

Central Texas 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-FI)						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	Lamesa (processed in Voca)	16/30	4K	2.64 - 2.66	-	1.48 - 1.60	0.6	0.7	1.40%	10-110	7299	2919	11012	445	-	-	395	167	61	28	-	-
			20/40	5K	2.64 - 2.66	-	1.48 - 1.60	0.6	0.7	1.70%	10-110	4023	2666	847	319	-	-	217	128	51	20	-	-
			30/50	6K	2.64 - 2.66	-	1.48 - 1.60	0.6	0.7	1.80%	10-130	1758	1151	590	247	-	-	96	65	35	16	-	-
			40/70	6K	2.64 - 2.66	-	1.48 - 1.60	0.6	0.7	1.80%	10-130	1191	661	266	95	-	-	67	37	15	5	-	-
			100 M	7K	2.64 - 2.66	-	1.48 - 1.60	0.6	0.6	1.80%	10-150	-	-	-	-	-	-	-	-	-	-	-	-
	Queen City Sand Formation/Hickory Formation	-	30/50	6K	2.65	96.14	1.54	0.6	0.7	1.8%	<130	1758	1151	590	247	-	-	96	65	35	16	-	-
Fairmount Santrol	Delaware/Hickory Formation	Winkler Co. (processed in Voca)	40/70	6K	2.65	96.14	1.54	0.6	0.7	1.8%	<130	1191	661	266	95	-	-	67	37	15	5	-	-
			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	-
Unimin Unifrac	Hickory Formation	Brady, TX	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	-
			30/50	5K	2.65	95	1.53	>0.6	>0.6	<2.0%	<250	2482	1327	534	246	97	-	120	68	29	14	6	-
Vista Proppants and Logistics	Central	Granbury, TX	40/70	6K	2.65	94	1.5	>0.6	>0.6	<3.0%	<250	753	516	308	168	93	-	40	28	17	9	5	-
			100 M	9K	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Tolar, TX	40/70	7K	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			100 M	9K	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Erna Frac Sand	Central/Llano Uplift	Erna, TX	40/70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			100 M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Texas Silicate Distributors, LLC	Hickory Formation	Brady, TX	8/16	2K	2.65	99.8	1.6	0.63	0.67	0.60%	15	26387	2564	1537	168	-	-	1414	208	98	12	-	-
			12/20	3K	2.65	99.8	1.6	0.64	0.68	0.90%	32	14864	4875	1865	811	-	-	759	269	107	48	-	-
			16/30	3K	2.65	99.8	1.6	0.63	0.64	0.90%	38	9970	4078	1575	570	-	-	516	222	91	34	-	-
			20/40	4K	2.65	96.06	1.54	0.62	0.64	0.90%	48	4592	2051	952	383	-	-	249	119	58	22	-	-
			30/70	5K	2.65	95.83	1.53	0.62	0.64	1.30%	67	1852	1132	564	263	-	-	100	64	33	16	-	-
			100 M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Fredonia, TX	12/20	3K	2.64	99.8	1.59	0.7	0.7	0.80%	6	14893	4527	1752	696	-	-	787	256	106	44	-	-
			16/30	4K	2.65	96.1	1.54	0.7	0.8	0.60%	17	7079	3395	1304	573	-	-	380	193	80	37	-	-
			20/40	5K	2.65	94.6	1.52	0.6	0.8	0.80%	28	4223	2608	1247	563	-	-	227	148	75	36	-	-
			30/50	5K	2.65	92.2	1.48	0.6	0.7	0.80%	40	2766	1985	1049	389	-	-	150	111	62	25	-	-
			40/70	7K	2.63	91.1	1.46	0.6	0.7	1.10%	44	1626	1165	579	243	-	-	88	65	34	16	-	-
			100 M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pioneer Sands, LLC	Hickory Formation	Brady, TX	40/70	6-7K	2.65	-	-	>= 0.6	>= 0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			100 M	-	2.65	-	-	>= 0.6	>= 0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Data sourced from company websites.