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Sydney, NSW 2019  
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## Erapol OC80D

WATER CLEAR POLYETHER BASED URETHANE  
ELASTOMER

### TECHNICAL DATASHEET

**Erapol OC80D** is a new two-component low viscosity water clear polyurethane system specifically formulated for applications where clarity is a must.

Initial testing shows product to be non-yellowing however further testing is being conducted.

### Application

The product is recommended in applications when yellowing due to exposure to sunlight needs to be minimised. It can be used in a number of diverse applications ranging from special effects, prototype parts, windows and display devices.

### Product Specification

	ISOCYANATE PREPOLYMER (A)	POLYOL CURATIVE (B)
Specific Gravity at 25°C	1.02	1.05
Viscosity at 25°C (cps)	720	200
Appearance	Water clear	Water clear

### Mixing and Curing Conditions

Isocyanate Prepolymer (A)	(pbw)	100
Polyol Curative (B)	(pbw)	43
Recommended % Theory		85
Part (A) Temperature	(°C)	20-30
Part (B) Temperature	(°C)	20-30
Pot Life	(mins)	10
Cure at 60°C	(hours)	16
Demould Time at 25°C	(hrs)	2-3*
Demould Time at 60°C	(hrs)	1*
Post Cure Time at 25°C	(days)	7

The above results are based on 143 gram of mixed sample at 25°C

\* Demould time will depend on the size and cross section of material.



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

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

		OC80D	TEST METHOD
<b>Hardness</b>	(Shore D)	80 ± 5	AS1683.15
<b>Tensile Strength</b>	(MPa)	38	AS1683.11
<b>Angle Tear Strength, Die C</b>	(kN/m)	117	AS1683.12
<b>Elongation</b>	(%)	5	AS1683.11
<b>Cured Specific Gravity</b>	(g/cm <sup>3</sup> )	1.05-1.10	AS1683.4
<b>Average Izod Impact Strength</b>	(kJ/m <sup>2</sup> )	38.07	-
<b>Average Energy Absorbed (Izod Test)</b>	(kg/cm)	15.5	-

## Moulding Materials

Any of the Erapol OC products can be poured into a urethane mould that has been prepared with an appropriate release agent. The Erapol OC products can be used in silicone moulding materials but they must be addition-cured silicones. Contact Era Polymers about specific grades of silicones that are suitable. Post curing the Erapol OC product at 50-60°C for 6-8 hours can improve the surface finish.

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.

## Processing Procedure

**Erapol OC80D** products can be processed by hand or machine dispensing equipment.

1. Weigh the amount of Part A into a container and degas at -95 kPa of vacuum until excessive foaming stops.
2. Part B should be added to Part A and mixed thoroughly. Be careful not to entrap air whilst mixing. (It can be advised that the mixed product can be degassed at -95kPa of vacuum if required.)
3. Pour the mixed materials into moulds that have been prepared with a suitable release agent if casting demouldable parts.
4. Allow casting to cure before demoulding.

NOTE: PART B must be completely stirred mechanically before use.

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## 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

**Erapol OC80D** should be used in well-ventilated area. Avoid breathing in vapours and protect skin and eyes from contact.

In case of skin contact 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.