



**POLYCOAT  
PRODUCTS**

A Division of American Polymers Corp.

# POLYCOAT PC 90-83

## Material Technical Data Sheet

**POLYCOAT PC 90-83** is a high molecular weight polyether diol that can be used either alone or in conjunction with other curatives to produce quality elastomers from a variety of polyether prepolymers. Used alone, most prepolymers yield durometers in the 50 to 60 Shore A range. Higher performance elastomers in a variety of durometers can be achieved from polyether TDI prepolymers by blending in various proportions with MOCA. The vulcanizates exhibit the following characteristics:

- Good tear
- Good abrasion resistance
- Variable Resilience

### Curative Specifications:

Equivalent weight	813
Appearance @ 77°F	Solid
Moisture content, %	<0.09

### PROCESSING

Prepolymer Temperature, °F	180 – 200
PC 90-83 Temperature, °F	150 – 160
MOCA Temperature, °F	240°F
Curative Mole Ratio (in blends)	0.1 – 1.0
Cure	1 hr@240°F
Post Cure	16 hrs@240°F

The formulation and properties shown in Table I are an example of an elastomer achieved with PC 90-83 and MOCA.

At room temperature, this curative is a waxy solid that must be melted for appropriate processing. To prepare for use, place the containers in a 158°F oven until the contents are melted.

#### Limited Warranty:

*Please read all information in the general guidelines, product data sheets, guide specifications and material safety data sheets (MSDS) before applying material. Published technical data and instructions are subject to change without notice. Contact your local Polycoat Products representative or visit our website for current technical data and instructions.*

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### PC 90 – 25 Material Technical Data Sheet

Table I

**Processing Conditions**

**Compound**

<b>Pre-Pol® PC 40-80</b> (3.26% NCO)	100 pts
MOCA (Mole %=70)	6.9 pts
<b>PC 90-83</b> (Mole % = 30)	18 pts
% Theory	95
Calculations: MOCA – (133.5 x 3.26 x 95 x 0.70) / 4202 = 6.9 pts	
PC 90-83 – (813 x 3.26 x 95 x 0.30) / 4202 = 18 pts	

**Mixing and Curing**

Prepolymer temperature, °F (°C) .....	200 (93)
MOCA temperature, °F (°C) .....	240 (116)
PC 90-83, °F (°C).....	158 (70)
Mold temperature, °F (°C) .....	212 (100)
Cure, hours at °F (°C).....	1 at 212 (100)
Postcure, hours at 158°F (70°C) .....	16
Working Life, minutes .....	15 - 20

**Vulcanizate Properties**

Test specimens conditioned one week at 24°C (75°F) and 50% RH before testing.

Hardness, durometer A .....	73
100% Modulus, psi.....	455 ± 50
300% Modulus, psi.....	790 ± 200
Tensile Strength, psi .....	4600 ± 300
Elongation at Break, % .....	525 ± 50
Tear Strength (ASTM D-470), lb/in .....	35 ± 5
Tear Strength (Die C), lb/in .....	270 ± 20
Resilience (Rebound), % .....	55