

# Fall 2018 Pervious Concrete Competition

Sponsored by the American Concrete Institute and ACI 522

Competition Date: 14-Oct-2018

\* = dimensional problem, 40% penalty

\*\*\* = improper material, disqualified



$$\text{FinalScore} = (0.50)(P) + (0.30)(S) + (0.20)(R)$$

	School Name	Team ID	Rule Compliance			Weight (g)	Avg Length (mm)	Avg Diameter (mm)	Permeability Time (seconds)	Split Tensile Load (kN)	C	FA	SF	TC (kg)	Report Score (%)	Unit Weight (kg/m <sup>3</sup> )	Split Tensile Strength (MPa)	Permeability (Falling Head) cm/s	CE	Permeability Ranking	Split Tensile Ranking	Report Ranking	CE Ranking	Performance Score	Perform Ranking
			Material	Curing	Size																				
1	Universidad San Francisco de Quito (USFQ)	USFQ1	x	x	x	1992.0	153.1	102.0	5.5	26.6	339.00		18.00	375.00	98	1593.2	1.08	2.380	0.049	10	42	1	18	17.80	5
2	Beirut Arab university	YAHMO	x	x	x	1968.7	148.9	100.7	5.6	25.9	318		35	388.10	92	1660.1	1.10	2.379	0.045	11	41	8	19	19.40	8
3	Centro Universitario FEI	FEIBR	x	x	x	2049.8	152.8	99.0	3.1	17.8	80		4	88.00	93	1743.3	0.75	4.459	4.903	1	48	6	DQ	20.13	DQ
4	Polytechnic University of Puerto Rico	POLY1	x	x	x	2223.2	150.3	101.2	5.9	31.9	314			314.00	67	1837.7	1.33	2.226	0.096	13	34	40	9	24.70	20
5	Arizona State University	DEVIL	x	x	x	2174.5	155.2	102.0	8.5	39.6				0.00	52	1713.6	1.59	1.541	DQ	25	26	48	DQ	29.90	30
6	Escuela Superior Politecnica Del Litoral (ESPOL)	ESPOL	x	x	x	2186.4	155.0	100.4	10.5	44.4				0.00	71	1780.9	1.82	1.292	DQ	30	16	34	DQ	26.60	23
7	Universidad de Puerto Rico, Recinto de Mayaguez	CAAMP	x	x	x	2333.6	154.0	101.2	10.3	33.3	147	111		202.50	80	1884.3	1.36	1.288	0.211	31	31	19	7	28.60	26
8	Universidad Peruana de Ciencias Aplicadas	UPC01	x	x	x	2119.5	152.6	100.8	14.3	43.2	250		13	275.00	80	1741.5	1.79	0.934	0.080	39	18	19	10	28.70	27
9	University of Missouri, Kansas City	rooUP	x	x	x	2404.0	152.1	101.8	13.7	62.2	335			335.00	93	1942.5	2.56	0.953	0.065	38	3	6	14	21.10	10
10	Washington State University	COUGS	x	x	x	2354.1	149.0	101.2	15.4	55.6	415			415.00	89	1963.2	2.35	0.849	0.028	40	6	12	24	24.20	18
11	Universidad Iberoamericana	UIA18	x	x	x	2049.2	152.4	100.7	5.5	28.4	266		14	294.00	97	1690.4	1.18	2.438	0.113	8	37	3	DQ	19.63	DQ
12	Saint Paul High School	SPHS1	x	x	x	2232.5	153.5	103.4	9.3	36.2	171	52		197.00	72	1733.5	1.45	1.374	0.261	29	29	32	6	29.60	29
13	Pittsburg State University	G n L	x	x	x	2210.1	151.6	101.9	7.5	32.7	119	94		166.00	70	1788.2	1.35	1.745	0.514	21	33	36	2	27.60	24
14	New Jersey Institute of Technology	NJIT1	x	x	x	2023.2	151.7	100.9	4.3	14.1				0.00	78	1666.7	0.59	3.084	DQ	4	49	24	DQ	21.50	11
15	Ohio State University	BUCKS	x	x	x	2318.7	152.2	101.3	21.3	45.6				0.00	73	1890.3	1.88	0.619	DQ	44	14	31	DQ	32.40	37
