

Innovations In Proppant Technology Are Making A Difference In Well Output

By Danny Boyd
Special Correspondent

Evolving technologies are enabling oil and gas operators to use proppants that go deeper into fractures and provide superior conductivity, which results in greater yields and cost savings on frac jobs.

Resin-Coated Sand

The Oilfield Technology Group at Momentive Specialty Chemicals Inc. has developed OilPlus™ proppant, a resin-coated sand that continues to make inroads into the Eagle Ford and other North American plays, says John Turner, global sales director.

OilPlus proppants are designed to provide enhanced oil flow through the proppant pack, which enables operators to increase oil production, Turner says. In a 39-well comparison of wells with similar job designs, he says the operator realized a 33 percent increase in oil production per well over traditional resin-coated proppants.

Turner says OilPlus proppant is a curable, resin-coated sand that also delivers all the performance characteristics of the company's other product lines. This includes the Stress Bond™ technology that causes the grains to bond under the correct

amount of stress and temperature, which Turner says helps protect against proppant embedment and flow back.

Proppant flow back can be an issue in certain formations where, as the well produces, it forces proppant back into the wellbore, which can cause serious damage to surface equipment, Turner points out. "The more advanced resin-coated proppants are curable, so they only bond under closure stress and temperature when they are pumped into the fractures," he says. "Obviously, they don't

bond in the vertical wellbore or the horizontal lateral. They will bond only when they have differential pressure on them.

"OilPlus proppants exhibit all the characteristics of a high-quality, curable resin-coated proppant with the additional benefit of providing a higher rate of oil flow through the proppant pack," he concludes.

Turner says operators have reported quicker oil breakthroughs and higher initial production rates.

While OilPlus proppants allow higher flow rates through the proppant pack,



Momentive Specialty Chemicals Inc.'s OilPlus™ proppant is a resin-coated sand designed to increase oil flow through the proppant pack. Developed by its Oilfield Technology Group, the company describes OilPlus proppant as a curable, resin-coated sand with the bonding characteristics of a high-quality, resin-coated proppant.



Turner says they maintain the same flow rates for water and other frac fluids. “When you pump OilPlus proppants, you get the same flow of fluids through the pack, but you get a higher rate of oil,” he says. “We conducted extensive laboratory testing that showed oil flow was more than double when compared with other resin-coated proppants, raw sand or uncoated ceramics. The tests were apples-to-apples comparisons with similar mesh sizes.”

With a smaller mesh size, such as the

40/70 typically used for slickwater fracs, he says OilPlus proppant actually flows oil through the pack as fast as 20/40 Northern White frac sand.

“Companies have been very receptive to it,” Turner reports. “We have pumped this product in every major oil play in North America.”

He adds that Momentive Specialty Chemicals always has focused on developing innovative technology, including manufacturing some of the first curable

resin-coated proppants that offered a stress bondable technology. It also was the first company to offer proppants tagged with nonradioactive tracer technology to track proppant distribution, which is its PropTrac™ fracture diagnostics service. The company possesses the research and development capabilities and manufacturing plants to design and develop its own resin systems, which is an advantage that helped develop the OilPlus proppant technology, Turner says. □

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