



**We Commit. We Do.**  
 Golden Bay Cement  
 Portland Works  
 P.O. Box 1143  
 Whangarei 0140  
 NEW ZEALAND  
 PH (09) 432 2656  
 FAX (09) 432 2822

# CERTIFICATE OF QUALITY

## TYPE HE

### Premium Portland Cement



Tests indicated as not accredited are outside the scope of the laboratory's accreditation.

Issued to: **Technical Manager**

Test Report No: **12#129**

Code	Week Ending	Specific Surface Area	Normal Consistency	Initial Set	Final Set	Soundness	Compressive Strength										Free Lime	Sodium Equivalent (NaEq)	Sulphur Trioxide (SO3)
							ISO-				Concrete								
							1 Day	3 days	7 days	28 days	Slump	1 Day	3 days	7 days	28 days				
Mean		501	31.2	108	3:15	1	22.0	41.1	51.7	66.0	93.9	16.4	30.5	36.5	45.9	1.4	0.57	2.2	
Standard Deviation		19	0.5	22	0:20	1	1.7	2.4	2.1	2.3	6.6	2.1	3.6	4.1	3.8	0.2	0.02	0.1	
Min		470	30.5	75	2:45	1	19.1	37.5	47.8	62.2	80.0	12.2	24.0	28.8	40.6	0.9	0.52	2.2	
Max		550	32.1	150	4:00	3	26.6	45.1	58.0	71.1	105.0	20.7	36.1	44.3	52.5	1.7	0.62	2.4	
NZS 3122:2009 Requirements				45 min	6:00 max	5 max		25.0 min	40.0 min									3.5 max	
Units		m2/kg	%	minutes	hrs:mins	mm		MPa	MPa	MPa			MPa	MPa	MPa	%	%	%	
120428-470-HE	28/04/12	530	31.8	150	4:00	2	23.1	42.9	53.2		90	17.0	29.6	36.0		1.2	0.59	2.2	
120415-976-HE	15/04/12	550	32.1	150	3:45	3	22.9	42.3	54.0		90	18.4	35.1	39.4		1.2	0.60	2.3	
120328-400-HE	28/03/12	485	31.8	120	3:45	1	23.4	45.1	58.0	71.1	100	16.7	32.6	39.8	45.7	1.0	0.57	2.3	
120309-581-HE	09/03/12	510	31.9	120	3:45	1	22.4	43.1	52.8	68.1	95	15.4	28.4	34.6	42.5	1.3	0.59	2.3	
120302-069-HE	02/03/12	515	31.9	120	3:45	2	23.0	44.7	53.9	67.1	95	18.0	32.2	38.7	46.4	1.1	0.60	2.3	
120128-451-HE	28/01/12	470	30.8	120	3:30	2	23.4	43.3	51.5	66.4	100	16.4	30.4	34.4	44.2	1.3	0.60	2.2	
120119-694-HE	19/01/12	500	30.9	105	3:15	1	22.1	42.1	51.6	65.0	95	17.4	31.2	34.7	46.2	1.3	0.56	2.2	
111205-647-HE	05/12/11	500	30.8	105	3:00	1	26.6	44.2	52.0	68.3	95	17.2	30.3	36.2	43.7	1.5	0.58	2.3	
111109-886-HE	09/11/11	500	30.6	120	3:00	2	23.2	44.1	54.8	69.4	85	19.4	35.9	42.4	51.2	1.3	0.58	2.3	
111027-326-HE	27/10/11	495	30.5	135	3:00	2	23.9	43.7	52.5	66.8	90	19.2	32.3	39.4	47.5	1.5	0.58	2.3	
111015-788-HE	15/10/11	495	30.5	135	3:15	1	21.6	41.0	50.5	66.1	105	13.0	28.9	34.3	40.6	1.2	0.58	2.2	
110930-064-HE	30/09/11	520	31.6	120	3:00	1	23.8	39.4	52.4	62.7	90	20.7	35.4	44.3	52.3	1.5	0.58	2.4	
110921-540-HE	21/09/11	510	31.5	105	3:30	1	21.0	38.9	47.8	62.2	95	16.7	32.8	39.2	46.2	1.7	0.58	2.2	
110915-345-HE	15/09/11	520	31.5	120	3:15	1	21.2	41.9	52.9	64.3						1.5	0.62	2.3	
110831-637-HE	31/08/11	520	30.9	105	3:15	2	20.3	39.7	50.3	62.7	85	17.3	36.1	43.2	52.5	1.5	0.56	2.2	
110820-096-HE	20/08/11	510	30.9	90	3:00	1	22.8	40.5	51.6	63.4	105	12.9	26.1	29.4	42.0	1.6	0.52	2.2	
110809-526-HE	09/08/11	480	31.2	75	3:00	2	20.1	39.4	49.3	67.1	90	15.7	30.0	38.2	50.2	1.6	0.58	2.3	
110731-185-HE	31/07/11	480	31.2	75	3:00	1	20.0	37.7	50.4	67.7	85	17.1	34.1	36.7	52.0	1.4	0.56	2.2	
110718-459-HE	18/07/11	495	31.2	75	3:00	1	20.0	38.2	50.1	67.0	95	15.4	29.1	37.5	45.0	1.6	0.57	2.3	
110710-962-HE	10/07/11	500	31.2	75	3:00	2	21.5	41.4	51.3	66.1	100	15.7	24.0	31.7	40.9	1.6	0.56	2.2	
110628-393-HE	28/06/11	475	31.1	90	3:00	1	20.0	37.5	49.8	64.7	100	15.3	24.7	28.8	45.4	1.2	0.55	2.2	
110620-236-HE	20/06/11	485	31.1	90	3:00	2	20.6	39.9	51.4	66.0	100	13.7	29.3	34.1	41.5	0.9	0.57	2.2	
110606-582-HE	06/06/11	480	31.2	105	3:00	2	19.1	39.5	50.5	66.5	80	12.2	24.2	33.5	43.7	1.4	0.57	2.2	
110529-138-HE	29/05/11	495	30.6	90	2:45	1	21.0	38.5	50.5	65.0						1.5	0.57	2.2	
110523-955-HE	23/05/11	505	31.5	105	3:30	1	22.8	38.5	49.1	63.4	95	16.8	29.4	31.8	45.0	1.0	0.55	2.2	

