

CERTIFICADO DE CONTROLE DA QUALIDADE DO CIMENTO



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



ENSAIOS QUÍMICOS				ENSAIOS FÍSICOS E MECÂNICOS									
ENSAIOS	PERDA AO	RESIDUO	TRIÓXIDO 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	–
01/06/2026	0.72	0.63	1.05	17.1	27.3	40.1	4575	1.3	0.1	0.0	225	275	32.0
02/06/2026	0.86	0.49	1.02	17.7	27.4	40.3	4675	1.2	0.2	0.0	235	300	32.1
03/06/2026	0.63	0.52	1.00	16.5			4556	1.1	0.1	0.0	260	324	31.9
04/06/2026	0.74	0.54	0.95	17.4			4572	1.1	0.2	0.0	240	314	31.9
05/06/2026	0.81	0.57	0.96	17.4	27.9	40.9	4539	1.3	0.1	0.0	250	310	31.9
06/06/2026	0.96	0.59	0.92	17.5	27.6	42.4	4779	1.4	0.2	0.0	245	305	31.8
08/06/2026	1.23		0.92	17.2	26.5		4674	1.1	0.1	0.0	240	310	32.2
09/06/2026	0.71	0.26	0.92	17.6	26.0		4824	1.0	0.1	0.0	245	310	31.9
10/06/2026	0.91	0.40	0.98	17.3	27.5		4621	1.1	0.2	0.0	235	320	32.3
11/06/2026	0.66	0.37	0.93	17.1	26.7	41.0	4589	1.1	0.1	0.0	235	320	32.2
12/06/2026	0.81	0.42	0.97	17.5	27.0		4661	1.1	0.2	0.0	240	310	32.2
13/06/2026	0.76	0.57	1.00	17.0	28.1	40.0	4738	1.2	0.1	0.0	235	300	32.3
15/06/2026	1.00	0.50	0.90	16.5			4645	1.1	0.1	0.0	235	300	32.4
16/06/2026	0.71	0.38	1.03	15.0	25.5		4756	1.2	0.2	0.0	225	285	32.4
17/06/2026	0.68	0.29	1.00	17.0			4635	1.1	0.2	0.0	235	290	32.4
18/06/2026	0.76	0.34	1.01	15.6			4581	1.2	0.2	0.0	235	300	32.4
20/06/2026	0.70	0.20	1.05	17.3	25.5	40.5	4807	1.2	0.2	0.0	215	275	32.4
22/06/2026	0.60	0.15	1.03	15.8	26.7		4773	1.3	0.2	0.0	230	295	32.4
23/06/2026	0.69		1.39	17.3			4834	1.3	0.3	0.0	225	290	32.4
24/06/2026	1.04	0.67	1.10	16.8	25.1	40.0	4787	1.2	0.2	0.0	220	290	32.4
25/06/2026	1.15	0.80	1.02	15.0			4771	1.2	0.2	0.0	225	290	32.3
26/06/2026	1.02	0.74	1.04	15.0			4771	0.6	0.1	0.0	220	290	32.3
27/06/2026	0.98		1.00	15.0	25.3		4661	1.0	0.2	0.0	230	290	32.3
29/06/2026	0.82		1.03	16.4	28.8	42.5	4779	1.3	0.2	0.0	235	305	32.3
30/06/2026	0.80	0.68	1.00	16.8	28.6		4681	1.2	0.2	0.0	225	295	32.2
MÉDIA	0.83	0.48	1.01	16.7	26.9	40.9	4691	1.2	0.2	0.0	234	300	32.2
DESVIO PADRÃO	0.17	0.18	0.09	0.9	1.2	1.0	93	0.2	0.1	0.0	10	13	0.2
MÍNIMO	0.60	0.15	0.90	15.0	25.1	40.0	4539	0.6	0.1	0.0	215	275	31.8
MÁXIMO	1.23	0.80	1.39	17.7	28.8	42.5	4834	1.4	0.3	0.0	260	324	32.4

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 ENSACADO
FÁBRICA: FVI - FÁBRICA DE VITÓRIA - ES
MÊS/ANO: JULHO/2026



