

EMC CemPozz

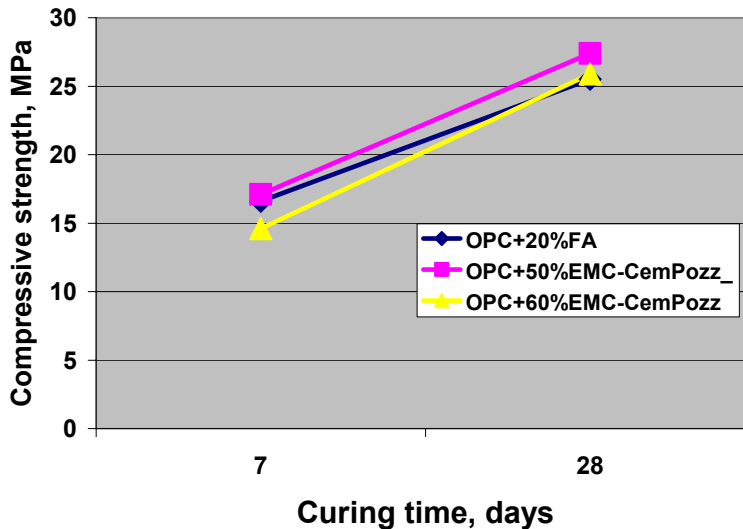
Concrete with 50-60% CEMPOZZ content

Slide # 6 demonstrates strength development of EN mortars containing EMC-high reactive pozzolan: EMC-CemPozz in comparison with pure OPC and OPC containing 20% of Fly ash (OPC replacement). This product can be simply added to the concrete mixer in the same way as the concrete producer is doing today with fly ash in traditional recipes. The test results show that replacement OPC by EMC-CemPozz as high as 50% is equivalent to traditional 20% fly ash replacement level.

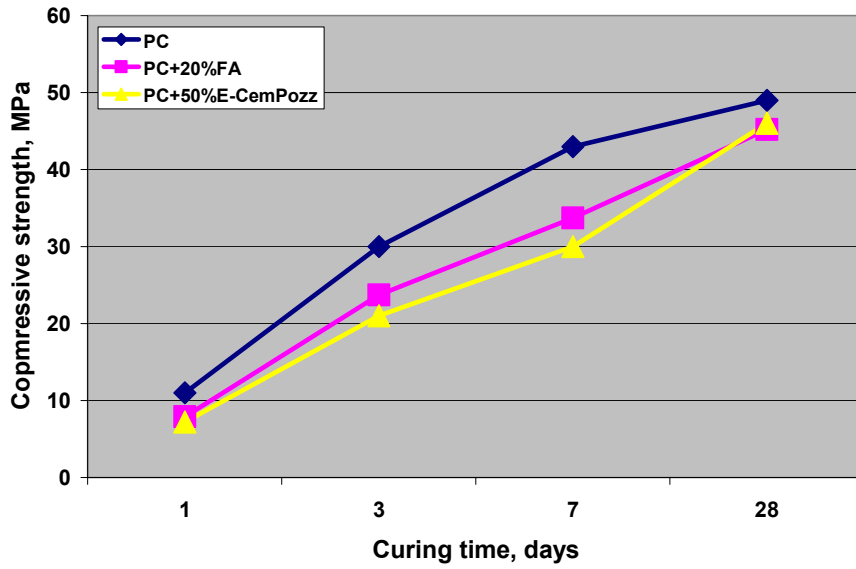
In USA, where an EMC pilot unit is in operation it has been confirmed by extensive industrial tests, that EMC-CemPozz performs even more effective when it is used in concrete. Slide # 7 represents the strength development of housing concrete with ca 271 kg of binder content per m³ with replacement of OPC with EMC-CemPozz up to 60%, which performs in line with concrete containing only 20% of fly ash.

As the data that we have shown demonstrate, EMC has resolved the strength development challenges and we are pleased to confirm that we have also resolved all of the other four critical criteria mentioned above.

Strength Development of the Concrete Produced with EMC - CemPozz (binder content 271kg/m³, w/B = 0.60)



Compressive Strength Development of EN mortar



To go back to the previous document close this one.

[Contents page](#)

To return to Contents page

CTRL + click to follow hyperlink

CemPozz Concrete Mix Design

	Mix #1		Mix #2		Mix #3		Mix #4		Mix #5		Mix #6		Mix #7	
	kg/m ³	lbs/cy	kg/m ³	lbs/cy	kg/m ³	lbs/cy	kg/m ³	lbs/cy	kg/m ³	lbs/cy	kg/m ³	lbs/cy	kg/m ³	lbs/cy
Cementitious content	273	460	273	460	273	460	265	446	249	420	249	420	243	410
CemPozz content,% by weight	50%	50%	55%	55%	55%	55%	35%	35%	50%	50%	60%	60%	60%	60%
CemPozz content	136	230	150	253	150	253	93	156	125	210	149	252	146	246
Water content	191	322	136	230	158	266	106	178	137	231	132	223	148	250
Water-to-cementitious content	0,70	0,70	0,50	0,50	0,58	0,58	0,40	0,40	0,55	0,55	0,53	0,53	0,61	0,61
Coarse aggregates(1" Limestone)	1097	1850	1097	1850	1097	1850	1127	1900	1038	1750	1068	1800	1038	1750
Fine aggregates	742	1250	823	1388	848	1429	827	1394	919	1550	854	1440	825	1390
Air-entrainment(ml/m ³)(oz/cy)	0	0	0	0	0	0	155	4	155	4	155	4	116	3
Water reducer(ml/m ³)(oz/cy)	0	0	696	18	1005	26	580	15	657	17	657	17	464	12
Slump (cm)(inches)	21,6	8,5	14,0	5,5	16,5	6,5	4,4	1,75	15,2	6	13,3	5,25	17,1	6,75
	MPa	PSI	MPa	PSI	MPa	PSI	MPa	PSI	MPa	PSI	MPa	PSI	MPa	PSI
7-day compressive strengths	9,8	1415	15,9	2308	12,7	1848	25,6	3715	14,6	2124	15,2	2199	12,7	1848
28-day compressive strengths	19,9	2892	27,6	4005	24,7	3581	33,8	4900	26,2	3800	26,0	3769	23,6	3422
56-day compressive strengths	24,9	3617	34,4	4996	30,4	4403	36,8	5340	31,2	4524	31,4	4547	29,5	4285

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