

## IRACORE - MATERIAL SELECTION GUIDE

Basic Properties	Castable (Products < 150 Lbs)					Pipe Lining (Products > 150 Lbs)			Grouts	
	2130	2140	2240	2825	3040	2855	6500	7500	275	255
<i>Economy of Material</i>	G	G	G	G	G	G	G	G	-	-
<i>Compression Set Resistance</i>	G	G	G	G	G	G	G	G	-	-
<i>Resilience (Rebound)</i>	VG	G	G	A	A	G	A	G	G	G
<i>Tear Strength</i>	P	G	G	G	VG	A	A	A	A	A
<i>Hydrolysis Resistance</i>	A	G	G	VG	P	G	VG	VG	G	G
<i>Ozone Resistance</i>	VG	VG	VG	VG	VG	VG	VG	VG	VG	VG
<i>Resistance to Oil &amp; Grease</i>	VG	VG	VG	VG	VG	VG	VG	VG	VG	VG
<i>Water Swell Resistance</i>	G	G	G	G	G	G	G	G	A	A
<i>Abrasion Resistance</i>	-	-	-	-	-	-	-	-	-	-
<i>Particle Size &gt; 1/4"</i>	P	G	G	G	G	G	G	G	G	G
<i>Low Angle Impingement</i>	VG	G	G	A	A	VG	A	VG	G	G
<i>High Angle Impingement</i>	VG	G	G	A	A	G	A	G	G	G
<i>Sliding</i>	A	G	G	A	VG	G	G	G	G	G
<i>High Temperature - Optimal</i>	50-130°F	50-130°F	50-130°F	130-200°F	50-100°F wet	50-130°F	130-200°F	100-160°F	50-130°F	50-130°F
<i>High Temperature - Special</i>	-	180°F	180°F	-	50-200°F dry	180°F	-	200°F	180°F	180°F
<i>Low Temperature - Limit</i>	-60°F	-60°F	-60°F	-60°F	-60°F	-60°F	-60°F	-60°F	-60°F	-60°F

**VG - Very Good                      G - Good                      A - Average                      P - Poor**

### Key Factors for selecting the Proper Urethane Elastomer

1. **Hardness**
  - a. Important factor for load bearing / compression requirements
  - b. 65-95 Shore A available
  - c. Not a great indicator of overall elastomer performance
2. **Service Environment Composition**
  - a. Dry or Wet Service
  - b. Solution pH
  - c. Slurry particle size, shape, and velocity
3. **Operating Temperatures**
  - a. Applications across a broad range of temperatures, -80F to 93F
  - b. Performance properties vary with temperature
4. **Abrasion Mechanism**
  - a. Sliding – High toughness and high tear strength best
  - b. Impact – High resiliency best
  - c. Erosion / Corrosion – elastomers protect against most ferrous corrosion mechanisms
5. **Tooling Costs**
  - a. Open casting vs. compression vs. injection molds

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