CERTIFICADO DE CONTROLE DA QUALIDADE DO CIMENTO

MIZU CIMENTOS

TIPO/CLASSE: CPII-Z 40

FÁBRICA: **FMN - FÁBRICA DE MANAUS - AM**

MÊS/ANO: **AGOSTO/2026**

POLIMIX AGLOMERANTE

FL-AGLO-LAB-002_R03

ENSAIOS QUÍMICOS				ENSAIOS FÍSICOS E MECÂNICOS									
ENSAIOS	PERDA AO FOGO (PF)	RESIDUO INSOLÚVEL (RI)	TRIÓXIDO DE ENXOFRE (SO3)	RESISTÊNCIA À COMPRESSÃO			FINURA			EXPANSIB. A QUENTE	TEMPO DE PEGA		CONSIST. NORMAL
				3 DIAS	7 DIAS	28 DIAS	BLAINE	#325	#200		INÍCIO	FIM	
UNIDADE	(%)	(%)	(%)	(MPa)	(MPa)	(MPa)	(cm²/g)	(%)	(%)	(mm)	(min)	(min)	(%)
LIMITE NORMATIVO (ABNT NBR 16697:2018)	≤ 8,5	≤ 18,5	≤ 4,5	≥ 15,0	≥ 25,0	≥ 40,0	–	–	≤ 10,0	≤ 5	≥ 60	≤ 600	–
01/08/2026	2.24	11.15	3.56	32.5	32.5	42.5	4740	2.3	0.1	0.0	145	245	31.0
03/08/2026	2.19	11.95	3.87	28.4	33.5	42.3	4700	2.4	0.1	0.0	145	245	31.0
04/08/2026	2.21	10.94	3.71	27.5	32.0	42.3	4740	2.5	0.1	0.0	140	245	31.0
05/08/2026	2.25	11.03	3.84	27.5	31.2	42.1	4740	2.4	0.1	0.0	145	245	31.0
06/08/2026	2.23	11.21	3.82	27.8	34.5	42.5	4740	2.4	0.1	0.0	145	245	31.0
07/08/2026	2.27	11.03	3.66	26.9	34.3	42.3	4660	2.6	0.1	0.0	140	245	31.0
08/08/2026	2.46	12.54	3.68	25.2	32.0	41.5	4700	2.5	0.1	0.0	145	245	31.0
10/08/2026	2.64	12.76	3.67	23.5	32.1	41.0	4660	2.5	0.1	0.0	140	245	31.0
11/08/2026	2.50	11.32	3.19	27.1	32.5	40.4	4810	2.6	0.1	0.0	140	245	30.8
12/08/2026	2.38	10.85	3.30	23.1	33.0	40.7	4550	2.7	0.1	0.0	145	245	30.8
13/08/2026	2.49	10.39	3.33	22.6	32.4	40.8	4590	2.7	0.1	0.0	145	245	31.0
14/08/2026	2.25	11.58	2.97	23.7	32.0	40.3	4770	2.5	0.1	0.0	145	240	30.9
15/08/2026	2.19	12.10	2.61	26.0	31.8	40.2	4740	2.4	0.1	0.0	145	245	31.0
17/08/2026	2.13	12.61	2.85	28.3	31.9	40.2	4740	2.4	0.1	0.0	140	245	31.8
18/08/2026	2.03	11.17	3.03	25.7	32.4	40.2	4590	2.5	0.1	0.0	145	245	31.0
19/08/2026	2.24	10.64	2.96	24.0	32.3	40.5	4480	2.6	0.1	0.0	160	200	31.0
20/08/2026	1.67	10.17	3.17	24.9	32.4	40.1	4550	2.7	0.1	0.0	160	200	31.0
21/08/2026	1.26	10.97	2.95	24.2	32.5	40.6	4770	2.6	0.1	0.0	155	210	31.0
22/08/2026	1.96	10.68	2.84	24.5	32.3	40.5	4550	2.5	0.1	0.0	155	215	31.0
24/08/2026	2.85	10.30	2.94	24.8	33.0	40.5	4740	2.6	0.1	0.0	140	220	30.4
25/08/2026	2.64	11.23	2.88	24.6	32.8	41.8	4740	2.7	0.1	0.0	170	215	30.5
26/08/2026	2.75	10.94	2.77	24.7	32.3	40.3	4440	3.0	0.2	0.0	180	210	30.7
27/08/2026	2.78	10.25	2.96	24.8	32.8	40.5	4610	2.4	0.2	0.0	175	230	29.5
28/08/2026	2.87	11.14	3.35	24.5	32.5	40.2	4470	2.5	0.2	0.0	180	235	29.2
29/08/2026	2.88	11.33	3.03	23.7	32.9	40.5	4510	2.6	0.2	0.0	170	225	29.0
31/08/2026	2.85	11.41	2.83	24.3	31.9	41.0	4470	2.9	0.2	0.0	195	220	30.2
MÉDIA	2.40	11.20	3.20	25.6	32.5	41.0	4646	2.6	0.1	0.0	154	233	30.7
DESVIO PADRÃO	0.40	0.70	0.40	2.2	0.7	0.8	113	0.2	0.0	0.0	16	16	0.6
MÍNIMO	1.26	10.17	2.61	22.6	31.2	40.1	4440	2.3	0.1	0.0	140	200	29.0
MÁXIMO	2.88	12.76	3.87	32.5	34.5	42.5	4810	3.0	0.2	0.0	195	245	31.8

