



CERTIFICATE OF QUALITY

EcoSure® Type GP Cement

NZS3122:2009 (Bulk & Bag Despatch)



Issued to: National Sales Manager

Test Report No: 24#16

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)	
							ISOCEN			Concrete						
							3 days	7 days	28 days	Slump	3 days	7 days				28 days
Mean		353	29.2	143	3:40	1	34.0	46.0	64.6	91	25.9	36.8	47.8	1.6	0.53	2.36
Standard Deviation		9	0.6	14	0:15	0.4	1.1	1.5	1.1	7	1.6	1.9	3.4	0.2	0.02	0.04
Min		335	28.3	105	3:15	0	31.8	43.1	63.2	80	23.5	33.5	43.0	1.2	0.51	2.31
Max		370	30.3	165	4:00	2	35.6	48.5	66.6	100	28.0	40.5	56.5	2.0	0.56	2.47
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	%	%	%
240208-341-GP	08/02/24	370	29.1	150	4:00	2	35.0							1.5	0.53	2.37
240205-339-GP	05/02/24	360	28.9	150	4:00	1	35.2			90	28.5			1.5	0.53	2.35
240131-047-GP	31/01/24	360	29.1	150	4:00	1	34.1	45.6		90	26.0	36.0		1.2	0.54	2.35
240123-989-GP	23/01/24	345	29.1	150	4:00	1	34.6	47.2		80	27.0	35.5		1.5	0.54	2.35
240114-705-GP	14/01/24	350	28.3	165	4:00	1	35.0	47.5		80	26.5	37.0		1.3	0.54	2.31
240111-476-GP	11/01/24	365	29.1	150	3:45	1	33.6	45.4	63.6	90	28.5	38.0	48.0	1.5	0.52	2.34
240106-162-GP	06/01/24	360	29.1	150	4:00	0	34.4	45.2	63.2					1.5	0.53	2.31
240102-160-GP	02/01/24	360	29.1	150	3:45	1	33.8	45.0	63.3	100	23.5	35.0	45.0	1.6	0.51	2.35
231225-830-GP	25/12/23	360	29.1	135	3:30	2	31.8	47.5	65.6	100	23.5	33.5	45.0	1.7	0.53	2.39
231221-461-GP	21/12/23	350	29.2	105	3:15	1	33.0	46.1	63.7	90	26.0	39.0	50.5	1.5	0.53	2.37
231214-323-GP	14/12/23	350	28.6	150	3:15	1	33.2	45.5	64.3	90	28.0	40.5	48.5	1.8	0.54	2.41
231211-321-GP	11/12/23	355	28.4	150	3:30	1	32.6	45.8	64.6					1.8	0.55	2.39
231209-760-GP	09/12/23	360	28.4	120	3:15	1	35.6	48.5	66.4					1.5	0.54	2.47
231202-741-GP	02/12/23	360	28.3	120	3:15	1	34.9	48.3	65.3	90	26.0	37.0	45.5	1.7	0.55	2.34
231201-354-GP	01/12/23	340	29.8	120	3:30	2	33.7	47.2	65.0					1.2	0.55	2.31
231128-351-GP	28/11/23	350	29.7	135	3:45	1	34.8	48.3	64.0	90	25.5	37.0	48.5	1.5	0.56	2.42
231123-044-GP	23/11/23	345	29.7	150	3:45	2	33.3	46.2	66.6					1.9	0.54	2.38
231120-041-GP	20/11/23	350	29.3	150	3:45	2	32.9	45.0	63.3	100	23.5	35.0	43.0	1.5	0.53	2.38
231114-855-GP	14/11/23	350	29.7	150	3:45	2	35.6	47.1	65.1	100	26.0	36.0	47.5	1.5	0.56	2.36
231105-560-GP	05/11/23	340	29.6	135	3:30	1	35.3	46.1	66.5	100	25.0	35.0	46.5	1.6	0.52	2.35
231102-319-GP	02/11/23	335	29.6	150	3:45	2	33.0	44.8	65.6	80	26.5	38.5	56.5	1.5	0.53	2.38
231028-990-GP	28/10/23	350	30.0	150	3:30	0	33.6	43.3	63.8	90	25.0	36.5	47.0	1.7	0.51	2.33
231024-978-GP	24/10/23	340	30.0	150	3:30	1	34.3	46.1	65.1					2.0	0.54	2.33
231019-725-GP	19/10/23	365	30.0	150	3:45	2	32.9	43.1	63.5					1.8	0.52	2.32
231016-722-GP	16/10/23	360	30.3	150	3:45	1	32.7	44.0	63.4	85	25.0	40.0	50.5	1.5	0.51	2.34

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.

