

## CERTIFICADO DA QUALIDADE

### ENSAIOS QUÍMICOS E FÍSICOS DO CIMENTO CP III 40 RS ENSACADO

Dez/2025

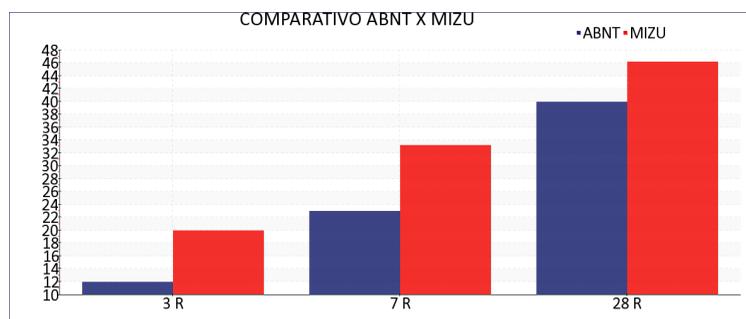
DATA	COMPOSIÇÃO QUÍMICA				RESISTÊNCIA A COMPRESSÃO			FINURA				EXP.	PEGA		CONSIST. NORMAL
	PF	RI	SO3	CaO.	3 DIAS	7 DIA	28 DIAS	MASSA	BLAINE	#P325	#200	QUENTE	INICIO	FIM	
	<6,5	<5,0	<4,5	Livre	>12,0	>23,0	>40,0	ESPECÍFICA	cm²/g	%	%	mm	>60	<720	
	%	%	%	%	MPa	MPa	MPa	g/cm³				min	min	%	
01/12/2025	0.83	0.41	0.74	0.86	19.9	33.4	44.4	2.93	4767	1.5	0.2	0.0	222	287	34.0
02/12/2025	0.98	0.41	0.62	0.84	19.5	32.3		2.93	4744	1.9	0.2	0.0	208	261	34.3
03/12/2025	1.00	0.36	0.70	0.78	18.5	33.7	46.8	2.93	4774	1.4	0.2	0.0	208	272	34.2
04/12/2025	0.99	0.36	0.56	0.86	19.9	32.1	46.2	2.93	4801	1.8	0.2	0.0	232	301	34.0
05/12/2025	1.06	0.49	0.64	0.78	20.0	33.6	45.7	2.93	4919	1.6	0.2	0.0	204	266	33.9
06/12/2025	1.31	0.42	0.63	0.86	19.7	35.0	45.5	2.93	4715	1.7	0.2	0.0	216	286	33.9
07/12/2025	0.88	0.21	0.66	0.73	20.4	31.5	46.2	2.93	4712	1.6	0.2	0.0	217	292	33.9
08/12/2025	0.92	0.18	0.62	0.81	21.1	33.4	46.4	2.93	4764	1.6	0.2	0.0	221	293	33.8
09/12/2025	0.93	0.67	0.63	0.78	19.1	32.7	45.1	2.93	4788	1.6	0.2	0.0	228	304	33.9
10/12/2025	1.03	0.66	0.86	0.78	19.4	31.1	46.6	2.93	4853	1.2	0.1	0.0	203	268	34.0
11/12/2025	1.18	0.65	0.64	0.73	19.2	31.0	45.3	2.93	4769	1.6	0.2	0.0	225	292	34.0
12/12/2025	1.10	0.66	0.57	0.75	18.6	32.2	44.5	2.93	4925	1.3	0.2	0.0	222	291	34.0
13/12/2025	1.33	0.60	0.56	0.67	20.2	32.5	45.3	2.93	4606	1.3	0.2	0.0	214	279	34.0
15/12/2025	1.21	0.37	0.67	0.62	19.8	31.4	45.4	2.93	4733	1.3	0.2	0.0	228	288	33.9
16/12/2025	1.16	0.51	0.57	0.78	18.5	32.5	44.7	2.93	4806	1.8	0.2	0.0	203	263	33.6
17/12/2025	1.37	0.85	0.51	0.84	18.5	31.4	44.7	2.93	4802	1.7	0.2	0.0	202	266	33.7
18/12/2025	1.10	0.61	0.55	0.89	19.2	33.3	45.7	2.93	4855	1.0	0.2	0.0	214	277	33.7
19/12/2025	0.89	0.37	0.69	0.94	18.7	32.3	45.4	2.93	4852	1.7	0.1	0.0	224	293	33.7
20/12/2025	0.84	0.28	0.69	0.97	19.9	31.6	47.5	2.93	4892	1.7	0.2	0.0	215	284	33.6
21/12/2025	1.08	0.38	0.67	1.02	20.3	33.4	47.4	2.93	4899	1.6	0.2	0.0	215	284	33.6
22/12/2025	0.85	0.53	0.78	0.75	19.7	34.7	46.6	2.93	4792	0.9	0.2	0.0	222	291	33.6
23/12/2025	1.12	0.42	0.79	0.89	19.7	34.8	46.3	2.93	4803	1.0	0.2	0.0	221	288	33.6
24/12/2025	1.18	0.37	0.35	0.54	21.1	34.1	48.7	2.93	4873	1.5	0.2	0.0	226	291	33.6
26/12/2025	1.31	0.24	0.55	0.81	20.8	33.8	47.2	2.93	4788	1.3	0.2	0.0	219	286	33.6
27/12/2025	1.59	0.26	0.62	0.73	21.1	34.5	48.7	2.93	4784	1.3	0.2	0.0	210	273	33.7
29/12/2025	1.46	0.47	0.46	0.73	21.4	34.9	47.9	2.93	4978	1.7	0.2	0.0	211	276	33.5
30/12/2025	1.38	0.41	0.53	0.75	22.4	38.2	47.6	2.93	4802	1.8	0.2	0.0	212	277	33.5
31/12/2025	1.51	0.83	0.46	0.73	22.3	34.2	46.7	2.93	4887	1.1	0.1	0.0	204	269	33.5

