

Permian Dune Sand Specs

Company Name	Region	Mining Location	Mesh size	Crush Resistance - K Factor	Specific Gravity	Bulk Density (lb/ft3)	Bulk Density (g/cm3)	Krumbein Roundness	Krumbein Sphericity	Acid Solubility (wt %)	Turbidity (FTU)	Conductivity (MD-F1)						Permeability (DARCY)					
												2000 psi	4000 psi	6000 psi	8000 psi	10000 psi	12000 psi	2000 psi	4000 psi	6000 psi	8000 psi	10000 psi	12000 psi
U.S. Silica	Midland/Hickory Formation	Crane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Badger Mining Corp.	Northern Delaware	Kermit	40/70	6K	2.64	93.0	-	-	-	2.50%	-	-	-	-	-	-	-	-	-	-	-	-	-
			50/140	10K	2.64	92.4	-	-	-	3.40%	-	-	-	-	-	-	-	-	-	-	-	-	-
Alpine Silica	Northern Delaware	Kermit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
High Roller	Northern Delaware	Kermit	40/70	7K	2.65	93.33	1.50	0.7	0.8	2.50	13	-	-	-	-	-	-	-	-	-	-	-	-
			50/140	9K	2.63	94.35	1.51	0.6	0.7	2.30%	54	-	-	-	-	-	-	-	-	-	-	-	-
			100 M	10K	2.65	90.02	1.44	0.8	0.8	2.30%	10	-	-	-	-	-	-	-	-	-	-	-	-
Atlas Sand	Northern Delaware	Kermit	40/70	7-8K	2.65	92.25	1.48	0.7	0.7	< 1.0%	< 110	-	-	-	-	-	-	-	-	-	-	-	-
			100 M	10-12K	2.59	91.51	1.47	0.7	0.8	< 1.0%	< 100	-	-	-	-	-	-	-	-	-	-	-	-
Black Mountain	Northern Delaware	Vest & El Dorado	40/70	8K	2.63	92	1.5	> 0.6	0.7	< 3.0%	< 100	927	617	328	154	78	49	49	34	18	8.9	4.6	2.9
			100 M	10K	2.64	90	1.4	> 0.6	0.7	< 3.0%	< 100	505	372	199	90	44	28	26	20	11	5.1	2.5	1.7
	Southern Delaware	Monahans	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Schlumberger/Wisconsin Proppants	Midland/South Delaware	Monahans	40/70	7K	2.65	-	1.49	0.8	0.7	2.00%	10	800	520	274	132	-	-	41	28	16	8	-	-
			100 M	11K	2.65	-	1.47	0.8	0.7	2.50%	22	351	245	143	72	-	-	19	13	8	4	-	-
Preferred Sands	Midland/South Delaware	Monahans	40/70	7K	2.66	92.8	1.49	0.8	0.8	-	15	1140	769	342	161	-	-	56	39	18	9	-	-
			100 M	10K	2.65	90.36	1.45	0.9	0.7	-	20	503	254	70	21	-	-	24	13	4	1	-	-
Capital Sand Proppants	Southern Delaware/Southern Midland	Monahans	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Covia Unimin	Southern Delaware/Southern Midland	Kermit & Crane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hi Crush	Northern Midland	Winkler Co. (Near Kermit)	100 M	11K	-	92.93	1.49	0.7	0.8	2.90%	115	503	249	104	45	17	7	26	14	6	3	1	0
Aequor Mgt.	Delaware	Culberson Co.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fairmount Santrol	Delaware	Winkler Co. (Near Kermit)	16/30	-	2.65	95	1.52	>= 0.6	>= 0.6	< 1.5%	< 75	10200	4440	1730	720	-	-	379	191	78	38	-	-
			20/40	5K	2.65	93.8	1.5	>= 0.6	>= 0.6	< 1.5%	< 75	4030	2510	1220	470	190	-	218	143	74	30	12	-
			30/50	6K	2.65	90.3	1.45	>= 0.6	>= 0.6	< 1.5%	< 75	2770	1990	1050	390	240	-	150	111	62	25	16	-
			40/70	6K	2.65	87.9	1.41	>= 0.6	>= 0.6	< 2.0%	< 75	1630	1170	580	240	120	-	88	65	34	15	8	-
Vista Proppants	Delaware	Monahans	40/70	7K	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			100 M	9K	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Data sourced from company websites.