

Resin Coated Proppants



Prime Plus™
Premium Resin Coated Sand



Description

Prime Plus™ proppants are an advanced, curable resin coated sand available in 16/30, 20/40, 30/50, and 40/70 mesh sizes. These proppants are designed for use in the major basins of North America where premium performance is required. They have a proven track record of delivering the industry’s highest performing curable resin coated sand conductivity, resulting in improved well performance.

Typical Applications

Fracture treatments:

- At closure stress up to:
 - 10,000 psi [69 MPa] (16/30 and 20/40)
 - 12,000 psi [83 MPa] (30/50 and 40/70)
- At bottom-hole static temperatures* from:
 - 130 – 450°F [54 – 232°C] (16/30 and 20/40)
 - 110 – 450°F [43 – 232°C] (30/50 and 40/70)

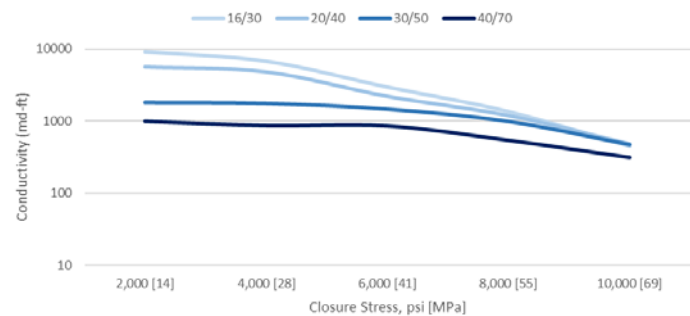
Technical Advantages and Benefits

- High conductivity
- Proppant flowback control
- Proppant fines reduction
- Cyclic stress resistance
- Minimizes proppant embedment
- Reduces respirable silica dust exposure below PEL limits

Conductivity

PropTester, Inc. Long-Term Baseline Procedure
Proppant Concentration: 2 lb_m/ft³ [9.8 kg/m³], Temp: 250°F [121°C]

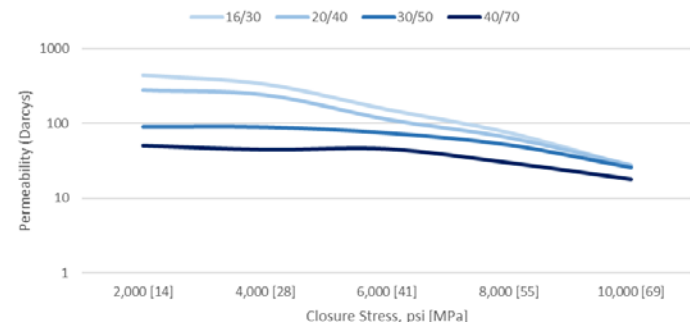
Closure Stress, psi [MPa]	2,000 [14]	4,000 [28]	6,000 [41]	8,000 [55]	10,000 [69]
Size	Conductivity (md-ft)				
16/30	9,045	6,698	2,955	1,358	454
20/40	5,586	4,762	2,190	1,191	483
30/50	1,807	1,752	1,461	987	469
40/70	995	865	856	538	309



Permeability

PropTester, Inc. Long-Term Baseline Procedure
Proppant Concentration: 2 lb_m/ft³ [9.8 kg/m³], Temp: 250°F [121°C]

Closure Stress, psi [MPa]	2,000 [14]	4,000 [28]	6,000 [41]	8,000 [55]	10,000 [69]
Size	Permeability (Darcy)				
16/30	442	335	154	75	27
20/40	279	241	114	65	28
30/50	91	90	75	52	26
40/70	51	45	46	30	18



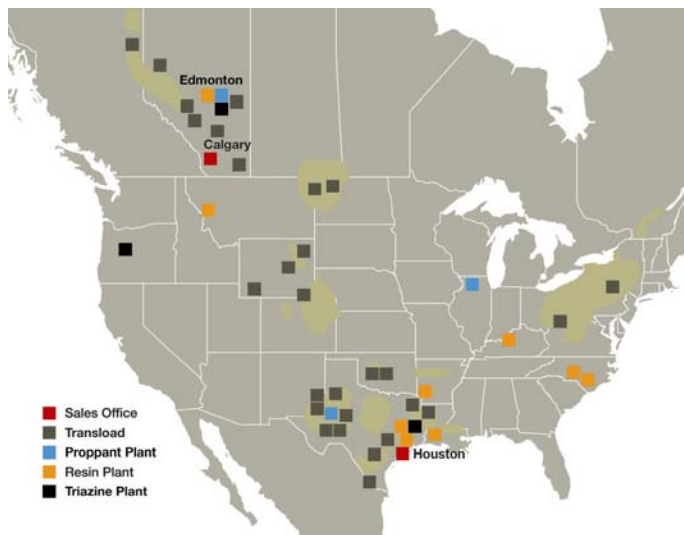
* Does not require a low temperature consolidation aid down to recommended temperatures.

Chemical Properties	Typical
Composition	resin coated, northern white frac sand
Resin Type	thermosetting, curable
Color*	light green
Solubility, weight %	
in water, brine & HCl	0.0
in HCl/HF acid, API RP 19C	≤ 0.3
in oil	0.0

*May vary due to white substrate hue variation. Color does not influence performance.

Physical Properties	Typical			
Mesh Size	16/30	20/40	30/50	40/70
Physical State	solid granule			
Specific Gravity	2.59	2.63	2.60	2.59
Bulk Density				
g/cm ³	1.53	1.47	1.45	1.45
[lb/gal]	[12.8]	[12.3]	[12.1]	[12.1]
Pipe Fill Factor				
cm ³ /g	0.653	0.680	0.690	0.690
[gal/lb]	[0.0782]	[0.0813]	[0.0826]	[0.0826]
Specific Volume				
cm ³ /g	0.386	0.380	0.385	0.386
[gal/lb]	[0.0463]	[0.0455]	[0.0461]	[0.0463]

North America Manufacturing and Distribution Network



Hexion continues to strategically locate transloads and proppant plants near the major shale plays in North America to meet the industry's increasing need for resin coated proppants.



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