Controle Estatístico

					R3	R7	R28								
Média	1.13	0.46	0.62	0.79	20.0	33.2	46.2	2.93	4810	1.5	0.2	0.0	216	282	33.8
Desvio	0.21	0.17	0.11	0.10	1.1	1.6	1.2	0.00	78	0.3	0.0	0.0	9	12	0.2
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	20.0
R7	23	33.2
R28	40	46.2



*Kênia Gomes Aires*

Responsável Técnico

Kênia Gomes Aires

CRQ: 21.3.00318

## CERTIFICADO DA QUALIDADE

### ENSAIOS QUÍMICOS E FÍSICOS DO CIMENTO CP III 40 RS ENSACADO

Jan/2026

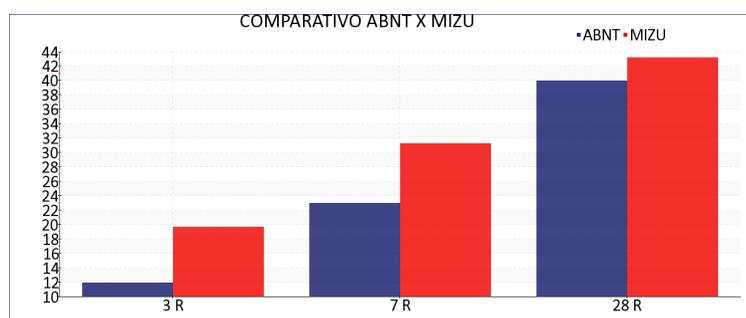
DATA	COMPOSIÇÃO QUÍMICA				RESISTÊNCIA A COMPRESSÃO			FINURA				EXP.	PEGA		CONSIST. NORMAL
	PF	RI	SO3	CaO.	3 DIAS	7 DIA	28 DIAS	MASSA	BLAINE	#P325	#200	QUENTE	INICIO	FIM	
	<6,5	<5,0	<4,5	Livre	>12,0	>23,0	>40,0	ESPECÍFICA	cm <sup>2</sup> /g	%	%	mm	>60	<720	
	%	%	%	%	MPa	MPa	MPa	g/cm <sup>3</sup>					min	min	%
02/01/2026	1.63	0.79	0.74	0.70	20.5	34.4	44.7	2.93	4752	1.4	0.1	0.0	181	250	33.8
03/01/2026	1.41	0.63	0.64	0.81	19.4	33.7	44.9	2.93	4735	1.7	0.1	0.0	198	261	33.5
04/01/2026	1.49	0.43	0.44	0.75	20.7	32.4	44.5	2.93	4698	1.8	0.2	0.0	196	257	33.6
05/01/2026	1.27	0.65	0.49	0.78	20.1	32.0	45.7	2.93	4848	1.9	0.2	0.0	225	292	33.5
07/01/2026	1.41	0.63	0.42	1.02	20.5	32.0	45.3	2.93	4823	1.3	0.1	0.0	225	294	33.9
08/01/2026	1.43	0.91	0.47	0.84	21.3	32.9		2.93	4841	1.2	0.2	0.0	235	298	33.9
09/01/2026	1.01	0.81	0.64	0.94	19.0	33.8	44.9	2.93	4810	1.3	0.1	0.0	221	291	33.8
10/01/2026	0.96	0.44	0.55	0.84		31.1	45.1	2.93	4808	1.2	0.1	0.0	214	286	33.8
11/01/2026	1.08	0.51	0.55	0.84	17.2	31.3	43.9	2.93	4661	1.2	0.1	0.0	223	290	34.1
12/01/2026	1.53	0.74	0.31	0.94	17.7	30.3	42.3	2.93	4645	1.4	0.1	0.0	228	297	34.1
13/01/2026	1.16	0.52	0.40	0.92	18.2	31.2	43.2	2.93	4665	1.1	0.1	0.0	237	301	34.1
