

# BALL VALVE NON-METALLIC SEATS

TRU-HARD 66- For Impact Resistant Applications. 425°F at 10,000 PSI

TRU-THERM 99- For High Temperature Applications. 650°F at 10,000 PSI

The goal of Trueline Valve Corporation & JC-TL Ball Corporation was to develop a selection of seat and seal compounds which enhanced friction and wear properties while also providing a positive seal. We felt they must contain properties which would allow their use at high temperatures, in corrosive environments, in both wet and dry services.

The result was our proprietary seats: Tru-Hard 66 and Tru-Therm 99.

The goal was attained by the use of organic, inorganic, granular and fibrous fillers. Little or no abrasive fillers, such as Glass, were use in the development of these seats which exhibit truly unique chemical, thermal and physical properties.

Seats and seals manufactured from these compounds provide an alternative to Metal Seated Valves in many instances as:

- These seats offer thermal and abrasion resistance.
- They are not soft and mechanically deficient as is PTFE.
- They do not hydrolyze as do Polyimides and Amide-Imides.
- They are not fragile as is pressed Carbon.
- They show little tendency to absorb moisture or swell.

## Seat Specifications and Physical Properties:



Property		TRU -HARD 66	TRU -THERM 99
Density		1.86	1.89
Tensile Strength (PSI)		2667	3000
Elongation %age		4	5
Impact Resistance ft/lbs	Notched	3.1	4
	Unnotched	8	8.6
Flexural Strength (PSI) D-790 @ 5% Strain		6807	6988
Flexural Modulus (PSI) D-790		0.09	0.14
Compressive Strength (PSI) D-695		5600	4500
Hardness Shore D		69	65
Coefficient of Linear Thermal Expansion (in/in °F)		$4 \times 10^{-5}$	$3 \times 10^{-5}$
Coefficient of Friction		0.1	0.09

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