



CERTIFICATE OF QUALITY

EcoSure® Type GP Cement

NZS3122:2009 (Bulk & Bag Despatch)



Issued to: National Sales Manager

Test Report No: 23#58

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)
							ISOCCN			Slump	Concrete					
							3 days	7 days	28 days		3 days	7 days	28 days			
Mean		344	29.1	150	3:55	1	32.4	45.7	65.2	96	23.1	33.8	45.7	1.4	0.57	2.2
Standard Deviation		8	0.2	11	0:13	0	0.9	1.3	1.3	5	1.2	2.5	3.7	0.1	0.01	0.02
Min		330	28.8	135	3:30	0	30.4	43.3	63.0	90	21.5	31.5	39.0	1.1	0.54	2.1
Max		360	29.9	180	4:30	2	34.3	48.6	67.5	100	25.0	38.0	52.0	1.7	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	%	%	%
230524-867-GP	24/05/23	360	28.9	165	4:15	1	31.6	45.6						1.5	0.55	2.16
230522-832-GP	22/05/23	350	29.0	180	4:30	1	31.2	44.9						1.5	0.55	2.16
230519-741-GP	19/05/23	340	29.0	165	4:15	1	31.4	45.5						1.6	0.56	2.15
230512-679-GP	12/05/23	350	29.9	165	4:00	1	32.3	45.7						1.7	0.55	2.16
230510-509-GP	10/05/23	330	29.6	150	4:15	2	30.4	43.3						1.5	0.54	2.13
230506-507-GP	06/05/23	335	29.3	150	4:00	1	32.3	45.8						1.4	0.55	2.14
230502-178-GP	02/05/23	330	29.2	135	4:00	0	32.4	47.7	66.0					1.4	0.55	2.13
230427-851-GP	27/04/23	350	28.8	135	3:45	1	32.4	47.2	66.8					1.4	0.57	2.15
230425-853-GP	25/04/23	350	29.2	135	3:45	1	32.6	46.3	65.6					1.5	0.55	2.14
230421-495-GP	21/04/23	345	28.9	135	3:45	0	32.1	45.4	65.2	100	23.0	32.0	39.0	1.5	0.59	2.12
230420-497-GP	20/04/23	345	29.0	150	4:00	1	31.4	43.4	63.0					1.4	0.56	2.12
230414-218-GP	14/04/23	350	29.2	150	3:45	1	32.4	44.2	65.1					1.5	0.57	2.15
230410-216-GP	10/04/23	330	29.1	150	3:45	1	33.1	46.1	66.9	90	24.0	31.5	46.0	1.6	0.57	2.17
230405-145-GP	05/04/23	345	29.0	150	4:00	1	32.2	45.1	64.0					1.1	0.58	2.17
230402-980-GP	02/04/23	355	29.0	150	4:00	1	33.3	47.0	63.8	100	21.5	33.5	45.0	1.3	0.58	2.16
230331-831-GP	31/03/23	345	29.2	150	4:00	2	31.3	43.8	63.1					1.4	0.58	2.14
230328-653-GP	28/03/23	345	29.2	150	4:00	1	31.9	44.9	64.4	90	25.0	38.0	47.0	1.3	0.57	2.13
230323-331-GP	23/03/23	330	29.0	150	4:00	1	33.2	45.7	65.1	100	22.5	32.0	47.0	1.3	0.57	2.18
230318-091-GP	18/03/23	340	29.0	150	3:45	1	33.4	46.8	65.3					1.3	0.57	2.09
230314-089-GP	14/03/23	355	29.0	150	3:45	1	33.7	45.1	64.2	100	23.0	33.0	46.0	1.4	0.55	2.18
230311-659-GP	11/03/23	350	28.8	135	3:30	1	34.3	48.6	67.5					1.1	0.57	2.16
230309-657-GP	09/03/23	340	28.9	150	3:45	2	33.4	46.4	65.3	90	24.0	37.5	52.0	1.5	0.55	2.18
230301-330-GP	01/03/23	335	28.9	150	3:45	1	33.9	47.2	67.0					1.3	0.58	2.14
230225-291-GP	25/02/23	345	28.8	150	3:45	1	32.5	45.9	65.7	100	22.0	33.0	43.5	1.4	0.58	2.14
230223-005-GP	23/02/23	340	29.1	150	3:45	1	32.3	45.4	63.7					1.5	0.58	2.20

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.