14/01/2026	1.17	0.68	0.32	0.84	18.2	32.6	42.9	2.93	4728	1.3	0.1	0.0	233	302	33.9
15/01/2026	1.36	0.57	0.34	1.05	19.6	31.0	42.5	2.93	4702	1.6	0.1	0.0	221	288	33.6
16/01/2026	0.80	0.35	0.28	0.97	19.0	29.4	41.7	2.93	4621	1.4	0.2	0.0	220	291	33.6
17/01/2026	1.34	0.54	0.34	0.94	18.1	30.5		2.93	4594	1.3	0.1	0.0	221	288	33.8
18/01/2026	1.23	0.57	0.37	0.86	19.5	30.0		2.93	4595	1.5	0.1	0.0	209	268	33.9
19/01/2026	1.23	0.44	0.18	0.75	18.8	29.3	41.1	2.93	4591	1.2	0.2	0.0	215	282	33.8
20/01/2026	1.35	0.26	0.30	0.86	17.9	29.1	41.9	2.93	4618	1.2	0.2	0.0	226	295	33.8
21/01/2026	1.12	0.60	1.01	0.92	18.4	29.7	42.3	2.93	4730	1.1	0.1	0.0	240	300	33.8
22/01/2026	1.55	0.46	0.44	0.86	18.9	31.5	41.9	2.93	4871	1.6	0.3	0.0	238	301	33.8
23/01/2026	1.56	0.55	0.71	0.81	20.9	31.1	43.2	2.93	4568	1.1	0.1	0.0	222	291	33.8
24/01/2026	1.74	0.41	0.63	0.84	20.7	31.1	42.9	2.93	4752	1.0	0.1	0.0	210	277	34.0
26/01/2026	1.36	0.44	0.55	0.89	18.4	31.3	41.5	2.93	4653	1.3	0.2	0.0	229	299	33.8
27/01/2026	1.88	0.78	0.46	0.62	22.7	31.2	42.7	2.93	4441	2.2	0.3	0.0	217	283	33.4
28/01/2026	1.33	0.55	0.81	0.81	20.7	30.1	42.9	2.93	4557	1.6	0.2	0.0	202	267	33.5
29/01/2026	1.35	0.61	0.74	0.75	21.0	29.4	43.3	2.93	4644	1.6	0.2	0.0	202	271	33.7
30/01/2026	1.45	0.58	0.67	0.70	22.3	33.3		2.93	4505	1.7	0.2	0.0	208	263	33.6
31/01/2026	1.66	0.56	0.53	1.00	22.6			2.93	4690	1.8	0.2	0.0	216	268	33.6

Controle Estatístico

					R3	R7	R28								
Média	1.35	0.57	0.51	0.85	19.7	31.3	43.3	2.93	4684	1.4	0.2	0.0	218	284	33.8
Desvio	0.24	0.15	0.19	0.10	1.5	1.5	1.4	0.00	108	0.3	0.1	0.0	14	15	0.2
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	19.7
R7	23	31.3
R28	40	43.3



