12k ISP

Features

Our testing reveals that in most cases KIP Products crush hemispherically

KIP can custom manufacture ceramic proppant with specific density, size and crush strength for use in very specific well formations.

Production increases when using the “KIP” high strength ceramic proppant. High pressure and extreme heat require the strongest crush strength and proppant engineering technology.

> “KIPs SP PRODUCTS ARE PROVEN TO INCREASE OIL AND GAS PRODUCTION

API Crush / Fines	12,500 PSI	3.93%	20-40 KIP
API Crush / Fines	12,500 PSI	2.83%	30-50 KIP
API Crush / Fines	12,500 PSI	1.69%	40-70 KIP

All results based on averages

Roundness	0.9
Sphericity	0.9
Bulk, gm/cm3	2.04

Testing Equipment:

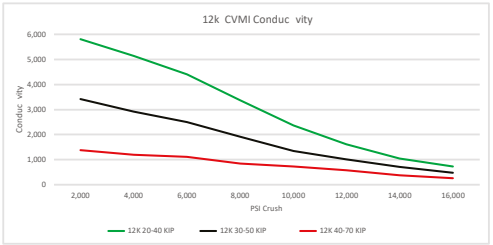
The equipment used for the measurement of conductivity and liquid permeability included: 75 ton Dake Press with air oil intensifier. API SS316 flow cells with 10 sq in. flow paths. Two - 10 sq in. Ohio Sandstone. Two-gallon nitrogen driven fluid reservoirs filled with 2% KCl and deoxygenated with nitrogen. An API cell was loaded with proppant sample to be tested. The proppant was leveled with a blade device.

Conductivity Procedure Overview:

All ISO13503-2:2006 / API RP-19C evaluations followed the procedures as outlined in that document. These are the new procedures created from the old API RP 56, 58 and 60 procedures.
The pressure was increased at 100 psi per minute at 1,000 and 2000 psi increments and the above measuring technique repeated until arriving at the requested long-term conductivity closures stresses.
The conductivity and permeability of the proppant were continuously monitored at 10,000 psi and 250 °F for 50 hours.

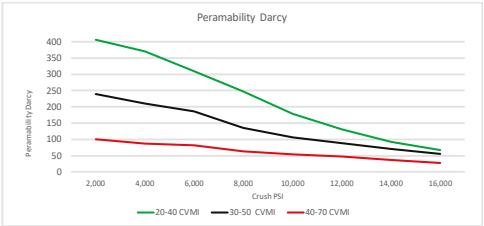
KUTHBAN INDUSTRIAL PROPPANT

APIRP19D is the guideline procedure used for testing the long-term conductivity of proppants. The procedure states: “The procedures presented in this publication are not intended to inhibit the development of new technology, material improvements, or improved operational procedures. Qualified engineering analysis and sound judgment is required for their application of it a specific solution.” The following are modifications to the APIRP19D which are used to improve testing with advances in equipment and data acquisition, acquired since the original published procedure in 2006 under ISO13503-3 and adopted as APIRP19D.



Long-Term Conductivity

Clousure Stress (psi)	20-40 KIP	30-50 KIP	40-70 KIP
2,000	5,815	3,422	1,383
4,000	5,135	2,913	1,201
6,000	4,401	2,506	1,118
8,000	3,374	1,919	848
10,000	2,362	1,352	722
12,000	1,608	1,012	580
14,000	1,048	712	375
16,000	737	476	262



Permability Darcy

Permeability Darcy	20-40 KIP	30-50 KIP	40-70 KIP
2,000	406	239	100
4,000	370	209	87
6,000	310	184	82
8,000	247	131	63
10,000	178	100	54
12,000	131	82	47
14,000	92	62	37
16,000	68	48	28