Data reported as per requirements of NZS 3112:1986 & ASTM C114-18

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Vincent Lane
Works Chemist



Portland Works, Portland, Whangarei 0178

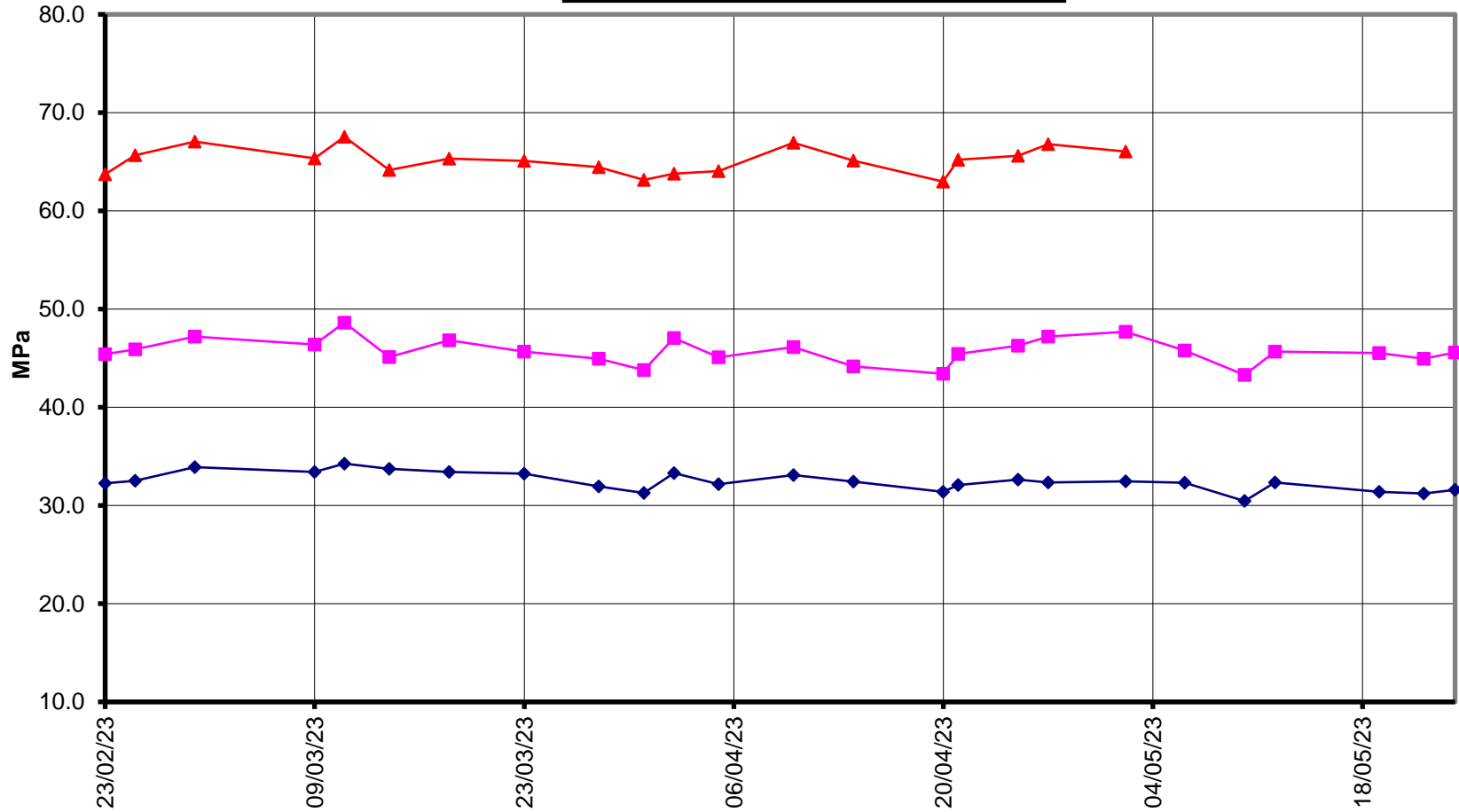
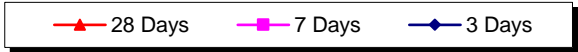
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EcoSure® Type GP Cement

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

