

**TOMASZOW, POLAND**

ACCUPACK® Gravel Packing Sands are produced from naturally occurring monocrystalline industrial quartz of exceptional purity and structural integrity. These durable grains will not degrade during handling or pumping, will not segregate during placement and are inert and nonreactive in the downhole environment.

Superior performance as a gravel pack can be attributed to the extensive processing and rescreening which optimizes the uniformity coefficient. ACCUPACK offers excellent formation bridging and retained uniform permeability without plugging or channeling under back flow pressure. ACCUPACK performs at significant depths and temperature gradients without crushing, compacting or chemically degrading to minimize formation fines from the permeable zone while maintaining flow velocity and production efficiency.

**PARTICLE SIZE ANALYSIS AND PROPERTIES**

Mean Values. These Do Not Represent A Specification.

	Mesh Size		<u>12/20</u>	<u>16/30</u>	<u>20/40</u>	<u>30/50</u>	<u>40/60</u>
	<u>ASTM</u>	<u>Microns</u>					
<b>Typical Mean % Retained on Individual Sieves</b>	12	1.70mm	0.3	---	---	---	---
	16	1.18mm	76.3	0.2	---	---	---
	18	1.00mm	23.1	10.9	---	---	---
	20	850	0.1	25.2	---	---	---
	25	710	---	54.7	2.5	---	---
	30	600	---	8.9	36.5	1.2	---
	35	500	---	---	41.8	16.3	---
	40	425	---	---	18.8	41.3	2.2
	45	355	---	---	---	27.1	32.3
	50	300	---	---	0.3	13.3	48.3
	60	250	---	---	---	---	16.2
	70	212	---	---	---	0.9	1.0
	PAN	PAN	---	---	---	---	---
	<b>Krumbein Shape Factors</b>						
Roundness	API RP 58		0.7	0.7	0.7	0.7	0.7
Sphericity	API RP 58		0.7	0.7	0.7	0.7	0.7
<b>Acid Solubility (%)</b>							
	API RP 19C		3.5	2.2	1.4	2.1	2.5
<b>Turbidity (FTU)</b>							
	API RP 58		106	44	47	45	51
<b>ISO Median Diameter D50 (mm)</b>							
			1.286	.829	.570	.435	.350

**PHYSICAL PROPERTIES**

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**Mean Percent by Weight**

Color	White	Visual
Hardness (Mohs)	7.0	Moh's Scale
Melting Point (°F/°C)	3135/1724	ASTM C-24
Moisture Content (%)	<0.1	ASTM C-566
Specific Gravity (g/cm <sup>3</sup> )	2.65	ASTM C-128
Bulk Density (g/cm <sup>3</sup> )	1.53	ASTM C-29
Bulk Density (lb/ft <sup>3</sup> )	95	ASTM C-29
Silicon Dioxide (SiO <sub>2</sub> )	≥99.00	

**CONTACT INFORMATION**

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**HEALTH HAZARD WARNING:** Prolonged inhalation of dust associated with the materials described in this data sheet can cause delayed lung injury including Silicosis, a progressive, disabling and sometimes fatal lung disease. IARC and NTP have determined that crystalline silica can cause lung cancer in humans. Risk of injury is dependent on the duration and level of exposure. Follow OSHA or other relevant safety and health standards for the form of crystalline silica called Quartz. Current material safety data sheets, containing safety information, are available and should be consulted before usage.

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