

CERTIFICADO DE CONTROLE DA QUALIDADE DO CIMENTO



TIPO/CLASSE: CIII-40 RS GRANEL
FÁBRICA: FVI - FÁBRICA DE VITÓRIA - ES
MÊS/ANO: MAIO/2026



ENSAIOS QUÍMICOS				ENSAIOS FÍSICOS E MECÂNICOS									
ENSAIOS	PERDA AO	RESIDUO	TRIOXIDO DE	RESISTÊNCIA À COMPRESSÃO			FINURA			EXPANSIB.	TEMPO DE PEGA		CONSIST. NORMAL
	FOGO (PF)	INSOLÚVEL (RI)	ENXÓFRE (SO3)	3 DIAS	7 DIAS	28 DIAS	BLAINE	#325	#200	A QUENTE	INÍCIO	FIM	
UNIDADE	(%)	(%)	(%)	(MPa)	(MPa)	(MPa)	(cm²/g)	(%)	(%)	(mm)	(min)	(min)	(%)
LIMITE NORMATIVO (ABNT NBR 16697:2018)	≤ 6,5	≤ 5,0	≤ 4,5	≥ 12,0	≥ 23,0	≥ 40,0	–	–	≤ 8,0	≤ 5	≥ 60	≤ 720	–
02/05/2026	1.54	0.89	1.94	24.9	35.3	48.9	4694	1.1	0.1	0.0	173	222	33.7
04/05/2026	1.09	0.86	1.98	25.4	35.4	47.7	4792	1.0	0.2	0.0	171	221	33.4
05/05/2026	1.72	0.82	1.97	23.2	34.7	48.3	4648	1.0	0.1	0.0	176	231	33.4
06/05/2026	1.66	0.70	1.95	23.8	35.7	48.5	4804	1.1	0.1	0.0	170	221	33.3
07/05/2026	1.42	0.74	2.12	24.1	33.3	48.9	4760	1.2	0.3	0.0	177	229	33.4
08/05/2026	1.76	0.76	1.91	24.2	33.4	48.1	4684	1.0	0.1	0.0	171	222	33.0
09/05/2026	1.52	0.86	1.98	24.9	32.9	47.8	4692	0.9	0.1	0.0	173	223	32.9
11/05/2026	1.67	1.17	1.74	22.9	32.3	46.2	4794	1.4	0.3	0.0	170	219	32.8
12/05/2026	1.48	1.37	1.68	23.8	31.5	45.2	4656	0.8	0.1	0.0	176	231	33.0
13/05/2026	1.86	1.03	1.85	22.7	31.1	46.5	4609	1.0	0.2	0.0	180	237	32.9
14/05/2026	1.68	0.49	1.66	22.9	30.9		4821	0.9	0.2	0.0	182	237	32.9
15/05/2026	1.74		1.81	22.4	32.1	45.0	4768	0.9	0.1	0.0	168	217	32.9
16/05/2026	1.69	1.35	1.76	23.6	32.8	45.5	4785	1.0	0.1	0.0	167	218	32.9
18/05/2026	1.74	0.67	1.90	24.7	34.3	44.8	4793	0.7	0.1	0.0	180	232	32.9
19/05/2026	1.50		1.83	22.6	31.1	46.5	4648	1.0	0.1	0.0	167	212	31.5
20/05/2026	1.80	0.90	1.80	23.2	30.4	47.2	4591	1.0	0.2	0.0	180	230	31.5
21/05/2026	2.21	0.64	1.82	22.4	32.1	45.4	4774	1.2	0.1	0.0	171	228	31.3
22/05/2026	1.96	0.73	1.85	23.1	31.8	47.5	4750	1.2	0.1	0.0	178	227	31.4
23/05/2026	2.18	0.69	1.82	23.3	29.6	46.9	4754	1.2	0.1	0.0	181	232	31.3
25/05/2026	1.56	0.70	1.82	25.6		47.2	4735	1.1	0.1	0.0	172	219	31.4
26/05/2026	2.08	0.59	1.77	22.1	30.3	47.4	4651	1.2	0.1	0.0	174	228	31.3
27/05/2026	2.12	0.63	1.85	25.5		44.3	4674	1.2	0.2	0.0	171	225	313.0
28/05/2026	2.45	0.65	1.65	22.1	32.1	45.4	4693	1.3	0.2	0.0	180	220	31.2
29/05/2026	1.80	0.67	1.77	21.5	31.0	45.0	4949	1.1	0.1	0.0	165	215	31.2
30/05/2026	1.45	0.80	1.62	22.1	30.8	45.0	4944	1.3	0.2	0.0	190	235	31.2
MÉDIA	1.75	0.81	1.83	23.5	32.4	46.6	4739	1.1	0.1	0.0	175	225	43.6
DESVIO PADRÃO	0.30	0.23	0.12	1.2	1.8	1.4	90	0.2	0.1	0.0	6	7	56.1
MÍNIMO	1.09	0.49	1.62	21.5	29.6	44.3	4591	0.7	0.1	0.0	165	212	31.2
MÁXIMO	2.45	1.37	2.12	25.6	35.7	48.9	4949	1.4	0.3	0.0	190	237	313.0