Responsável Técnico
GABRIELE OLIVEIRA DA SILVA
CRQ 14200571 - XIV Região

CERTIFICADO DE CONTROLE DA QUALIDADE DO CIMENTO

MIZU CIMENTOS

TIPO/CLASSE: CPII-Z 40

FÁBRICA: **FMN - FÁBRICA DE MANAUS - AM**

MÊS/ANO: **SETEMBRO/2026**

POLIMIX AGLOMERANTE

FL-AGLO-LAB-002_R03

ENSAIOS QUÍMICOS				ENSAIOS FÍSICOS E MECÂNICOS									
ENSAIOS	PERDA AO FOGO (PF)	RESIDUO INSOLÚVEL (RI)	TRIÓXIDO DE ENXOFRE (SO3)	RESISTÊNCIA À COMPRESSÃO			FINURA			EXPANSIB. A QUENTE	TEMPO DE PEGA		CONSIST. NORMAL
				3 DIAS	7 DIAS	28 DIAS	BLAINE	#325	#200		INÍCIO	FIM	
UNIDADE	(%)	(%)	(%)	(MPa)	(MPa)	(MPa)	(cm²/g)	(%)	(%)	(mm)	(min)	(min)	(%)
LIMITE NORMATIVO (ABNT NBR 16697:2018)	≤ 8,5	≤ 18,5	≤ 4,5	≥ 15,0	≥ 25,0	≥ 40,0	–	–	≤ 10,0	≤ 5	≥ 60	≤ 600	–
01/09/2026	2.27	13.57	3.18	23.4	30.4	40.3	4790	1.8	0.2	0.0	130	200	30.6
02/09/2026	2.39	11.87	3.21	23.0	30.0	40.5	4820	2.3	0.2	0.0	165	220	30.7
03/09/2026	1.79	13.28	2.69	22.5	30.5	40.5	4790	2.2	0.2	0.0	170	230	30.3
04/09/2026	1.64	13.29	2.74	22.8	30.6	40.2	4760	2.3	0.2	0.0	175	225	30.8
05/09/2026	1.70	13.30	2.88	22.6	30.6	40.0	4790	2.3	0.2	0.0	175	230	30.4
08/09/2026	1.74	12.85	3.00	22.4	30.5	40.2	4960	2.0	0.2	0.0	160	230	30.5
09/09/2026	1.81	12.39	2.94	22.3	30.4	40.5	4790	2.1	0.1	0.0	180	240	30.9
10/09/2026	1.98	12.53	3.00	22.6	30.5	40.8	4760	2.1	0.1	0.0	165	230	30.5
11/09/2026	2.12	12.66	3.04	22.7	30.1	40.9	5090	2.3	0.2	0.0	170	230	30.0
12/09/2026	1.90	12.51	3.00	22.7	30.0	40.9	4960	2.6	0.2	0.0	160	225	30.8
14/09/2026	1.81	12.48	2.91	22.7	29.9	41.0	4820	2.5	0.2	0.0	185	215	30.3
15/09/2026	1.85	14.72	2.81	22.7	30.1	40.7	4922	2.2	0.1	0.0	170	220	30.2
16/09/2026	1.83	14.78	2.99	22.5	29.5	40.5	5090	2.3	0.2	0.0	185	220	30.5
17/09/2026	1.87	14.84	3.00	22.0	29.3	41.2	4960	2.4	0.2	0.0	180	215	30.7
18/09/2026	1.85	14.12	2.91	22.7	29.2	41.0	4890	1.7	0.1	0.0	185	220	30.7
19/09/2026	1.78	12.89	2.90	22.8	29.3	40.7	4890	1.8	0.1	0.0	150	220	30.6
21/09/2026	1.75	12.56	2.96	22.8	29.5	40.8	4860	2.1	0.1	0.0	140	220	30.6
22/09/2026	1.68	12.26	2.98	23.0	30.0	40.7	4920	2.0	0.1	0.0	140	220	30.6
23/09/2026	1.90	12.25	2.96	22.5	29.6	40.8	4990	2.1	0.1	0.0	160	230	30.0
24/09/2026	2.09	12.65	3.41	22.3	29.5	41.1	4810	2.1	0.1	0.0	150	220	30.0
25/09/2026	2.28	13.04	3.86	22.5	29.5	41.0	4650	2.1	0.1	0.0	160	230	30.4
26/09/2026	2.21	13.05	3.62	22.2	29.5	40.8	4760	2.0	0.1	0.0	150	220	30.6
28/09/2026	2.17	13.07	3.59	21.8	29.4	40.7	5370	2.9	0.2	0.0	160	220	30.4
29/09/2026	2.12	12.90	3.63	22.4	29.2	40.6	5160	2.7	0.2	0.0	170	230	30.4
30/09/2026	1.84	12.72	3.75	22.0	28.7	40.6	5260	2.4	0.1	0.0	170	230	30.0
MÉDIA	1.90	13.10	3.10	22.6	29.8	40.7	4915	2.2	0.2	0.0	164	224	30.5
DESVIO PADRÃO	0.20	0.80	0.30	0.3	0.5	0.3	170	0.3	0.1	0.0	15	8	0.3
MÍNIMO	1.64	11.87	2.69	21.8	28.7	40.0	4650	1.7	0.1	0.0	130	200	30.0
MÁXIMO	2.39	14.84	3.86	23.4	30.6	41.2	5370	2.9	0.2	0.0	185	240	30.9

