

CERTIFICADO DA QUALIDADE

ENSAIOS QUÍMICOS E FÍSICOS DO CIMENTO CP III 40 RS ENSACADO

Nov/2024

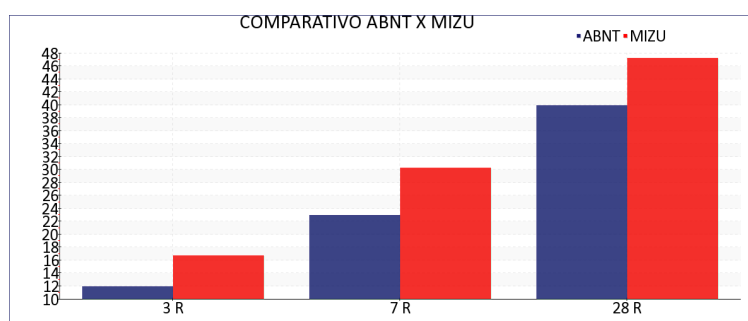
DATA	COMPOSIÇÃO QUÍMICA				RESISTÊNCIA A COMPRESSÃO			FINURA				EXP.	PEGA		CONSIST. NORMAL
	PF	RI	SO3	CaO.	3 DIAS	7 DIA	28 DIAS	MASSA	BLAINE	#P325	#200	QUENTE	INICIO	FIM	
	<6,5	<5,0	<4,5	Livre	>12,0	>23,0	>40,0	ESPECÍFICA	cm ² /g	%	%	mm	>60	<720	
	%	%	%	%	MPa	MPa	MPa	g/cm ³					min	min	%
01/11/2024	1.26	0.69	0.98	0.94	17.33	28.86	45.76	2.95	4886	1.08	0.11	0.00	222	281	33.24
04/11/2024	1.21	0.53	1.12	0.86	16.80	28.83	46.50	2.95	4804	1.12	0.09	0.00	223	278	33.18
05/11/2024	1.15	0.60	1.16	0.83	17.00	30.26	46.40	2.95	4804	1.01	0.09	0.00	217	270	33.40
06/11/2024	1.79	0.85	1.17	0.99	17.03	29.53	46.15	2.95	4804	0.79	0.06	0.00	214	265	33.44
07/11/2024	1.00	0.48	0.97	0.99	17.23	30.30	45.90	2.95	4859	0.85	0.12	0.00	210	268	33.40
08/11/2024	1.46	0.68	0.98	0.68	16.50	28.30	45.30	2.95	4859	0.82	0.08	0.00	220	275	33.48
09/11/2024	1.40	0.51	0.98	0.68	15.93	28.50	44.40	2.95	4939	0.72	0.08	0.00	213	265	33.50
11/11/2024	1.04	0.70	1.06	0.76	16.26	29.40	46.22	2.95	4992	1.14	0.14	0.00	222	277	33.52
12/11/2024	1.03	0.69	1.06	0.73	15.86	29.73	46.70	2.95	4859	0.92	0.16	0.00	224	279	33.48
13/11/2024	0.96	0.48	1.20	0.60	16.20	30.20	46.35	2.95	4859	1.34	0.14	0.00	213	264	32.92
14/11/2024	0.93	0.69	1.21	0.70	17.06	29.96	47.07	2.95	4859	1.08	0.12	0.00	222	275	32.94
16/11/2024	1.29	0.71	1.02	0.70	16.96	28.26	45.03	2.95	4912	1.09	0.16	0.00	225	283	32.94
18/11/2024	1.33	0.63	1.11	1.04	17.70	32.56	47.92	2.95	4832	0.99	0.15	0.00	220	278	33.36
19/11/2024	1.29	0.66	1.04	0.81	16.00	30.96	48.50	2.95	4912	1.19	0.14	0.00	226	283	33.24
21/11/2024	1.34	0.95	0.97	0.89	16.33	30.13	48.45	2.95	4750	1.14	0.14	0.00	217	272	33.14
22/11/2024	1.25	0.61	1.11	0.86	16.93	28.73	47.37	2.95	4859	1.35	0.19	0.00	218	277	33.10
23/11/2024	1.46	0.61	0.85	0.86	17.80	32.36	49.50	2.95	4832	0.90	0.12	0.00	213	270	32.74
25/11/2024	1.54	0.60	0.98	0.70	18.16	32.50	49.25	2.95	4912	1.07	0.15	0.00	217	272	32.78
26/11/2024	1.56	0.40	1.06	0.81	15.50	29.23	48.20	2.95	4992	0.83	0.09	0.00	209	259	32.76
28/11/2024	1.88	0.45	1.05	1.09	17.30	33.00	50.70	2.95	4832	1.29	0.16	0.00	225	287	32.02
29/11/2024	1.60	0.66	0.92	0.91	16.93	33.10	49.60	2.95	4859	1.09	0.17	0.00	209	261	32.38
30/11/2024	1.43	0.55	0.95	0.99	17.13	32.20	48.27	2.95	4886	1.07	0.13	0.00	206	263	32.42

Controle Estatístico

					R3	R7	R28								
Média	1.33	0.62	1.04	0.84	16.82	30.31	47.25	2.95	4868	1.04	0.13	0.00	218	273	33.06
Desvio	0.26	0.13	0.09	0.13	0.68	1.61	1.65	0.00	59	0.17	0.03	0.00	6	8	0.41
NBR 16697:2018	<6,5	<5,0	<4,5	-	>12,0	>23,0	>40,0	-	-	-	<8,0	<5,0	>60	<720	-

