

Controle de Qualidade - Satisfação do Cliente
ENSAIOS QUÍMICOS E FÍSICOS DO CIMENTO CP III 40 RS



jan/2018

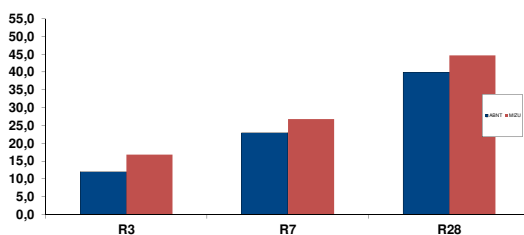
Ensacado

Dia	Composição Química				Resistência a Compressão			Finura			Expansibilidade	Pega		Consist.	
	P. Fogo (%)	RI (%)	SO3 (%)	CaO Livre (%)	03 Dias MPa	07 Dias MPa	28 Dias Mpa	Massa Espec. (g/cm³)	Blaine (m²/Kg)	# 325 (%)	# 200 (%)	Quente (mm)	Início (min)	Fim (min)	Normal (%)
1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
2	1,73	0,22	1,03	0,92	18,0	26,2	44,1	2,98	4467	0,7	0,3	0,0	225	275	31,97
3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
5	1,68	0,27	0,93	0,97	16,3	26,1	45,8	2,98	4472	0,7	0,3	0,0	230	275	31,97
6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
9	1,52	0,26	0,90	0,88	17,4	26,2	44,2	2,97	4289	0,7	0,3	0,0	225	265	32,40
10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
11	1,69	0,22	1,12	0,86	16,6	26,8	43,8	2,97	4469	0,7	0,3	0,0	210	260	32,36
12	1,54	0,29	1,03	0,91	16,0	26,7	44,2	2,97	4395	0,7	0,3	0,0	205	265	32,40
13	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
14	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
15	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
16	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
17	1,46	0,25	1,00	0,90	17,1	28,2	44,9	2,97	4387	0,7	0,3	0,0	210	268	32,4
18	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
19	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
20	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
21	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
22	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
23	1,63	0,29	0,97	0,97	16,8	27,3	44,2	2,97	4372	0,7	0,3	0,0	215	260	32,0
24	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
25	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
26	1,74	0,19	1,24	0,83	17,3	27,8	45,8	2,97	4436	0,7	0,3	0,0	215	255	32,1
27	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
28	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
29	1,62	0,22	1,12	0,93	16,5	26,1	45,2	2,97	4501	0,6	0,2	0,0	220	260	32,1
30	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
31	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

Controle Estatístico

	R3	R7	R28												
MÉDIA	1,62	0,25	1,04	0,91	16,9	26,8	44,7	2,97	4.415	0,69	0,3	0,00	217	265	32,2
DESVIO	0,10	0,04	0,11	0,05	0,62	0,78	0,76	0,00	68,00	0,03	0,03	0,00	8,33	6,92	0,19
ABNT	≤4,5	≤ 1,5	≤ 4,0		≥ 12,0	≥ 23,0	≥ 40,0		≥ 300		≤ 8,0	≤ 5	≥ 60		

COMPARATIVO ABNT X MIZU



Jessika Mouta Guimarães

Responsável técnica
 Jessika Mouta Guimarães
 CRQ:03426796 - 3ª Região

Controle de Qualidade - Satisfação do Cliente
ENSAIOS QUÍMICOS E FÍSICOS DO CIMENTO CP III 40 RS



fev/2018

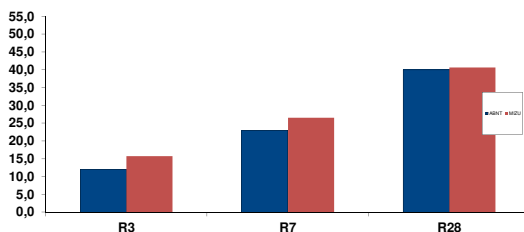
Ensacado

Dia	Composição Química				Resistência a Compressão			Finura			Expansibilidade	Pega		Consist.	
	P. Fogo (%)	RI (%)	SO3 (%)	CaO Livre (%)	03 Dias MPa	07 Dias MPa	28 Dias MPa	Massa Espec. (g/cm³)	Blaine (m²/Kg)	# 325 (%)	# 200 (%)	Quente (mm)	Início (min)	Fim (min)	Normal (%)
1	1,55	0,22	0,98	1,08	16,9	24,9	40,2	2,97	4564	0,7	0,3	0,0	210	260	31,9
2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
8	1,58	0,18	1,05	0,97	15,1	24,7	40,6	2,97	4463	0,7	0,3	0,0	229	280	32,0
9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
13	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
14	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
15	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
16	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
17	1,45	0,17	1,08	0,94	14,9	26,0	40,7	2,98	4543	0,7	0,3	0,0	210	240	31,7
18	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
19	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
20	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
21	1,32	0,22	1,00	0,94	14,3	26,8	40,5	2,98	4498	0,60	0,30	0,0	210	240	31,9
22	1,41	0,16	0,88	0,94	14,2	26,7	40,5	2,98	4501	0,7	0,3	0,0	210	253	31,9
23	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
24	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
25	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
26	1,63	0,19	0,89	0,96	17,8	29,7	41,9	2,98	4472	0,6	0,3	0,0	212	245	31,9
27	1,59	0,24	0,92	0,97	17,4	26,8	40,0	2,98	4439	0,7	0,3	0,0	215	255	31,8
28	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