*Kênia Gomes Aires*

Responsável Técnico

Kênia Gomes Aires

CRQ: 21.3.00318

## CERTIFICADO DA QUALIDADE

### ENSAIOS QUÍMICOS E FÍSICOS DO CIMENTO CP III 40 RS ENSACADO

Fev/2026

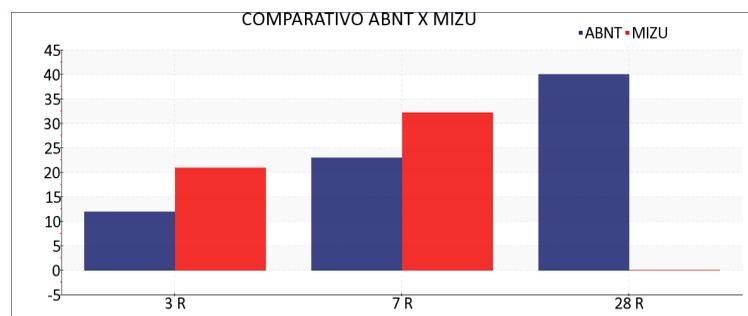
DATA	COMPOSIÇÃO QUÍMICA				RESISTÊNCIA A COMPRESSÃO			FINURA				EXP.	PEGA		CONSIST. NORMAL
	PF	RI	SO3	CaO.	3 DIAS	7 DIA	28 DIAS	MASSA	BLAINE	#P325	#200	QUENTE	INICIO	FIM	
	<6,5	<5,0	<4,5	Livre	>12,0	>23,0	>40,0	ESPECIFICA	cm <sup>2</sup> /g	%	%	mm	>60	<720	
	%	%	%	%	MPa	MPa	MPa	g/cm <sup>3</sup>					min	min	%
02/02/2026	1.74	0.62	0.69	0.75	20.8	33.3		2.93	4554	1.3	0.1	0.0	198	250	33.6
03/02/2026	1.17	0.65	1.03	0.81	20.3	33.1		2.93	4639	1.2	0.1	0.0	197	243	33.1
04/02/2026	1.69	0.46	0.59	0.86	20.5	32.7		2.93	4583	1.0	0.1	0.0	199	254	33.1
05/02/2026	1.73	0.38	0.55	0.89	20.9	33.0		2.93	4650	0.9	0.1	0.0	191	244	33.1
06/02/2026	1.43	0.65	0.94	0.86	21.3	31.8		2.93	4638	0.8	0.1	0.0	192	246	33.3
10/02/2026	0.95	0.42	1.79	0.78	20.1	31.9		2.93	4683	0.9	0.2	0.0	180	232	33.7
11/02/2026	1.54	0.85	1.57	1.05	22.9	33.8		2.93	4713	0.9	0.2	0.0	166	210	33.7
12/02/2026	1.21	0.53	2.09	0.70	23.1	33.3		2.93	4562	1.0	0.1	0.0	150	196	33.7
13/02/2026	1.35	0.67	1.22	0.73	22.3	32.5		2.93	4597	1.1	0.2	0.0	173	219	33.6
14/02/2026	1.39	0.48	0.86	1.48	22.1	33.0		2.93	4648	1.2	0.1	0.0	168	212	33.6
16/02/2026	1.09	0.83	0.81	0.84	22.0	31.4		2.93	4590	1.7	0.2	0.0	192	240	33.3
18/02/2026	1.08	0.75	0.84	0.70	20.2	30.8		2.93	4547	1.7	0.2	0.0	192	245	33.4
19/02/2026	1.18	0.38	0.56	0.75	19.2	31.4		2.93	4535	1.5	0.2	0.0	204	253	33.4
20/02/2026	1.01	0.65	0.76	0.75	19.6	31.3		2.93	4576	1.5	0.2	0.0	204	249	33.4
21/02/2026	1.02	0.86	0.70	0.75	21.2	31.1		2.93	4637	1.5	0.2	0.0	195	243	33.5
23/02/2026	1.09	0.62	0.90	0.75	20.9	31.1		2.93	4637	1.2	0.1	0.0	195	246	33.4
24/02/2026	0.93	0.65	1.05	0.78	20.5			2.93	4589	1.4	0.1	0.0	202	252	33.5
25/02/2026	1.11	0.65	0.88	0.78	19.6			2.93	4557	1.1	0.1	0.0	214	269	33.5
26/02/2026	1.23	0.60	0.51	0.78	20.3			2.93	4589	1.3	0.2	0.0	229	281	33.1

Controle Estatístico

					R3	R7	R28								
Média	1.26	0.62	0.97	0.83	20.9	32.2		2.93	4607	1.2	0.2	0.0	192	241	33.4
Desvio	0.26	0.15	0.43	0.18	1.1	1.0		0.00	49	0.3	0.1	0.0	18	20	0.2
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	20.9
R7	23	32.2
R28	40	



*Kênia gomes aires*

Responsável Técnico  
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