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Raki Harding
Quality Systems Manager



Portland Works, Portland, Whangarei 0178

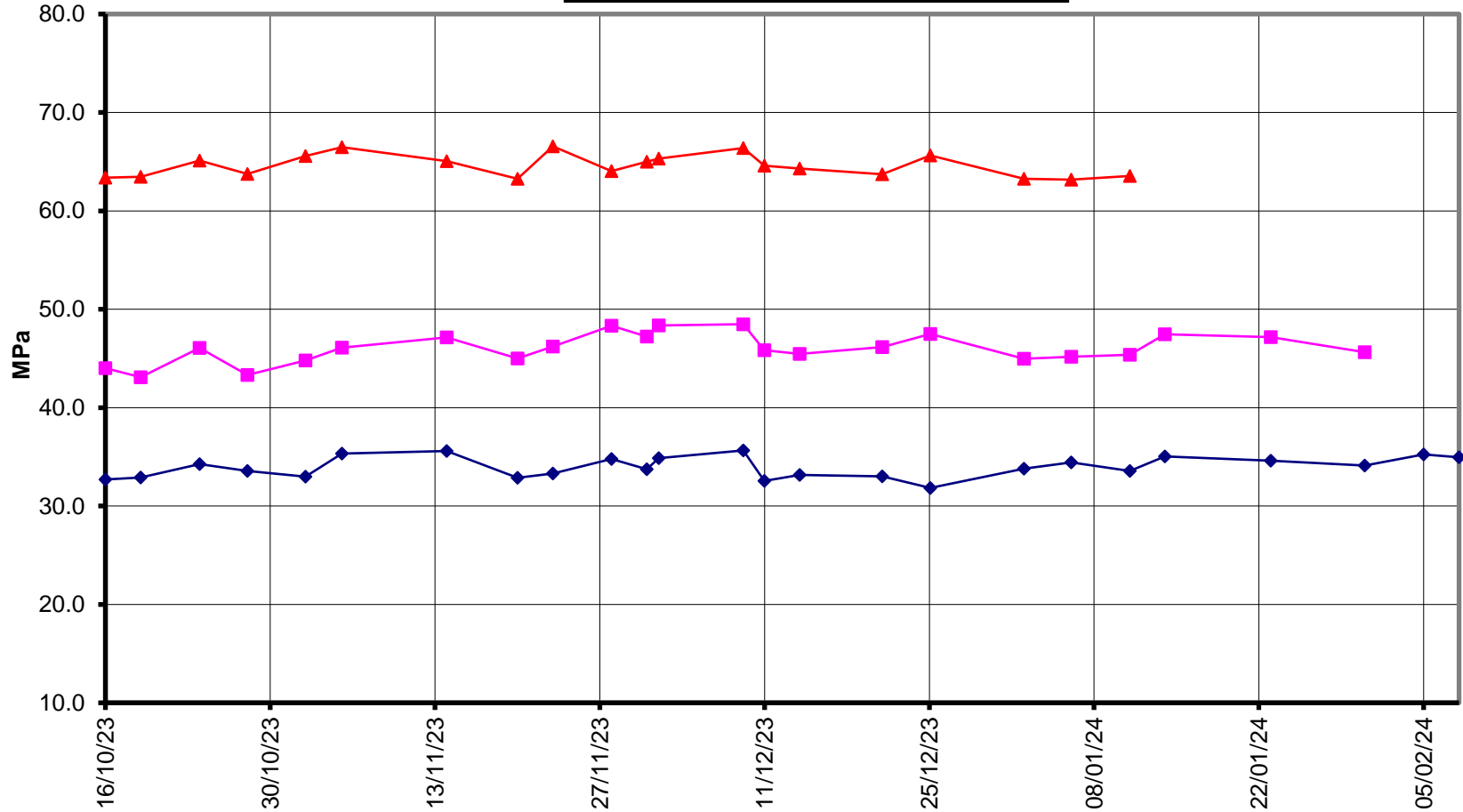
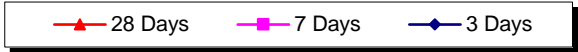
Date issued: 16/02/2024

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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