Comparativo ABNT x MIZU

	ABNT	MIZU
R3	12	16.82
R7	23	30.31
R28	40	47.25



Kênia gomes aires

Responsável Técnico

Kênia Gomes Aires

CRQ: 21.3.00318

CERTIFICADO DA QUALIDADE

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Dez/2024

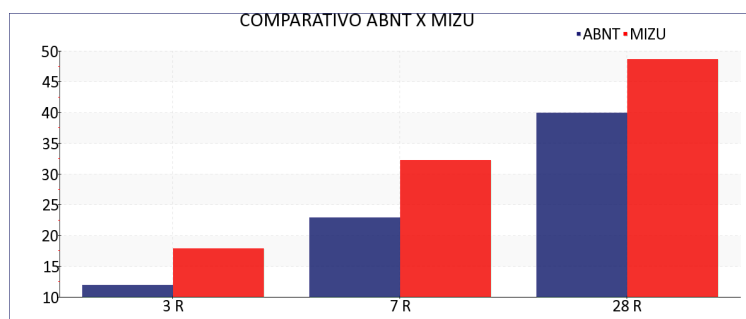
DATA	COMPOSIÇÃO QUÍMICA				RESISTÊNCIA A COMPRESSÃO			FINURA				EXP.	PEGA		CONSIST. NORMAL
	PF	RI	SO3	CaO.	3 DIAS	7 DIA	28 DIAS	MASSA	BLAINE	#P325	#200	QUENTE	INICIO	FIM	
	<6,5	<5,0	<4,5	Livre	>12,0	>23,0	>40,0	ESPECÍFICA	cm ² /g	%	%	mm	>60	<720	
	%	%	%	%	MPa	MPa	MPa	g/cm ³					min	min	%
02/12/2024	1.43	0.32	0.96	0.83	15.80	29.83	47.65	2.95	4804	1.33	0.20	0.00	214	267	32.46
03/12/2024	1.50	0.51	0.87	0.81	15.93	29.00		2.95	4804	1.60	0.23	0.00	233	290	32.46
04/12/2024	1.75	0.48	0.91	0.81	15.90	29.50	48.50	2.95	4859	1.49	0.20	0.00	225	280	32.46
05/12/2024	1.59	0.36	0.79	0.96	16.70	32.03	48.77	2.95	4859	1.34	0.20	0.00	231	290	32.36
06/12/2024	1.79	0.43	0.82	0.89	17.83	32.36		2.95	4832	0.94	0.14	0.00	214	269	32.34
07/12/2024	1.64	0.41	0.82	1.17	16.93	33.00	47.87	2.95	4804	1.33	0.21	0.00	219	270	32.44
09/12/2024	1.62	0.41	0.97	0.91	18.50	32.70	50.90	2.95	4750	1.28	0.15	0.00	224	287	32.42
10/12/2024	1.50	0.49	0.93	0.70	17.46	33.16		2.95	4722	1.00	0.18	0.00	211	266	32.44
11/12/2024	1.30	0.13	0.98	0.81	19.16	33.80		2.95	4832	1.30	0.17	0.00	234	292	32.44
12/12/2024	1.84	0.24	0.86	0.91	19.30	33.16		2.95	4804	1.29	0.16	0.00	230	289	32.62
13/12/2024	1.90	0.45	0.76	0.83	17.60	32.76		2.95	4859	1.35	0.15	0.00	225	284	32.30
14/12/2024	1.74	0.73	0.80	0.83	18.70	31.00		2.95	4886	1.14	0.16	0.00	218	275	32.30
16/12/2024	1.59	0.62	0.84	0.86	22.56	37.86		2.95	4832	0.92	0.10	0.00	213	264	31.22
17/12/2024	1.69	0.49	0.77	0.73	19.40	32.03		2.95	4886	1.36	0.22	0.00	222	277	32.22
18/12/2024	1.70	0.66	0.63	0.42	19.60			2.95	4804	1.21	0.14	0.00	227	290	32.26
19/12/2024	1.75	0.55	0.64	0.65		31.46		2.95	4832	1.22	0.13	0.00	222	279	32.36
20/12/2024	2.04	0.61	0.61	0.91	18.20	32.70		2.95	4777	1.30	0.17	0.00	216	271	32.32
21/12/2024	1.77	0.30	0.51	0.78	18.13	32.50		2.95	4722	1.07	0.15	0.00	227	291	32.20
22/12/2024	1.81	0.57	0.45	0.89	17.30	30.56		2.95	4777	1.05	0.18	0.00	214	269	32.28
23/12/2024	2.06	0.70	0.56	0.83	17.03	32.90		2.95	4804	1.16	0.16	0.00	226	281	32.22
26/12/2024	1.77		0.64	0.78	17.46	33.23		2.95	4750	1.37	0.18	0.00	224	284	31.90
27/12/2024	1.78		0.48	0.81	18.56	32.23		2.95	4804	1.04	0.21	0.00	230	293	31.82
31/12/2024	2.17		0.32	0.99	16.30			2.95	4804	1.12	0.18	0.00	238	303	31.70

Controle Estatístico

					R3	R7	R28								
Média	1.73	0.47	0.74	0.83	17.93	32.27	48.74	2.95	4809	1.23	0.17	0.00	223	281	32.24
Desvio	0.20	0.16	0.18	0.14	1.56	1.83	1.29	0.00	46	0.17	0.03	0.00	7	11	0.31
NBR 16697:2018	<6,5	<5,0	<4,5	-	>12,0	>23,0	>40,0	-	-	-	<8,0	<5,0	>60	<720	-

Comparativo ABNT x MIZU

	ABNT	MIZU
R3	12	17.93
R7	23	32.27
R28	40	48.74



Kênia gomes aires

Responsável Técnico
Kênia Gomes Aires
CRQ: 21.3.00318