | 1.01 – 1.06 | 1.20 – 1.24 |
| **%NCO** | - | 26 |

## PROCESSING

| | | |
|---|---|---|
| **Elastomer A755** | (pbw) | 100 |
| **M15 Prepolymer** | (pbw) | 30 |
| **Elastomer A755 Temperature** | (°C) | 25-30 |
| **M15 Prepolymer Temperature** | (°C) | 25-30 |
| **Mixed Viscosity @ 25°C** | (cPs) | 2500 |
| **Pot Life at 25°C** | (mins) | 10-14 |
| **Cure at 25°C** | | 72 hours at 25°C<br>Accelerated cure of 16 hours at 70°C |
| **Optimum mould temperature** | (°C) | 80 |

The system may be processed either by hand mixing with a drill stirrer, or by dispensing through specially designed equipment having accurate metering pumps for the two components and a suitable mixing head. The components should be maintained at a minimum of 20°C and should be mixed immediately before the intended pouring process. When hand-mixing the product should be thoroughly degassed under vacuum before curing.

Isothane Limited, Unit 10, Newhouse Road, Huncoat Industrial Estate, Accrington, Lancashire BB5 6NT
Telephone 01254 872555 Fax 01254 871522 Order Line Fax 01254 398295
Email info@isothane.com Website www.isothane.com

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In applications where bonding of the product to other material is a requirement, use of a primer from the Isothane range may be necessary to maximise adhesion.

It is important to note that components of the resin formulation may separate on standing and the material should be agitated before use in order to effect re-dispersion. If during re-dispersion air is mixed into the resin, it must be degassed be for use.

## CURED ELASTOMER PROPERTIES

| | | Typical Values | Test Method |
|---|---|---|---|
| **Hardness** | (Shore A) | 55-65 | BS2782 |
| **Tensile Strength** | (MPa) | 3 | BS903 |
| **Elongation** | (%) | 300 | BS903 |
| **Tear Strength** | (KN/m) | 12 | BS903 |
| **Density** | | 1.12 | BS903 |
| **Coefficient of Linear Expansion** | | $150x10^{-6}$ | ASTM D696 |

## STORAGE, HANDLING AND PERSONAL PROTECTION

Elastomer A755 and M15 prepolymer should be stored in dry conditions at 20-25°C. Opened or part used containers must be resealed immediately after use and capped with dry air or nitrogen where possible.

If Elastomer A755 has been store in cold conditions for long periods it should be heated to 30-40°C then thoroughly agitated and cooled to 20-25°C before use. Cold M15 Prepolymer should be heated to 70-80°C to allow melt out, then thoroughly agitated and cooled to 20-25°C before use.

The shelf life for the unopened product is 6 months. The recommendations in our Safety Data Sheet for this product must be followed at all times. More general information is included in our publication “A Guide to the Safe Handling of Polyurethane Chemicals” and in “Decontamination of Isocyanates using Isothane Decontaminant”.

The recommendations in the Elastomer A755 and M15 Prepolymer safety data sheets should be followed at all times.

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