16	University of Maryland	TERPS	x	x	x	2311.2	151.2	101.2	10.5	26.5				0.00	80	1899.5	1.10	1.259	DQ	34	40	19	DQ	32.80	38
17	Tecnológico de Costa Rica	FAMMP	x	x	x	2304.4	153.7	104.1	8.9	41.8	375			375.00	96	1762.1	1.66	1.403	0.044	28	23	5	20	21.90	12
18	North Carolina State University	WOLF1	x	x	x	2031.6	144.8	102.0	7.0	39.0	353		19	391.00	97	1718.0	1.68	1.811	0.031	17	22	3	23	21.98	13
19	Universidad de Sonora	PH4Q4	x	x	x	2118.5	162.5	99.4	5.8	33.0				0.00	68	1680.3	1.30	2.422	DQ	9	35	39	DQ	31.92	35
20	Facultad de Estudios Superiores Aragón, UNAM	FESAR	x	x	x	2269.1	155.3	100.6	7.5	44.2	290		35	360.00	85	1837.9	1.80	1.790	0.069	19	17	14	12	17.40	4
21	Centro de Investigación Multidisciplinaria Aragón	CIMA1	x	x	x	2102.9	149.7	100.6	7.4	59.3	220	55		247.50	85	1767.0	2.51	1.796	0.297	18	4	14	3	13.00	2
22	Universidad Autónoma de Zacatecas	ICUAZ	x	x	x	2256.4	153.5	100.0	14.0	52.6				0.00	71	1871.0	2.18	0.970	DQ	37	8	34	DQ	27.70	25
23	Universidad Autónoma de Nuevo León	UANL1	x	x	x	2010.7	151.5	100.7	5.2	21.2	176	60		206.00	83	1666.1	0.88	2.585	0.262	7	45	18	5	20.60	9
24	San Jose State University	SPRTA	x	x	x	2542.7	153.0	101.4	83.9	59.7	264			264.00	74	2058.5	2.45	0.157	0.021	50	5	29	DQ	40.38	DQ
25	Universidad de Costa Rica	B4PC	x	x	x	2063.2	152.3	100.6	4.6	22.3	308		34	376.00	84	1704.6	0.93	2.895	0.050	5	44	17	16	19.10	6
26	Qatar University	MK1KH	x																DQ				DQ		
27	University of Toledo	UTACI	x	x	x	2208.5	153.9	101.5	8.2	45.7				0.00	57	1773.6	1.86	1.605	DQ	24	15	46	DQ	25.70	22
28	University of Sherbrooke	SHERB	x	x	x	2276.9	149.8	100.6	6.9	46.7	154		66	286.00	98	1913.3	1.97	1.921	0.162	15	12	1	8	11.30	1
29	Auburn University	AUACI	x	x	x	2257.6	151.8	100.8	10.7	47.6	356			356.00	91	1865.5	1.98	1.250	0.055	35	11	10	15	22.80	15
30	Texas State University	TXST	x	x	x	2314.6	153.3	101.7	10.4	11.1	220		95	409.00	34	1858.2	0.45	1.263	0.008	33	51	51	25	42.00	46
31	Instituto Tecnológico de Sonora (ITSON)	ITSON	x	x	x	2381.9	153.5	106.6	4.5	15.0				0.00	56	1740.4	0.58	2.656	DQ	6	50	47	DQ	38.36	44
32	Universidad Nacional de Ingeniería	UNIPL	x	x	x	2124.9	157.8	102.8	3.6	21.9	80	55		107.50	88	1622.3	0.86	3.607	1.497	3	46	13	1	25.06	21
33	Universidad de Cuenca	UDC18	x	x	x	1954.1	156.5	100.8	3.3	29.8				0.00	78	1566.3	1.20	4.047	DQ	2	36	24	DQ	16.60	3
34	Missouri University of Science and Technology	UMS&T	x	x	x	2110.0	153.8	101.9	6.8	19.2	194	90	15	269.00	92	1683.1	0.78	1.927	0.077	14	47	8	11	22.70	14
35	Southern Illinois University Edwardsville	SIUEA	x	x	x	2323.1	154.6	101.3	63.0	40.8				0.00	59	1864.8	1.66	0.211	DQ	49	24	45	DQ	40.70	45
36	Instituto Tecnológico de La Paz	MMMBH	x	x	x	1980.1	151.0	99.8	7.8	37.5				0.00	70	1678.1	1.59	1.728	DQ	23	27	36	DQ	33.50	DQ
37	Valparaiso University	Valpo	x	x	x	2215.3	149.4	102.3	10.1	32.4				0.00	61	1806.0	1.35	1.268	DQ	32	32	43	DQ	34.20	41

