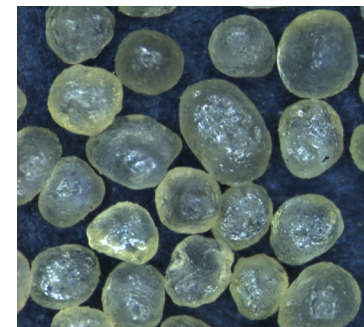


InnoProp® PLT Resin-Coated Proppant



InnoProp® PLT is an ultra high-performance non-phenolic curable resin coated proppant designed to prevent proppant flowback in low-temperature reservoirs without the use of an activator.

The Polyurethane Low Temperature resin, coated on high-quality U.S. Silica White® sand, is designed to enable bonding down to 70°F bottom-hole static temperatures.



ADVANTAGES AND BENEFITS:

- Best-in-class bond strength, crush and conductivity at lower temperatures
- Bonds in low-temperature reservoirs without the use of an activator
- Significantly reduces proppant flowback
- Increased conductivity provides enhanced hydrocarbon recovery
- Formaldehyde-free polyurethane resin coating
- Re-bonding capability helps to ensure continued performance under cyclic stress
- Durable coating reduces fines generation under cyclic stress
- Substrate is U.S. Silica White® sand, ensuring consistent quality in every shipment
- Compatible with all current fluid systems
- Available in multiple mesh sizes

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES

API RP-19C / ISO 13503-2

Product	Mesh Size	Upper Temp Stability (°F)	Bulk Density g/cm ³	Bulk Density lb/ft ³	Particle Density g/cm ³	Absolute Volume gal/lb	Acid Solubility (%)	Turbidity (NTU)
InnoProp PLT	20/40	175	1.55	96	2.58	0.0852	< 2.0	< 250
InnoProp PLT	30/50	175	1.53	95	2.55	0.0846	< 2.0	< 250
InnoProp PLT	40/70	175	1.48	92	2.56	0.0819	< 2.0	< 250

CONDUCTIVITY

Product	Mesh Size	CONDUCTIVITY MD-FT at 125°F 2 LB/FT ²				
		Closure Stress [PSI]				
		1,000	2,000	4,000	6,000	8,000
InnoProp PLT	20/40	6,749	5,889	4,172	3,039	1,748
InnoProp PLT	30/50	2,491	2,032	1,517	1,131	699
InnoProp PLT	40/70	1,721	1,455	1,072	825	521

PERMEABILITY

Product	Mesh Size	PERMEABILITY DARCY at 125°F 2 LB/FT ²				
		Closure Stress [PSI]				
		1,000	2,000	4,000	6,000	8,000
InnoProp PLT	20/40	319	283	206	155	92
InnoProp PLT	30/50	117	97	74	57	37
InnoProp PLT	40/70	82	71	53	42	27

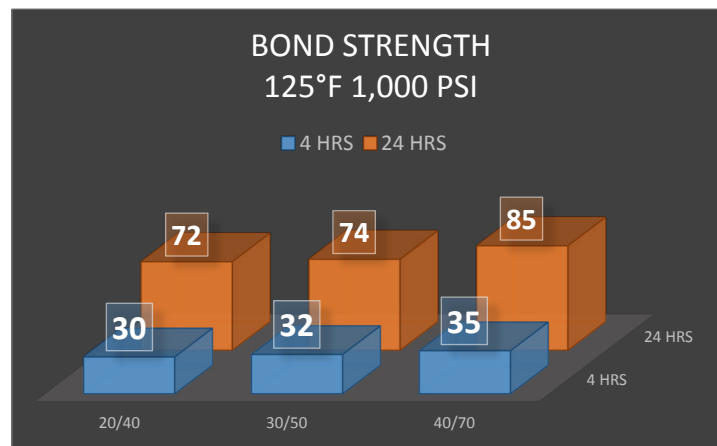
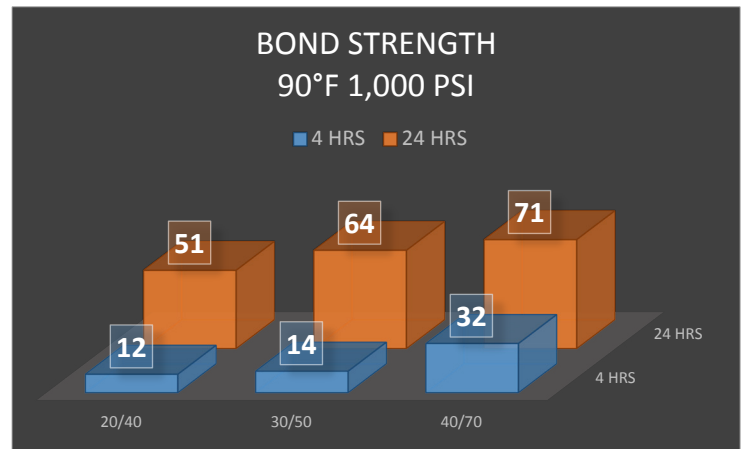
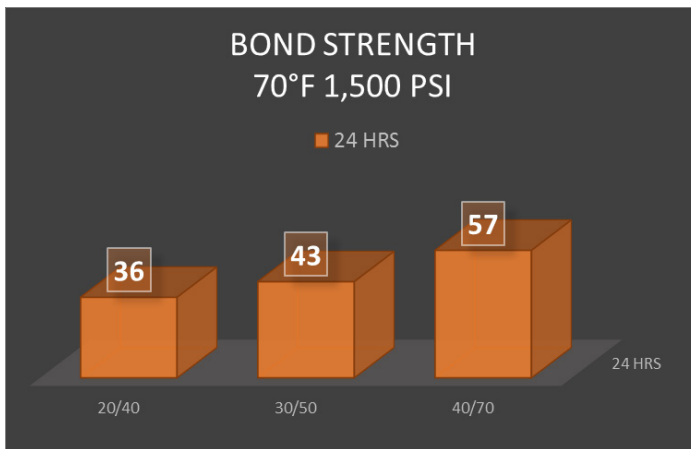


CRUSH RESISTANCE

API RP-19C / ISO 13503-2

Product	Mesh Size	Closure Stress [PSI]			
		2,000	4,000	6,000	8,000
InnoProp PLT	20/40	0.1%	0.2%	0.5%	1.5%
InnoProp PLT	30/50	0.1%	0.2%	0.5%	1.4%
InnoProp PLT	40/70	0.1%	0.2%	0.3%	1.0%

UNCONFINED COMPRESSIVE STRENGTH [UCS] - PSI



Compatibility: This resin-coated proppant is fully compatible with most, if not all, commonly used fracturing fluids both water and oil based. Testing with specific fluids prior to pumping is highly recommended. Some fluids may require adjustment of pH control, breaker, or foamer loadings. Avoid prolonged exposure to highly alkaline fluids, i.e. pH greater than 12 and/or greater than the equivalent of 2.2 gallon free caustic soda per 1000 gallons of fluids.

Disclaimer: The information set forth in this Product Data Sheet represents typical properties of the product described; the information and the typical values are not specifications. U.S. Silica Company makes no representation or warranty (expressed or implied) concerning the products, described in this product data sheet.

Warning: The product contains respirable crystalline silica-quartz, which can cause silicosis (an occupational lung disease) and lung cancer. For detailed information on the potential health effects of respirable crystalline silica - quartz, see the U.S. Silica Company Safety Data Sheet.