Responsável Técnico
GABRIELE OLIVEIRA DA SILVA
CRQ 14200571 - XIV Região

CERTIFICADO DE CONTROLE DA QUALIDADE DO CIMENTO

MIZU CIMENTOS

TIPO/CLASSE: CPII-Z 40

FÁBRICA: **FMN - FÁBRICA DE MANAUS - AM**

MÊS/ANO: **OUTUBRO/2026**

POLIMIX AGLOMERANTE

FL-AGLO-LAB-002_R03

ENSAIOS QUÍMICOS				ENSAIOS FÍSICOS E MECÂNICOS									
ENSAIOS	PERDA AO FOGO (PF)	RESIDUO INSOLÚVEL (RI)	TRIÓXIDO DE ENXOFRE (SO3)	RESISTÊNCIA À COMPRESSÃO			FINURA			EXPANSIB. A QUENTE	TEMPO DE PEGA		CONSIST. NORMAL
				3 DIAS	7 DIAS	28 DIAS	BLAINE	#325	#200		INÍCIO	FIM	
UNIDADE	(%)	(%)	(%)	(MPa)	(MPa)	(MPa)	(cm²/g)	(%)	(%)	(mm)	(min)	(min)	(%)
LIMITE NORMATIVO (ABNT NBR 16697:2018)	≤ 8,5	≤ 18,5	≤ 4,5	≥ 15,0	≥ 25,0	≥ 40,0	–	–	≤ 10,0	≤ 5	≥ 60	≤ 600	–
01/10/2026	1.94	12.43	3.95	22.0	30.1	40.3	5190	2.2	0.1	0.0	160	210	30.4
02/10/2026	1.93	12.55	3.75	22.4	29.8	40.9	5160	2.3	0.2	0.0	140	220	30.4
03/10/2026	2.52	13.05	3.87	22.2	29.9	40.4	5540	2.3	0.2	0.0	140	210	30.2
05/10/2026	3.11	13.54	3.98	22.0	30.0	40.3	5410	2.4	0.2	0.0	140	210	30.2
06/10/2026	2.75	12.94	3.46	22.4	29.3	40.5	5190	2.2	0.2	0.0	160	220	30.5
07/10/2026	2.03	13.01	3.41	21.4	30.6	40.8	5220	2.0	0.2	0.0	160	220	30.4
08/10/2026	2.20	13.71	3.33	21.9	30.6	40.8	5190	2.0	0.2	0.0	160	210	30.2
09/10/2026	2.20	13.45	3.09	23.5	29.7		5090	2.3	0.2	0.0	160	210	30.2
10/10/2026	1.99	11.36	2.89	22.0	30.6		5120	2.1	0.2	0.0	120	220	30.0
13/10/2026	2.10	11.78	3.00	22.0	30.7		5090	1.9	0.2	0.0	140	205	30.5
