



CERTIFICATE OF QUALITY

EcoSure® Type GP Cement

NZS3122:2009 (Bulk & Bag Despatch)



Issued to: National Sales Manager

Test Report No: 23#39

info@goldenbay.co.nz

Code	Week Ending / Voyage	Specific Surface Area	Normal Consistency	Initial Set	Final Set	Sound-ness	Compressive Strength						Free Lime	Sodium Equivalent (NaEq)	Sulphur Trioxide (SO3)	
							ISOCCN			Slump	Concrete					
							3 days	7 days	28 days		3 days	7 days				28 days
Mean		340	29.0	144	3:50	1	31.9	45.3	65.6	96	23.1	32.6	48.1	1.6	0.56	2.1
Standard Deviation		10	0.2	11	0:09	0	1.3	1.5	1.4	7	1.7	1.7	3.0	0.3	0.02	0.04
Min		320	28.7	120	3:30	1	29.6	42.6	62.4	90	21.3	30.4	43.6	1.1	0.52	2.1
Max		360	29.5	165	4:15	2	34.3	48.6	68.1	110	26.9	37.7	52.4	2.3	0.58	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	%	%	%
230331-831-GP	31/03/23	345	29.2	150	4:00	2	31.3							1.4	0.58	2.1
230328-653-GP	28/03/23	345	29.2	150	4:00	1	31.9			90				1.3	0.57	2.1
230323-331-GP	23/03/23	330	29.0	150	4:00	1	33.2	45.7		105	22.6	31.8		1.3	0.57	2.2
230318-091-GP	18/03/23	340	29.0	150	3:45	1	33.4	46.8						1.3	0.57	2.1
230314-089-GP	14/03/23	355	29.0	150	3:45	1	33.7	45.1		100	22.8	33.1		1.4	0.55	2.2
230311-659-GP	11/03/23	350	28.8	135	3:30	1	34.3	48.6						1.1	0.57	2.2
230309-657-GP	09/03/23	340	28.9	150	3:45	2	33.4	46.4		90	23.9	37.7		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
230119-477-GP	19/01/23	325	29.3	135	4:15	1	30.1	44.6	67.1	90	22.7	32.4	46.7	1.8	0.53	2.1
230113-325-GP	13/01/23	345	29.1	150	3:45	1	31.6	46.6	65.1					1.9	0.55	2.2
230107-315-GP	07/01/23	345	29.1	150	3:45	2	30.8	42.7	65.5	110	21.7	32.0	52.4	1.8	0.53	2.2
221231-208-GP	31/12/22	335	29.3	135	4:00	1	30.3	43.2	62.4	90	22.3	32.1	48.9	1.7	0.52	2.2
221223-021-GP	23/12/22	335	29.4	150	3:45	1	30.3	42.6	66.0	100	21.3	33.3	50.7	2.0	0.53	2.2
221220-706-GP	20/12/22	320	29.5	135	4:00	1	30.9	44.4	67.6					1.8	0.52	2.2
221217-703-GP	17/12/22	325	29.5	135	4:00	1	32.9	44.6	65.1	90	23.4	32.1		1.8	0.54	2.2
221214-374-GP	14/12/22	340	28.9	135	3:45	1	29.6	43.9	66.4					1.9	0.54	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

Date issued: 6/04/2023

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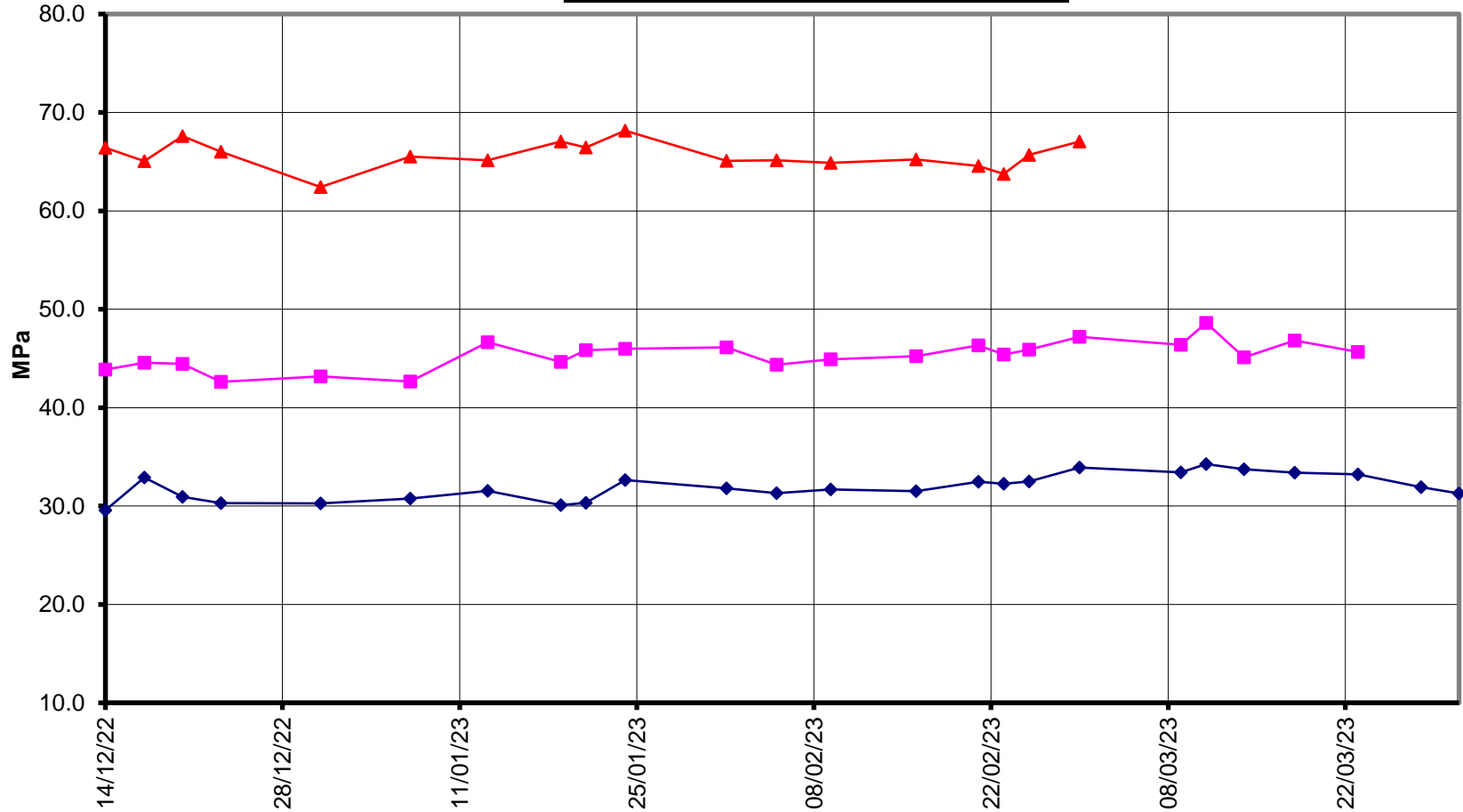


EcoSure® Type GP Cement

Compressive Strength ISO-CEN Mortar (Bulk Dispatch)



28 Days 7 Days 3 Days



Date





EcoSure® Type GP Cement

Compressive Strength Concrete (Bulk Dispatch)



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