Kênia gomes Aires

Responsável Técnico
KÊNIA GOMES AIRES
CRQ: 21.3.00318 - V Região

CERTIFICADO DE CONTROLE DA QUALIDADE DO CIMENTO



TIPO/CLASSE: CPM-40 RS GRANEL
FÁBRICA: FVI - FÁBRICA DE VITÓRIA - ES
MÊS/ANO: JUNHO/2026



ENSAIOS QUÍMICOS				ENSAIOS FÍSICOS E MECÂNICOS									
ENSAIOS	PERDA AO FOGO (PF)	RESIDUO INSOLÚVEL (RI)	TRIOXIDO DE ENXÓFRE (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)	≤ 6,5	≤ 5,0	≤ 4,5	≥ 12,0	≥ 23,0	≥ 40,0	–	–	≤ 8,0	≤ 5	≥ 60	≤ 720	–
02/06/2026	1.17	0.67	1.85	23.6	32.3	46.2	4857	1.0	0.2	0.0	170	225	31.2
03/06/2026	1.60	0.43	1.81	21.8	32.5	45.1	4667	1.0	0.2	0.0	180	230	32.0
04/06/2026	1.72	0.91	1.78	23.6	32.4	45.1	4751	1.0	0.1	0.0	175	215	31.8
05/06/2026	1.67	0.82	1.74	22.1	32.3	45.5	4886	1.1	0.1	0.0	175	220	31.6
06/06/2026	2.06	0.86	1.66	23.5	30.4	47.8	4674	1.2	0.2	0.0	185	240	31.8
08/06/2026	1.64	0.90	1.75	22.3	31.2	47.2	4728	1.1	0.2	0.0	180	220	31.7
09/06/2026	1.53	0.79	1.69	21.6	32.3		4755	1.0	0.1	0.0	170	215	31.5
10/06/2026	1.85	0.81	1.69	21.6	32.7		4705	1.0	0.1	0.0	180	215	31.8
12/06/2026	1.66	0.70	1.69	21.6	33.2	47.4	4715	0.9	0.2	0.0	185	230	31.7
15/06/2026	1.87	0.53	1.76	22.0	30.6	47.2	4807	1.1	0.1	0.0	175	225	32.4
16/06/2026	1.87		1.69	21.5	32.2	45.1	4723	1.0	0.1	0.0	190	240	32.5
17/06/2026	1.71	0.82	1.78	21.5			4656	1.1	0.2	0.0	180	230	32.4
18/06/2026	1.91	0.57	1.71	21.4		46.5	4711	1.0	0.2	0.0	180	240	32.4
19/06/2026	1.80	0.46	1.74	22.5	32.4	45.5	4730	1.0	0.2	0.0	185	235	32.4
20/06/2026	1.65	0.61	1.71	23.0	32.5	45.8	4836	1.1	0.2	0.0	185	230	32.4
22/06/2026	1.49	0.59	1.75	23.5	33.8	47.8	4722	1.3	0.2	0.0	185	230	32.4
24/06/2026	1.56	0.62	1.82	22.6		47.0	4780	1.0	0.2	0.0	170	225	32.3
25/06/2026	1.76	0.69	1.74	22.5			4773	0.8	0.2	0.0	175	230	32.4
29/06/2026	1.71	0.60	1.76	24.5	32.4		4842	0.8	0.2	0.0	190	260	32.4
30/06/2026	1.58	0.71	1.72	25.8	34.4		4749	1.2	0.2	0.0	175	270	32.6
MÉDIA	1.69	0.69	1.74	22.6	32.4	46.4	4753	1.0	0.2	0.0	180	231	32.1
DESVIO PADRÃO	0.19	0.14	0.05	1.2	1.0	1.0	64	0.1	0.1	0.0	6	14	0.4
MÍNIMO	1.17	0.43	1.66	21.4	30.4	45.1	4656	0.8	0.1	0.0	170	215	31.2
MÁXIMO	2.06	0.91	1.85	25.8	34.4	47.8	4886	1.3	0.2	0.0	190	270	32.6

