

**URS 4180**

Revised 6/22/00

**HIGH MODULUS, HIGH HDT POLYURETHANE CASTING SYSTEM**

**80 SHORE D**

**DESCRIPTION**

**URS 4180** is a high modulus polyether, based urethane casting system with good rigidity and excellent impact resistance at temperatures up to 250 degrees F. **URS 4180** is recommended for applications where stiffness and impact resistance at higher temperatures are of consideration, such as, wheels, impact guards, guide slots, support plates, edge guards, etc.

**FEATURES**

Excellent Machining Qualities  
High Impact Strength  
Excellent Tensile Strength  
Outstanding Oil Resistance  
High HDT  
No MOCA or TDI  
Hand or Machine Processing

**LIQUID**

**PROPERTIES**

**POL 470B**

**ISO 110A**

**MIXED**

Appearance	Amber Liquid	Amber Liquid	Amber Liquid
Viscosity (cps)	2,800 –3,400 (77 F)	500-1,000 (77 F)	1,600-2,000 (77 F)
Density (lbs/gal)	8.90 – 9.10	10.00 – 10.20	9.50 - 9.70

**PHYSICAL PROPERTIES**

Hardness, Shore D	82
Hardness, Shore D at 200 deg. F.	77
Modulus, psi, 100%	4225
Tensile Strength, Ultimate, psi	9025
Elongation, %	180
Tear Strength "Die C" lbs/in	105
Compression Set, Method A	11
Impact Resistance ft-lbs/in (with postcure)	13
HDT ( Deg F.)	210

URS 4180 Cont:

### **PROCESSING PARAMETERS**

Process Polyol 470B at 100 to 150 degrees F.

Melt Isocyanate 110A if frozen at 100 degrees F., otherwise use at 70-85 degrees F.

Mold Temperature: 110 to 160 degrees F.

Mix ratio: 100 parts Polyol 470B to 120 parts Isocyanate 110A by weight.

Degas mixture if possible or pre-degas Polyol in dispensing equipment prior to casting.

Pot life: (200g mass) (77 degrees F) 10 to 15 minutes.

Demold: 1- 2 Hours or 30-45 minutes with maximum process and mold temperature. Catalyst may also be used to shorten demold time.

Post Cure: 16-24 hours @ 140 degrees F.

**NOTE: Full Physicals are only obtained with full postcure!**

### **STORAGE**

Systems should be stored unopened in air tight containers at 60-90 degrees F. Partially emptied containers should be swept free of atmospheric moisture with dry nitrogen before sealing.

### **HANDLING PRECAUTIONS**

For complete and updated health and safety information, read the MATERIAL SAFETY DATA SHEETS. Do not handle or use until the MATERIAL SAFETY DATA SHEET has been read and understood.