14/10/2026	1.98	11.88	2.78	22.5	30.8		5160	2.0	0.2	0.0	145	220	30.5
15/10/2026	1.83	12.89	2.91	22.0	30.7		4810	2.1	0.2	0.0	150	225	30.6
16/10/2026	1.85	13.08	3.00	22.9	30.7		4990	1.9	0.1	0.0	150	235	30.6
17/10/2026	1.83	13.13	2.98	22.5	30.8		4955	1.8	0.1	0.0	145	240	30.5
19/10/2026	1.82	13.30	3.07	22.4	30.8		4890	2.1	0.1	0.0	150	240	30.6
20/10/2026	1.89	13.00	3.32	23.1	30.8		4920	1.9	0.1	0.0	160	220	30.8
21/10/2026	2.19	13.83	3.54	23.4	30.2		5020	1.9	0.2	0.0	145	225	30.5
22/10/2026	1.91	12.76	3.37	22.9	30.6		4730	2.9	0.2	0.0	120	220	30.8
23/10/2026	2.11	12.96	3.41	23.3	30.4		4810	140.0	225.0	0.0	140	225	30.8
24/10/2026	2.15	12.88	3.35	23.1	30.5		4910	2.1	0.1	0.0	145	220	30.6
26/10/2026	2.24	13.06	3.22	23.0	30.7		4910	2.0	0.1	0.0	140	230	30.8
27/10/2026	1.79	12.77	3.46	23.1	30.2		4890	2.5	0.2	0.0	150	210	30.8
28/10/2026	1.88	13.69	3.42	22.6	29.8		4810	2.2	0.2	0.0	145	215	30.6
29/10/2026	2.65	13.83	3.76	22.6	30.0		4990	2.3	0.2	0.0	150	210	30.8
30/10/2026	1.70	13.56	3.45	22.7	30.1		4910	2.2	0.2	0.0	160	220	30.5
31/10/2026	1.75	10.72	2.47	22.7	30.0		4980	2.0	0.2	0.0	140	255	30.7
MÉDIA	2.10	12.90	3.30	22.6	30.3	40.6	5034	7.4	8.8	0.0	147	221	30.5
DESVIO PADRÃO	0.30	0.80	0.40	0.5	0.4	0.3	191	27.0	44.1	0.0	11	12	0.2
MÍNIMO	1.70	10.72	2.47	21.4	29.3	40.3	4730	1.8	0.1	0.0	120	205	30.0
MÁXIMO	3.11	13.83	3.98	23.5	30.8	40.9	5540	140.0	225.0	0.0	160	255	30.8

Responsável Técnico
GABRIELE OLIVEIRA DA SILVA
CRQ 14200571 - XIV Região