

Resin Coated Proppants



kRT™ Economical Resin Coated Sand



Description

Hexion's kRT™ proppants are a curable resin coated sand available in 16/30, 20/40, 30/50, 40/70, and 100 mesh sizes. kRT proppants are an economical resin coated sand that controls proppant flowback in reservoirs down to 110°F and enhances conductivity.

Typical Applications

Fracture treatments:

- At closure stress up to:
 - 8,000 psi [55 MPa] (16/30 and 20/40)
 - 10,000 psi [69 MPa] (30/50 and 40/70)
 - 12,000 psi [83 MPa] (100)
- At bottom-hole static temperatures* from:
 - 140 – 450°F [60 – 232°C] (16/30 and 20/40)
 - 110– 450°F [43 – 232°C] (30/50, 40/70 and 100)

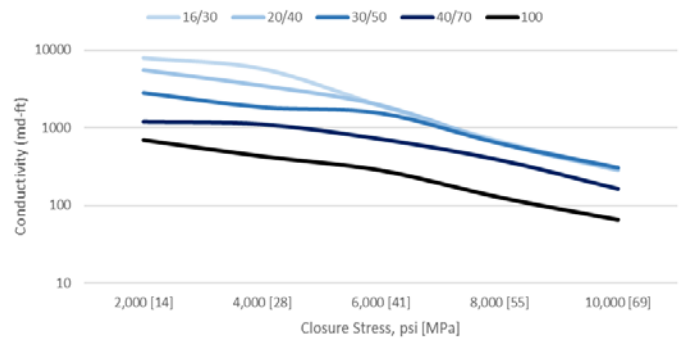
Technical Advantages and Benefits

- Enhanced 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/ft² [9.8 kg/m²], Temp: 250°F [121°C]

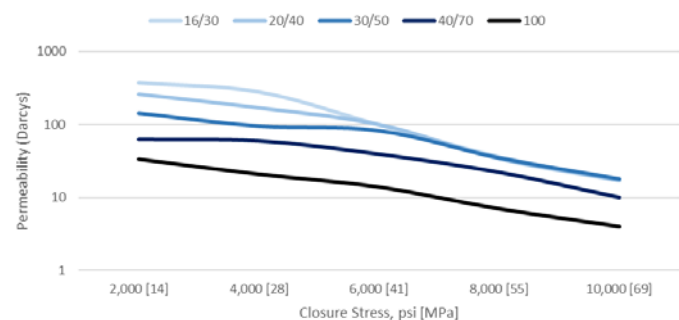
Closure Stress, psi [MPa]	2,000 [14]	4,000 [28]	6,000 [41]	8,000 [55]	10,000 [69]
Size	Conductivity (md-ft)				
16/30	7,967	5,758	1,910	670	296
20/40	5,471	3,451	1,934	633	282
30/50	2,790	1,828	1,524	623	302
40/70	1,191	1,103	711	384	163
100	698	431	283	127	65



Permeability

PropTester, Inc. Long-Term Baseline Procedure
 Proppant Concentration: 2 lb_m/ft² [9.8 kg/m²], 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	376	281	99	36	17
20/40	261	169	100	34	17
30/50	142	95	82	35	18
40/70	62	59	39	22	10
100	34	21	14	7	4



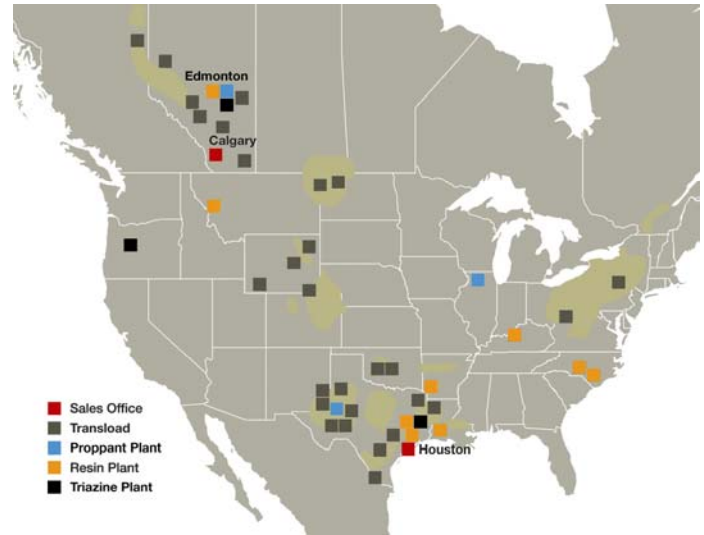
* Does not require a low temperature consolidation aid down to recommended temperatures.

Chemical Properties	Typical
Composition	resin coated, northern white frac sand
Resin Type	thermosetting, curable
Color*	tannish to grayish
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	100
Physical State	solid granule				
Specific Gravity	2.62	2.61	2.62	2.62	2.61
Bulk Density					
g/cm ³ [lb/gal]	1.50 [12.6]	1.56 [13.0]	1.44 [12.0]	1.40 [11.7]	1.42 [11.9]
Pipe Fill Factor					
cm ³ /g [gal/lb]	0.665 [0.0796]	0.641 [0.0768]	0.694 [0.0832]	0.714 [0.0855]	0.704 [0.0840]
Specific Volume					
cm ³ /g [gal/lb]	0.381 [0.0457]	0.383 [0.0459]	0.382 [0.0458]	0.382 [0.0458]	0.383 [0.0459]

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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