# Fall 2018 Pervious Concrete Competition

Sponsored by the American Concrete Institute and ACI 522

Competition Date: 14-Oct-2018

\* = dimensional problem, 40% penalty

\*\*\* = improper material, disqualified



$$FinalScore = (0.50)(P) + (0.30)(S) + (0.20)(R)$$

School Name	Team ID	Rule Compliance			Weight (g)	Avg Length (mm)	Avg Diameter (mm)	Permeability Time (seconds)	Split Tensile Load (kN)	C	FA	SF	TC (kg)	Report Score (%)	Unit Weight (kg/m <sup>3</sup> )	Split Tensile Strength (MPa)	Permeability (Falling Head) cm/s	CE	Permeability Ranking	Split Tensile Ranking	Report Ranking	CE Ranking	Performance Score	Perform Ranking
		Material	Curing	Size																				
38 * Universidad Autonoma de Centroamérica	Crete	x	x	x	2219.9	144.4	102.4	12.4	40.3	299			299.00	64	1865.4	1.73	1.020	0.040	36	20	42	22	45.36	47
		x	x	x																				
39 University of Nevada, Las Vegas (UNLV)	UNLV1	x	x	x	2239.2	150.6	101.6	9.2	46.5				0.00	74	1834.9	1.94	1.421	DQ	27	13	29	DQ	23.20	16
		x	x	x																				
40 Universidad Autonoma de Aguascalientes	UAAMX	x	x	x	1949.6	154.5	99.6	7.9	24.1				0.00	40	1619.8	1.00	1.729	DQ	22	43	50	DQ	33.90	40
		x	x	x																				
41 University of Minnesota Duluth	UMD44	x	x	x	2944.5	151.0	101.7	172.0	97.1				0.00	79	2400.2	4.03	0.076	DQ	51	1	23	DQ	30.40	32
		x	x	x																				
42 University of Illinois at Urbana-Champaign	ILLIN	x	x	x	2415.8	155.2	101.7	16.9	37.2	192		48	288.00	85	1915.2	1.50	0.781	0.049	42	28	14	17	32.20	36
		x	x	x																				
43 Penn State University- UP	PSU18	x	x	x	2514.9	153.1	101.5	22.3	52.7				0.00	78	2032.0	2.16	0.592	DQ	45	9	24	DQ	30.00	31
		x	x	x																				
44 University of Louisiana at Lafayette	Cajun	x	x	x	2089.2	153.1	101.9	5.8	28.4	339			339.00	72	1673.8	1.16	2.271	0.068	12	38	32	13	23.80	17
		x	x	x																				
45 University of Minnesota	UMNTC	x	x	x	2372.1	152.5	102.5	15.7	40.4				0.00	80	1884.6	1.65	0.822	DQ	41	25	19	DQ	31.80	34
		x	x	x																				
46 Facultad De Ingenieria -UAGro	UAGRO	x	x	x	2131.2	142.0	101.4	16.4	47.2				0.00	60	1860.4	2.09	0.779	DQ	43	10	44	DQ	33.30	39
		x	x	x																				
47 Universidad Rafael Landivar	URL18	x	x	x	2407.3	152.9	101.9	26.6	41.5				0.00	65	1930.6	1.70	0.490	DQ	46	21	41	DQ	37.50	43
		x	x	x																				
48 University of Victoria	SIMBA	x	x	x	2609.9	154.3	101.0	33.6	54.9				0.00	77	2113.0	2.24	0.397	DQ	47	7	27	DQ	31.00	33
		x	x	x																				
49 California State University, Chico (CSU)	CHICO	x	x	x	2314.0	148.8	101.6	8.8	41.3	188	48		212.00	75	1917.1	1.74	1.470	0.268	26	19	28	4	24.30	19
		x	x	x																				
50 University of Houston-Downtown	GATOR	x	x	x	2287.8	155.7	100.9	7.7	28.0				0.00	70	1837.2	1.13	1.751	DQ	20	39	36	DQ	28.90	28
		x	x	x																				
51 Instituto Politécnico Nacional (IPN)	IPN10	x	x	x	2064.9	153.2	101.1	7.1	34.5	330		33	396.00	90	1678.7	1.42	1.868	0.043	16	30	11	21	19.20	7
		x	x	x																				
52 University of Wisconsin - Platteville	UWP18	x	x	x	2593.0	154.9	101.4	41.7	80.1				0.00	42	2073.2	3.25	0.318	DQ	48	2	49	DQ	34.40	42
		x	x	x																				