16/30-Mesh

Premium frac sand

WISCONSIN PROPPANTS

APPLICATIONS

- Hydraulic fracturing operations
- Operations that require proppant with premium performance specifications

BENEFITS

- Ensures superior long-term conductivity due to high crush resistance
- Minimizes fines generation due to high roundness and sphericity
- Withstands closure stresses up to 5,000 psi
- Reduces dust and fines generation via low acid solubility and frac sand turbidity
- Provides superior crush performance due to high silica content

FEATURES

- Compliance with API Standard 19C
- Roundness and sphericity values typically greater than or equal to 0.7

The 16/30-mesh premium frac sand is selected with the highest quality standards. Sourced from Midwest mines in the Wonewoc Formation, 16/30-mesh premium frac sand exceeds industry expectations for high-quality Northern White sand. The high resistance to crush and very low acid solubility enable 16/30-mesh premium premium frac sand to withstand harsh downhole conditions and maintain strength and integrity after fracture closure.

16/30-mesh premium frac sand has roundness and sphericity values typically greater than or equal to 0.7.

Properties	
Specific gravity (apparent density)	2.65
Bulk density, g/cm^3	1.58
Roundness	0.8
Sphericity	0.7
Grain size distribution (GSD), in size wt %	>94.0
Acid solubility,† %	0.3
Turbidity, NTU	61

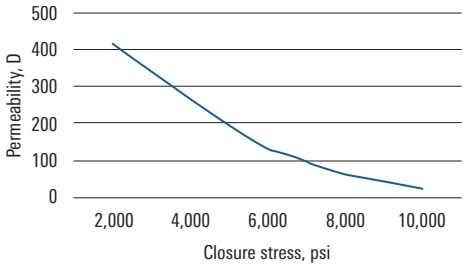
†Performed in 12:3 mud acid for 30 minutes at 150 degF [66 degC]

Conductivity and Permeability		
Stress, psi	**Conductivity, mD.ft**	**Permeability, D**
2,000	7,602	412
4,000	4,707	263
6,000	2,271	133
8,000	1,006	61
10,000	424	27

Test conditions: ISO 13503-5
Wisconsin sandstone, 150 degF [66 degC], 2 lbm/ft^2 [9.8 kg/m^2]
50 hours, 2 wt % (167 lbm/1,000 galUS [20 kg/m^3]) potassium chloride (KCl)

Crush Test (ISO 13503-2): K value, 5,000 psi	
Stress, psi	**Fines, wt %**
5,000	8.5
6,000	11.3

Sieve Analysis: Median diameter, 0.889 mm	
Mesh	**wt %**
12	0.1
16	3.4
18	23.5
20	39.4
25	24.1
30	7.8
40	1.3
Pan	0.4



Permeability measured at 150 degF, 2 lbm/ft^2. High crush resistance and roundness and sphericity values contribute to high permeability.