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TIPO/CLASSE: CPM-40 RS GRANEL
FÁBRICA: FVI - FÁBRICA DE VITÓRIA - ES
MÊS/ANO: JULHO/2026



ENSAIOS QUÍMICOS				ENSAIOS FÍSICOS E MECÂNICOS									
ENSAIOS	PERDA AO FOGO (PF)	RESIDUO INSOLÚVEL (RI)	TRIOXIDO DE ENXÓFRE (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)	≤ 6,5	≤ 5,0	≤ 4,5	≥ 12,0	≥ 23,0	≥ 40,0	–	–	≤ 8,0	≤ 5	≥ 60	≤ 720	–
01/07/2026	1.34		1.93	25.0	35.9		4704	1.1	0.2	0.0	185	235	32.5
02/07/2026	1.42		1.77	26.6	36.1		4781	0.8	0.2	0.0	175	230	32.5
03/07/2026	1.98		1.80	25.0			4819	0.8	0.2	0.0	185	238	32.6
04/07/2026	1.66		1.80	25.0	35.4		4769	0.8	0.2	0.0	185	240	32.6
06/07/2026	1.56		1.74	24.3	34.0		4786	1.0	0.2	0.0	175	225	32.5
07/07/2026	1.27		1.88		33.0		4757	0.9	0.2	0.0	185	235	32.5
08/07/2026	1.63		1.83	25.3	33.7		4772	1.3	0.1	0.0	180	232	32.5
09/07/2026	1.50		1.76	24.4	34.9		4672	1.1	0.2	0.0	180	230	32.5
10/07/2026	1.95		1.82	26.7	35.8		4787	1.0	0.2	0.0	175	230	32.5
11/07/2026	2.00		1.94		34.4		4727	1.3	0.2	0.0	175	225	32.5
13/07/2026	1.87		1.82	24.1	34.7		4850	1.1	0.1	0.0	170	220	32.4
14/07/2026	2.09		1.93	23.5	34.8		4886	1.1	0.2	0.0	185	238	32.4
15/07/2026	2.01		1.91	24.5	35.5		4788	1.0	0.1	0.0	175	235	32.4
16/07/2026	1.75		1.99	24.5	35.5		4831	1.0	0.2	0.0	175	225	33.3
17/07/2026	1.78		1.98	25.6	36.9		4919	1.0	0.1	0.0	175	225	32.1
18/07/2026	2.02		1.92	26.0	36.5		4969	1.0	0.1	0.0	180	230	32.3
20/07/2026	2.01		1.99	25.3			4912	0.9	0.2	0.0	190	250	32.2
21/07/2026	1.49		1.93	27.2			4714	1.1	0.2	0.0	175	220	32.2
22/07/2026	1.47		2.02	25.2			4658	1.5	0.3	0.0	175	220	32.0
23/07/2026	1.92		2.11	25.6			4719	1.3	0.2	0.0	190	240	32.1
MÉDIA	1.74		1.89	25.2	35.1		4791	1.1	0.2	0.0	180	231	47.0
DESVIO PADRÃO	0.26		0.10	1.0	1.1		84	0.2	0.1	0.0	6	8	65.2
MÍNIMO	1.27		1.74	23.5	33.0		4658	0.8	0.1	0.0	170	220	32.0
MÁXIMO	2.09		2.11	27.2	36.9		4969	1.5	0.3	0.0	190	250	32.4

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