



Era Polymers Pty. Ltd.
25-27 Green Street, Banksmeadow
Sydney, NSW 2019
AUSTRALIA
www.erapol.com.au

Erapol OC93A

WATER CLEAR POLYETHER BASED URETHANE
ELASTOMER

TECHNICAL DATASHEET

Erapol OC93A is a two-component, water clear polyurethane that cures at room temperature to produce a 93 Shore A elastomer. This material when cured at 25°C will take longer than 24 hours to reach 93 Shore A. The material can be cured for 2 - 4 hours at 35-40°C to speed up the cure.

Application

The product is recommended in applications when yellowing due to exposure to sunlight needs to be minimised. The material can be used in a number of diverse applications, from special effects, badges and any product requiring a clear protective coating.

Product Specification

	ISOCYANATE PREPOLYMER (A)	POLYOL CURATIVE (B)
Specific Gravity at 25°C	1.02	1.03
Viscosity at 25°C (cps)	560 - 1160	130 - 330
Appearance	Water clear	Water clear

Mixing and Curing Conditions

Isocyanate Prepolymer (A)	(pbw)	100
Polyol Curative (B)	(pbw)	52
Recommended % Theory		95
Part (A) Temperature	(°C)	20-30
Part (B) Temperature	(°C)	20-30
Pot Life	(mins)	12
Demould Time at 25°C	(hrs)	24
Post Cure Time at 25°C	(days)	7 days fully cured at 25°C

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

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

		OC93A	TEST METHOD
Hardness	(Shore A)	93 ± 5	AS1683.15
Tensile Strength	(MPa)	20	AS1683.11
Angle Tear Strength, Die C	(kN/m)	42	AS1683.12
Elongation	(%)	400	AS1683.11

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. Part A should be clear, if it goes cloudy warm to 40°C for 1-2 hours until it goes clear.

Processing Procedure

Erapol OC93A 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. OC93A must be cured in a room where the temperature does not drop below 20°C, this is critical in winter.

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.
4. Allow casting to cure before demoulding.

NOTE: PART B must be completely stirred mechanically before use. In the colder months it may also be necessary to slightly warm the Part B (40°C) as it may solidify.

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 OC93A 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.