



# CERTIFICATE OF QUALITY

## EcoSure® Type GP Cement

NZS3122:2009 (Bulk & Bag Despatch)



Issued to: National Sales Manager

Test Report No: 23#49

info@goldenbay.co.nz

Code	Week Ending / Voyage	Specific Surface Area	Normal Consistency	Initial Set	Final Set	Soundness	Compressive Strength						Free Lime	Sodium Equivalent (NaEq)	Sulphur Trioxide (SO3)	
							ISO-CEN			Slump	Concrete					
							3 days	7 days	28 days		3 days	7 days				28 days
Mean		344	29.0	145	3:49	1	32.4	45.6	65.4	96	23.5	33.1	47.4	1.5	0.57	2.1
Standard Deviation		8	0.1	10	0:08	0	0.9	1.2	1.3	6	1.7	2.3	2.7	0.2	0.01	0.03
Min		325	28.7	120	3:30	0	30.3	43.4	63.1	90	21.4	30.4	43.6	1.1	0.53	2.1
Max		360	29.2	165	4:00	2	34.3	48.6	68.1	105	26.9	38.0	51.8	2.3	0.59	2.2
NZS 3122:2009 Requirements				45 min	6:00 max	5 max		35.0 min	45.0 min						0.6 max	3.5 max
Units		m2/kg	%	minutes	hrs:mins	mm	MPa	MPa	MPa	mm	MPa	MPa	MPa	%	%	%
230427-851-GP	27/04/23	350	28.8	135	3:45	1	32.4							1.4	0.57	2.2
230425-853-GP	25/04/23	350	29.2	135	3:45	1	32.6							1.5	0.55	2.1
230421-495-GP	21/04/23	345	28.9	135	3:45	0	32.1	45.4		105	22.8	32.2		1.5	0.59	2.1
230420-497-GP	20/04/23	345	29.0	150	4:00	1	31.4	43.4						1.4	0.56	2.1
230414-218-GP	14/04/23	350	29.2	150	3:45	1	32.4	44.2						1.5	0.57	2.2
230410-216-GP	10/04/23	330	29.1	150	3:45	1	33.1	46.1		90	24.1	31.4		1.6	0.57	2.2
230405-145-GP	05/04/23	345	29.0	150	4:00	1	32.2	45.1						1.1	0.58	2.2
230402-980-GP	02/04/23	355	29.0	150	4:00	1	33.3	47.0		100	21.4	33.6		1.3	0.58	2.2
230331-831-GP	31/03/23	345	29.2	150	4:00	2	31.3	43.8	63.1					1.4	0.58	2.1
230328-653-GP	28/03/23	345	29.2	150	4:00	1	31.9	44.9	64.4	90	25.2	38.0	47.2	1.3	0.57	2.1
230323-331-GP	23/03/23	330	29.0	150	4:00	1	33.2	45.7	65.1	105	22.6	31.8	46.8	1.3	0.57	2.2
230318-091-GP	18/03/23	340	29.0	150	3:45	1	33.4	46.8	65.3					1.3	0.57	2.1
230314-089-GP	14/03/23	355	29.0	150	3:45	1	33.7	45.1	64.2	100	22.8	33.1	46.2	1.4	0.55	2.2
230311-659-GP	11/03/23	350	28.8	135	3:30	1	34.3	48.6	67.5					1.1	0.57	2.2
230309-657-GP	09/03/23	340	28.9	150	3:45	2	33.4	46.4	65.3	90	23.9	37.7	51.8	1.5	0.55	2.2
230301-330-GP	01/03/23	335	28.9	150	3:45	1	33.9	47.2	67.0					1.3	0.58	2.1
230225-291-GP	25/02/23	345	28.8	150	3:45	1	32.5	45.9	65.7	100	21.8	33.1	43.6	1.4	0.58	2.1
230223-005-GP	23/02/23	340	29.1	150	3:45	1	32.3	45.4	63.7					1.5	0.58	2.2
230221-003-GP	21/02/23	345	28.9	165	3:45	1	32.5	46.3	64.6	100	21.5	33.3	43.8	1.4	0.58	2.2
230216-805-GP	16/02/23	360	28.9	150	3:45	1	31.5	45.2	65.2	90	22.3	32.7	47.4	1.4	0.57	2.1
230209-635-GP	09/02/23	350	29.1	150	3:45	1	31.7	44.9	64.9					1.7	0.58	2.2
230205-361-GP	05/02/23	340	28.8	150	3:45	1	31.3	44.4	65.1	90	24.9	30.6	47.8	1.6	0.57	2.1
230201-210-GP	01/02/23	345	28.7	135	4:00	1	31.8	46.1	65.1	100	26.9	32.1	51.5	1.6	0.55	2.1
230124-814-GP	24/01/23	345	29.2	120	3:45	1	32.6	46.0	68.1	90	25.8	30.4	48.3	1.4	0.55	2.1
230121-657-GP	21/01/23	325	28.8	120	4:00	1	30.3	45.8	66.4					2.3	0.53	2.1

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 composition to ASTM C114-18

All concrete testing conducted in accordance with NZS 3112:1986.