The above samples were tested as received in accordance with the current terms of accreditation and methods stated in NZS 3122:2009 with the exception of:  
 - Chemical Analysis to ASTM C114:11b  
 - Concrete Compressive Strength test results outside the scope of accreditation

**This Report must not be reproduced except in full**

Jim White  
 Quality System Co-ordinator Date issued: 11/05/12

- Sample Retested
- Sample Tested Outside of the Standard Test Requirement
- # -No result available at time of certificate issue

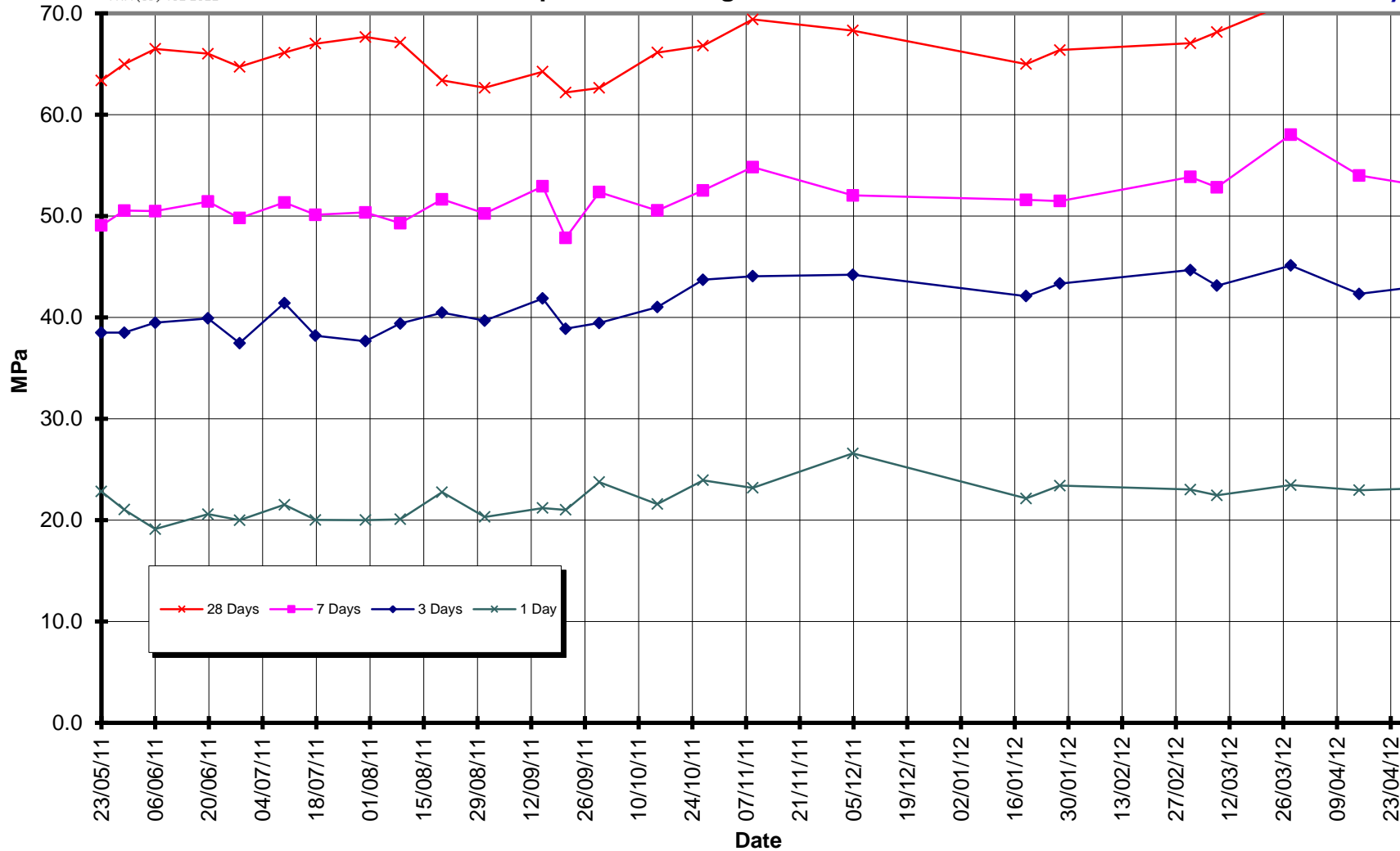


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# Premium Portland Cement Type HE



## Compressive Strength ISO-CEN Mortar





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# Premium Portland Cement Type HE



## Compressive Strength Concrete

