

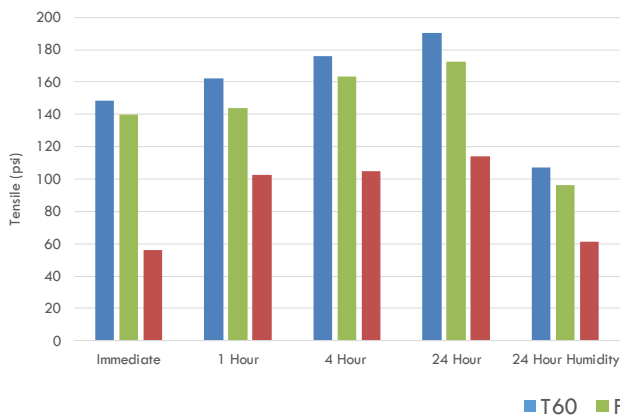


# Comparative Strength Data

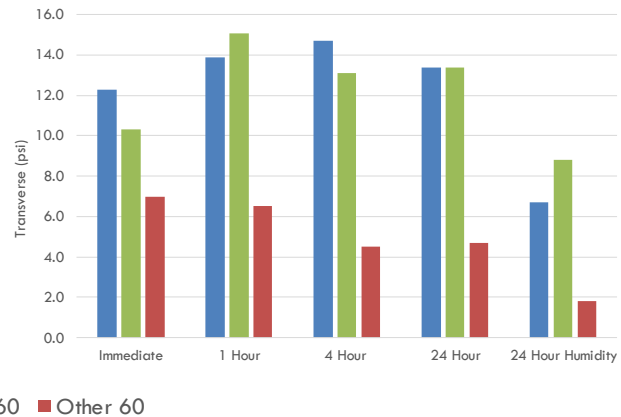
*Superior by Nature, Quality by Badger®*

AFS grain fineness number (GFN) and grain shape alone are not sufficient for measuring sand quality. Wet and dry processing techniques and superior process control play significant roles in product performance. Compared to another commercially available round grain 60 GFN silica sand, BadgerCast™ sands produce higher tensile and transverse strengths in a phenolic urethane cold box (PUCB) resin system.

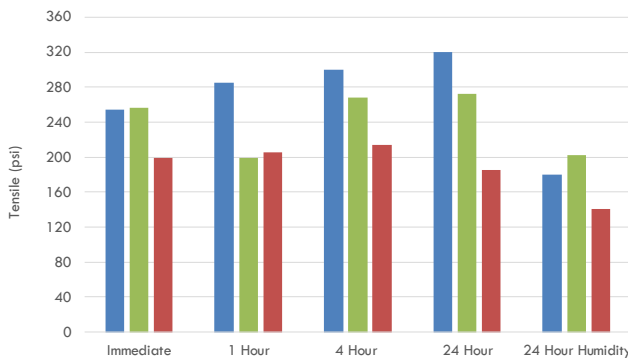
Dog Bone Comparison with 0.8% Resin



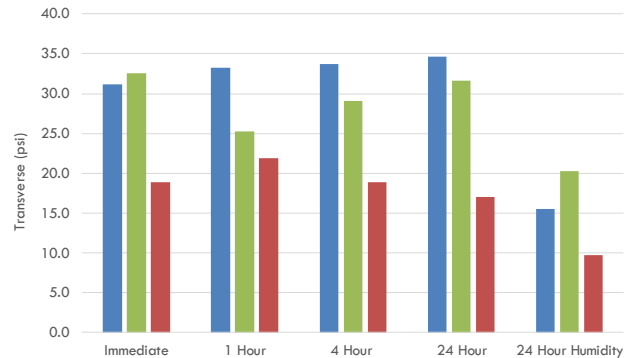
Disc Comparison with 0.8% Resin



Dog Bone Comparison with 1.3% Resin



Disc Comparison with 1.3% Resin



Dog Bone with 0.8% Resin

Disc with 0.8% Resin

Dog Bone with 1.3% Resin

Disc with 1.3% Resin

Interval	T60	FW60	Other 60	T60	FW60	Other 60	T60	FW60	Other 60	T60	FW60	Other 60
Immediate	148.7	139.8	56.1	12.3	10.3	7.0	253.7	256.2	198.6	31.2	32.5	18.9
1 Hour	162.3	143.7	102.5	13.9	15.1	6.5	284.8	199.0	205.5	33.2	25.3	21.9
4 Hour	176.3	163.3	105.0	14.7	13.1	4.5	300.1	267.7	214.3	33.7	29.1	18.9
24 Hour	190.4	172.5	114.1	13.4	13.4	4.7	320.3	272.7	184.9	34.7	31.6	17.0
24 Hour Humidity	107.1	96.5	61.1	6.7	8.8	1.8	179.7	202.3	140.7	15.5	20.3	9.7

All chemical and physical properties are typical and tested in accordance with AFS Mold and Core Test Handbook in BMC's laboratories. We give no warranty for our products, either expressed or implied. We recommend that you confirm all properties in the laboratory of your choice.