ENSAIOS QUÍMICOS				ENSAIOS FÍSICOS E MECÂNICOS									
ENSAIOS	PERDA AO	RESIDUO	TRIÓXIDO 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	–
01/07/2026	0.67		1.12	18.2	27.6	41.0	4733	1.2	0.3	0.0	240	305	32.3
02/07/2026	0.53		1.16	16.3	28.1	41.0	4713	1.1	0.3	0.0	230	295	32.1
03/07/2026	0.69		1.25	17.3	28.7	40.1	4728	1.0	0.2	0.0	225	295	32.3
04/07/2026	1.06		1.10	17.7	27.9	41.6	4682	1.2	0.2	0.0	225	290	32.2
06/07/2026	0.89		1.10	17.9	27.0		4654	1.2	0.2	0.0	230	290	32.1
07/07/2026	1.04		1.07	17.8	26.4		4583	1.3	0.2	0.0	225	290	32.0
08/07/2026	0.78		1.12	17.6		41.1	4750	1.2	0.2	0.0	225	285	31.9
09/07/2026	0.71		1.10	17.8	27.8		4675	1.2	0.3	0.0	230	305	31.9
10/07/2026	1.08		1.32	16.4	26.0	40.1	4642	1.4	0.2	0.0	225	290	32.0
11/07/2026	1.15		1.16	15.4	25.1		4585	1.4	0.2	0.0	220	285	32.3
13/07/2026	1.08		1.14	16.7	26.2	41.7	4680	1.4	0.2	0.0	225	289	32.2
14/07/2026	1.28		1.26	15.2	27.2		4747	1.2	0.3	0.0	225	290	32.2
15/07/2026	1.15		1.33	15.7	27.3		4743	1.3	0.2	0.0	225	292	32.3
16/07/2026	0.90		1.25	16.4	26.8	40.9	4799	1.2	0.2	0.0	220	285	32.3
17/07/2026	0.84		1.21	19.7	30.0	42.8	4673	1.3	0.2	0.0	235	300	32.4
20/07/2026	0.99		1.17	19.6	29.6	42.6	4712	1.3	0.2	0.0	215	280	32.5
21/07/2026	0.99		1.10	19.6	29.9	45.6	4709	1.4	0.2	0.0	225	275	32.4
22/07/2026	0.99		1.20	19.5	28.7	43.7	4627	1.6	0.1	0.0	220	285	32.3
23/07/2026	0.87		1.26	18.7	28.1	44.5	4525	1.5	0.2	0.0	205	265	32.2
24/07/2026	0.86		0.92	18.5	28.2	41.5	4615	1.5	0.2	0.0	225	280	32.3
25/07/2026	1.10		1.01	19.8	28.1	44.4	4756	1.5	0.2	0.0	225	285	32.3
27/07/2026	1.52		0.87	17.9	28.4	42.1	4710	1.3	0.2	0.0	215	270	32.3
28/07/2026	1.34		1.16	19.5	28.8		4629	1.5	0.2	0.0	220	275	32.0
29/07/2026	1.10		1.14	16.9	28.5		4564	1.3	0.3	0.0	225	280	32.1
30/07/2026	0.93		1.03	17.5	28.5		4576	1.6	0.2	0.0	235	305	32.2
31/07/2026	0.55		1.22	16.9	28.6		4610	1.5	0.2	0.0	230	290	32.1
MÉDIA	0.97		1.15	17.7	27.9	42.2	4670	1.3	0.2	0.0	225	288	32.2
DESVIO PADRÃO	0.23		0.11	1.4	1.2	1.6	70	0.2	0.1	0.0	7	10	0.2
MÍNIMO	0.53		0.87	15.2	25.1	40.1	4525	1.0	0.1	0.0	205	265	31.9
MÁXIMO	1.52		1.33	19.8	30.0	45.6	4799	1.6	0.3	0.0	240	305	32.5

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



ENSAIOS QUÍMICOS				ENSAIOS FÍSICOS E MECÂNICOS									
ENSAIOS	PERDA AO	RESIDUO	TRIÓXIDO 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	–
01/08/2026	0.28		1.20	17.3	28.1		4759	1.4	0.2	0.0	235	300	32.1
03/08/2026	1.14		1.18	18.3	29.7		4760	1.2	0.2	0.0	220	275	32.1
04/08/2026	1.23		1.27	18.8			4631	1.6	0.2	0.0	220	290	32.1
05/08/2026	1.20		1.10	18.4	29.6		4627	1.3	0.2	0.0	220	270	31.9
06/08/2026	0.62		1.02	18.9	28.4		4701	1.5	0.2	0.0	225	285	31.8
07/08/2026	0.69		1.25	18.7			4702	1.4	0.2	0.0	215	275	31.9
08/08/2026	1.22		1.20	17.5	28.4		4603	1.6	0.2	0.0	215	270	31.9
10/08/2026	0.94		1.14	16.4	27.7		4582	1.5	0.3	0.0	220	270	31.8
11/08/2026	1.10		1.16	17.8	28.9		4660	1.0	0.2	0.0	225	275	32.0
12/08/2026				16.9	29.7		4728	1.3	0.3	0.0	235	295	32.0
13/08/2026				15.7	27.5		4544	1.3	0.1	0.0	215	280	32.3
14/08/2026				16.8	28.1		4724	1.7	0.1	0.0	240	305	32.1
15/08/2026				16.3	28.1		4677	1.4	0.3	0.0	225	285	32.0
17/08/2026				17.8	29.0		4594	1.8	0.4	0.0	235	300	32.0
18/08/2026				16.9			4652	1.7	0.2	0.0	225	290	31.9
19/08/2026				16.0			4656	1.1	0.2	0.0	225	290	31.0
20/08/2026							4595	1.7	0.3	0.0	225	290	31.7
22/08/2026							4546	1.5	0.3	0.0	210	275	31.7
MÉDIA	0.94		1.17	17.4	28.6		4652	1.4	0.2	0.0	224	284	31.9
DESVIO PADRÃO	0.33		0.08	1.0	0.8		68	0.2	0.1	0.0	8	11	0.3
MÍNIMO	0.28		1.02	15.7	27.5		4544	1.0	0.1	0.0	210	270	31.0
MÁXIMO	1.23		1.27	18.9	29.7		4760	1.8	0.4	0.0	240	305	32.3

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