Controle Estatístico

	R3	R7	R28												
MÉDIA	1,50	0,20	0,97	0,97	15,8	26,5	40,6	2,98	4.497	0,67	0,3	0,00	214	253	31,9
DESVIO	0,11	0,03	0,08	0,05	1,52	1,66	0,61	0,00	44,28	0,05	0,00	0,00	6,99	14,04	0,09
ABNT	≤4,5	≤ 1,5	≤ 4,0		≥ 12,0	≥ 23,0	≥ 40,0		≥ 300		≤ 8,0	≤ 5	≥ 60		

COMPARATIVO ABNT X MIZU



Jessica Mouta Guimarães

Responsável técnica
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Controle de Qualidade - Satisfação do Cliente
ENSAIOS QUÍMICOS E FÍSICOS DO CIMENTO CP III 40 RS

mar/2018

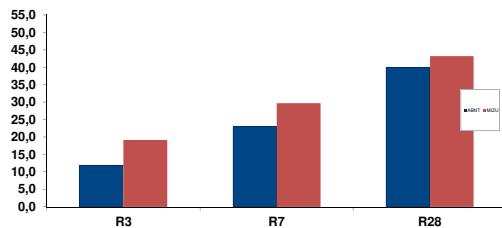
Enscado

Dia	Composição Química				Resistência a Compressão			Finura				Expansibilidade	Pega		Consist.
	P. Fogo (%)	RI (%)	SO3 (%)	CaO Livre (%)	03 Dias MPa	07 Dias MPa	28 Dias MPa	Massa Espec. (g/cm³)	Blaine (m²/Kg)	# 325 (%)	# 200 (%)	Quente (mm)	Início (min)	Fim (min)	Normal (%)
1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3	1,53	0,13	1,12	0,98	19,7	30,9	45,4	2,98	4829	0,70	0,30	0,0	195	235	31,7
4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
6	1,42	0,09	1,16	0,95	21,0	31,2	42,2	2,99	4829	0,70	0,30	0,0	190	245	31,8
7	1,55	0,16	1,09	0,96	20,5	30,8	42,5	2,99	4855	0,60	0,30	0,0	185	230	31,8
8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
12	1,59	0,15	1,11	0,90	18,7	31,7	43,4	2,99	4829	0,70	0,30	0,0	190	238	31,8
13	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
14	1,62	0,18	1,16	0,94	17,8	28,3	42,9	2,99	4727	0,7	0,3	0,0	198	250	31,9
15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
16	1,62	0,20	1,14	0,98	18,6	30,1	---	2,99	4874	0,7	0,3	0,0	198	248	31,9
17	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
21	1,57	0,16	1,03	0,92	20,0	29,3	---	2,98	4852	0,7	0,3	0,0	210	255	31,8
22	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
24	1,48	0,12	1,08	0,88	18,6	28,0	---	2,98	4789	0,8	0,3	0,0	205	255	31,8
25	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
28	1,43	0,15	1,10	0,90	17,7	27,1	---	2,97	4487	0,8	0,3	0,0	200	250	31,7
29	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Controle Estatístico

	R3	R7	R28												
MÉDIA	1,53	0,15	1,11	0,93	19,2	29,7	43,3	2,98	4,786	0,71	0,3	0,00	197	245	31,8
DESVIO	0,08	0,03	0,04	0,04	1,17	1,61	1,27	0,01	120,05	0,06	0,00	0,00	7,82	8,89	0,06
ABNT	≤ 4,5	≤ 1,5	≤ 4,0		≥ 12,0	≥ 23,0	≥ 40,0		≥ 300		≤ 8,0	≤ 5	≥ 60		

COMPARATIVO ABNT X MIZU



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Controle de Qualidade - Satisfação do Cliente
ENSAIOS QUÍMICOS E FÍSICOS DO CIMENTO CP III 40 RS

abr/2018

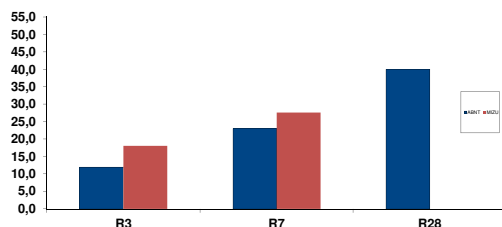
Ensacado

Dia	Composição Química				Resistência a Compressão			Finura				Expansibilidade	Pega		Consist.
	P. Fogo (%)	RI (%)	SO3 (%)	CaO Livre (%)	03 Dias MPa	07 Dias MPa	28 Dias MPa	Massa Espec. (g/cm³)	Blaine (m²/Kg)	# 325 (%)	# 200 (%)	Quente (mm)	Início (min)	Fim (min)	Normal (%)
1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10	1,49	0,12	1,02	0,87	18,3	27,6		2,97	4458	0,8	0,3	0,0	195	240	31,3
11	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
13	1,51	0,15	1,00	0,92	18,1	27,7		2,97	4700	0,8	0,3	0,00	200	255	31,4
14	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
16	1,32	0,11	1,14	0,96	17,8			2,97	4710	0,8	0,3	0,0	190	250	31,3
17	1,45	0,15	1,13	0,92	18,2			2,97	4815	0,7	0,3	0,0	205	265	31,3
18	1,40	0,13	1,10	0,93				2,98	4751	0,8	0,3	0,0	210	265	31,3
19	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
20	1,35	0,16	1,06	0,93				2,98	4815	0,7	0,3	0,0	195	250	31,3
21	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Controle Estatístico

	R3	R7	R28												
MÉDIA	1,42	0,14	1,08	0,92	18,1	27,7	#DIV/0!	2,97	4.708	0,77	0,3	0,00	199	254	31,3
DESVIO	0,08	0,02	0,06	0,03	0,22	0,07	#DIV/0!	0,01	132,15	0,05	0,00	0,00	7,36	9,70	0,04
ABNT	≤4,5	≤1,5	≤4,0		≥12,0	≥23,0	≥40,0		≥300		≤8,0	≤5	≥60		

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