Sample Retested

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Vincent Lane  
Works Chemist



Portland Works, Portland, Whangarei 0178

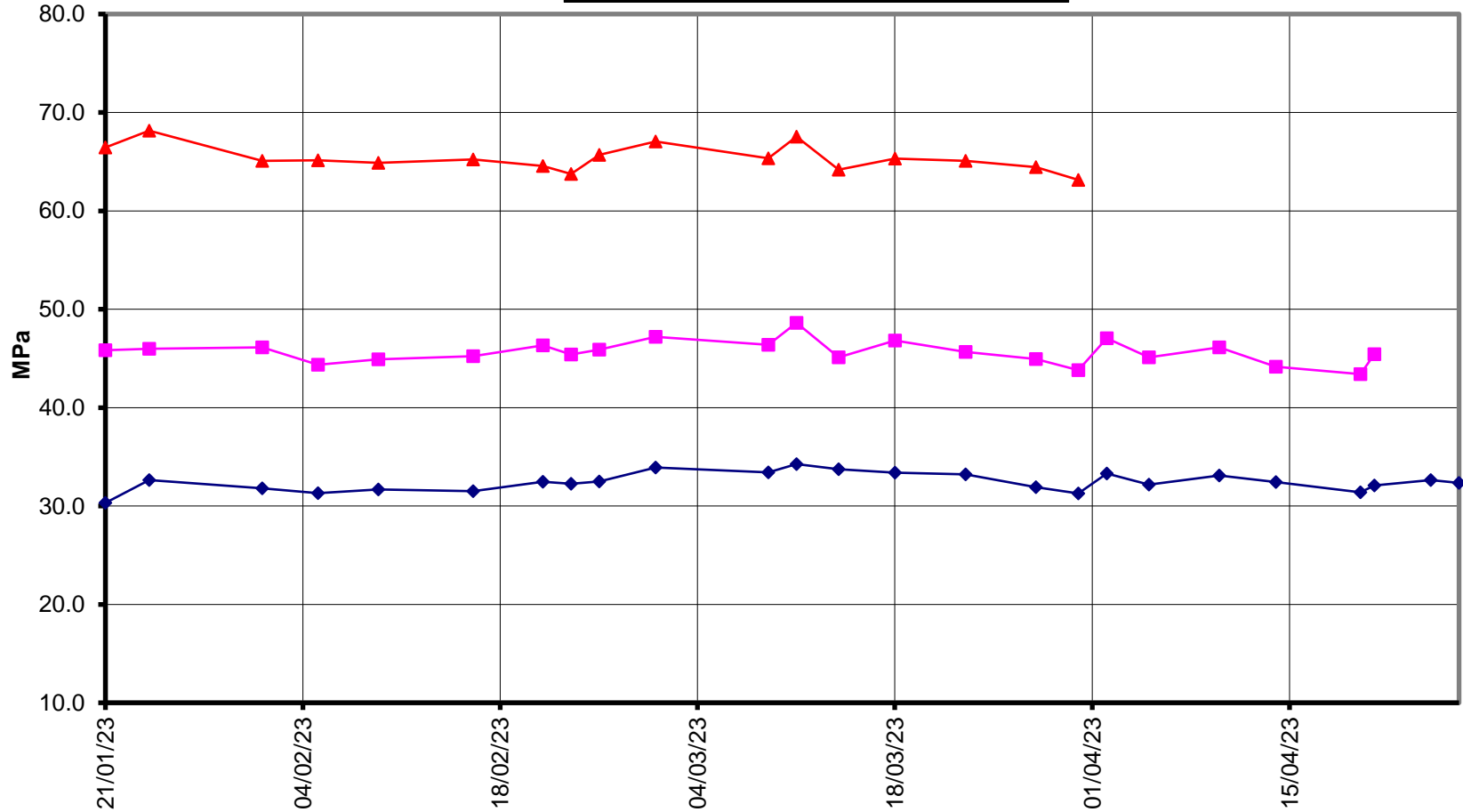
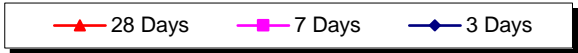
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# EcoSure® Type GP Cement

## Compressive Strength ISO-CEN Mortar (Bulk Dispatch)



Date





# EcoSure® Type GP Cement

## Compressive Strength Concrete (Bulk Dispatch)



—x— 28 Days    —■— 7 Days    —◆— 3 Days    —x— Slump

