

Performance Comparison: Drake Plastics Extruded KetaSpire KT820NT PEEK Rod* vs. Injection Molded Resin**

Summary: Drake Extruded KetaSpire PEEK shapes offer Mil-P 46183 compliant properties with improved Tensile Strength.

Test Method*** Mil-P 46183 Type 1 Spec	Tensile Strength @ Yield			Tensile Elongation @ Yield			Tensile Modulus			Flex Strength			Flex Modulus		
	ASTM D638 ≥13000 psi			ASTM D638 ≥4.5%			ASTM D638 ≥480 kpsi			ASTM D790 ≥19.5 kpsi			ASTM D790 ≥500 kpsi		
Sample Prep Method	Drake Extruded and Machined	Injection Molded ASTM Bars	% vs. Molded	Drake Extruded and Machined	Injection Molded ASTM Bars	% vs. Molded	Drake Extruded and Machined	Injection Molded ASTM Bars	% vs. Molded	Drake Extruded and Machined	Injection Molded ASTM Bars	% vs. Molded	Drake Extruded and Machined	Injection Molded ASTM Bars	% vs. Molded
9mm dia. Lot #1	16067	13300	120.8%	6.6	5.0	132.0%	442	518	85.3%						
13mm dia. Lot #2	16267	13723	118.5%	5.6	5.3	105.7%	496	523	94.8%						
15mm dia. Lot #2	15211	13723	110.8%	5.2	5.3	98.1%	534	523	102.1%						
15mm dia. Lot #3	15724	13900	113.1%	5.5	5.1	107.8%	533	541	98.5%	25	21.1	118.5%	601	538	111.7%
19mm dia. Lot #1	16333	13300	122.8%	5.2	5.0	104.0%	539	518	104.1%						
30mm dia. Lot #1	16300	13300	122.6%	5.0	5.0	100.0%	588	518	113.5%						
32mm dia. Lot #4	15619	13900	112.4%	4.8	5.1	94.1%	583	532	109.6%	25	21.3	117.4%	609	545	111.7%
72mm dia. Lot #2	15500	13723	112.9%	5.2	5.3	98.1%	542	523	103.6%	25.1	21.3	117.8%	623	543	114.7%
72mm dia. Lot #3	16048	13900	115.5%	5.2	5.1	102.0%	539	541	99.6%	25	21.1	118.5%	619	538	115.1%

*Rods were extruded by Drake and then machined into ASTM test bars for testing by Solvay Advanced Polymers.

**Resin was injection molded into ASTM test bars. Test results are per the resin certification of compliance for these lots.

***All testing performed by Solvay Advanced Polymers in accordance with ASTM standards.

Results based on actual test data, no results omitted or culled.

Past performance does not guarantee future results. For an extra charge, Drake will provide actual testing on our products.