



CERTIFICATE OF QUALITY

EcoSure® Type GP Cement

NZS3122:2009 (Bulk & Bag Despatch)



Issued to: National Sales Manager

Test Report No: 23#115

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		349	29.6	137	3:36	1	34.9	47.8	65.3	90	25.8	36.9	49.1	1.6	0.54	2.35
Standard Deviation		10	0.3	10	0:11	0.5	0.9	1.0	0.7	9	2.5	3.0	3.3	0.2	0.01	0.02
Min		330	29.1	120	3:15	0	33.0	46.2	64.1	70	21.0	31.5	43.0	1.4	0.52	2.30
Max		365	30.0	150	4:00	2	36.8	50.2	66.5	100	29.0	41.5	55.0	1.9	0.57	2.39
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	%	%	%
231006-050-GP	06/10/23	355	29.6	135	3:30	1	33.3			90	23.0			1.8	0.52	2.37
231002-045-GP	02/10/23	340	29.6	150	3:45	1	33.0							1.5	0.53	2.36
230927-762-GP	27/09/23	350	29.8	150	3:30	2	34.5	46.6						1.6	0.53	2.36
230924-755-GP	24/09/23	340	29.8	120	3:30	0	34.6	46.9		90	21.0	31.5		1.6	0.53	2.34
230919-450-GP	19/09/23	340	29.6	150	3:30	1	33.8	47.8		90	27.5	38.0		1.5	0.54	2.35
230915-073-GP	15/09/23	330	30.0	120	3:45	2	34.7	49.0						1.4	0.54	2.30
230910-071-GP	10/09/23	335	29.5	135	3:45	1	35.5	49.3		80	28.0	40.5		1.6	0.56	2.37
230907-634-GP	07/09/23	355	29.9	135	3:45	2	34.9	48.8	65.9					1.8	0.55	2.37
230902-629-GP	02/09/23	355	29.9	135	4:00	0	35.0	47.8	65.2	100	26.5	36.5	50.5	1.7	0.54	2.31
230829-392-GP	29/08/23	355	29.9	135	3:30	1	35.2	47.1	65.9	90	28.0	39.0	55.0	1.6	0.54	2.35
230824-052-GP	24/08/23	360	29.9	135	3:45	1	35.5	47.9	65.1	100	26.0	34.0	43.0	1.4	0.54	2.35
230822-050-GP	22/08/23	365	29.9	135	3:45	1	35.2	47.2	64.7					1.5	0.55	2.33
230818-641-GP	18/08/23	340	29.2	135	3:30	1	34.6	46.3	64.5	90	27.5	41.5	50.5	1.4	0.53	2.35
230814-639-GP	14/08/23	350	29.1	150	3:45	1	34.0	46.2	65.2					1.5	0.55	2.35
230809-298-GP	09/08/23	365	29.1	135	3:30	1	36.8	48.6	66.0	70	29.0	40.5	50.5	1.6	0.55	2.37
230807-296-GP	07/08/23	345	29.1	120	3:15	1	36.2	49.0	66.3					1.8	0.55	2.38
230803-092-GP	03/08/23	350	29.4	150	3:45	1	35.6	47.9	65.2					1.8	0.55	2.34
230731-086-GP	31/07/23	350	29.2	135	3:15	1	34.6	46.9	65.3	90	25.5	34.5	47.0	1.9	0.55	2.36
230728-782-GP	28/07/23	355	29.6	120	3:30	1	33.7	46.6	64.8					1.9	0.55	2.35
230723-746-GP	23/07/23	365	29.6	135	3:30	2	36.0	50.2	66.5	100	27.5	38.0	51.0	1.6	0.55	2.38
230719-382-GP	19/07/23	335	29.5	135	3:15	2	35.6	48.3	66.1	100	25.0	35.5	46.0	1.9	0.54	2.33
230714-028-GP	14/07/23	335	29.6	150	3:45	1	35.4	47.7	64.7					1.5	0.57	2.36
230712-026-GP	12/07/23	340	29.5	150	3:45	0	35.7	47.9	64.9	80	25.5	36.5	50.0	1.5	0.56	2.31
230704-724-GP	04/07/23	350	29.5	135	3:30	1	34.5	47.3	64.1	90	21.5	33.5	47.0	1.7	0.56	2.39
230702-726-GP	02/07/23	355	29.5	150	3:45	1	34.1	47.3	64.7					1.6	0.57	2.39

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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Vincent Lane
Works Chemist



Portland Works, Portland, Whangarei 0178

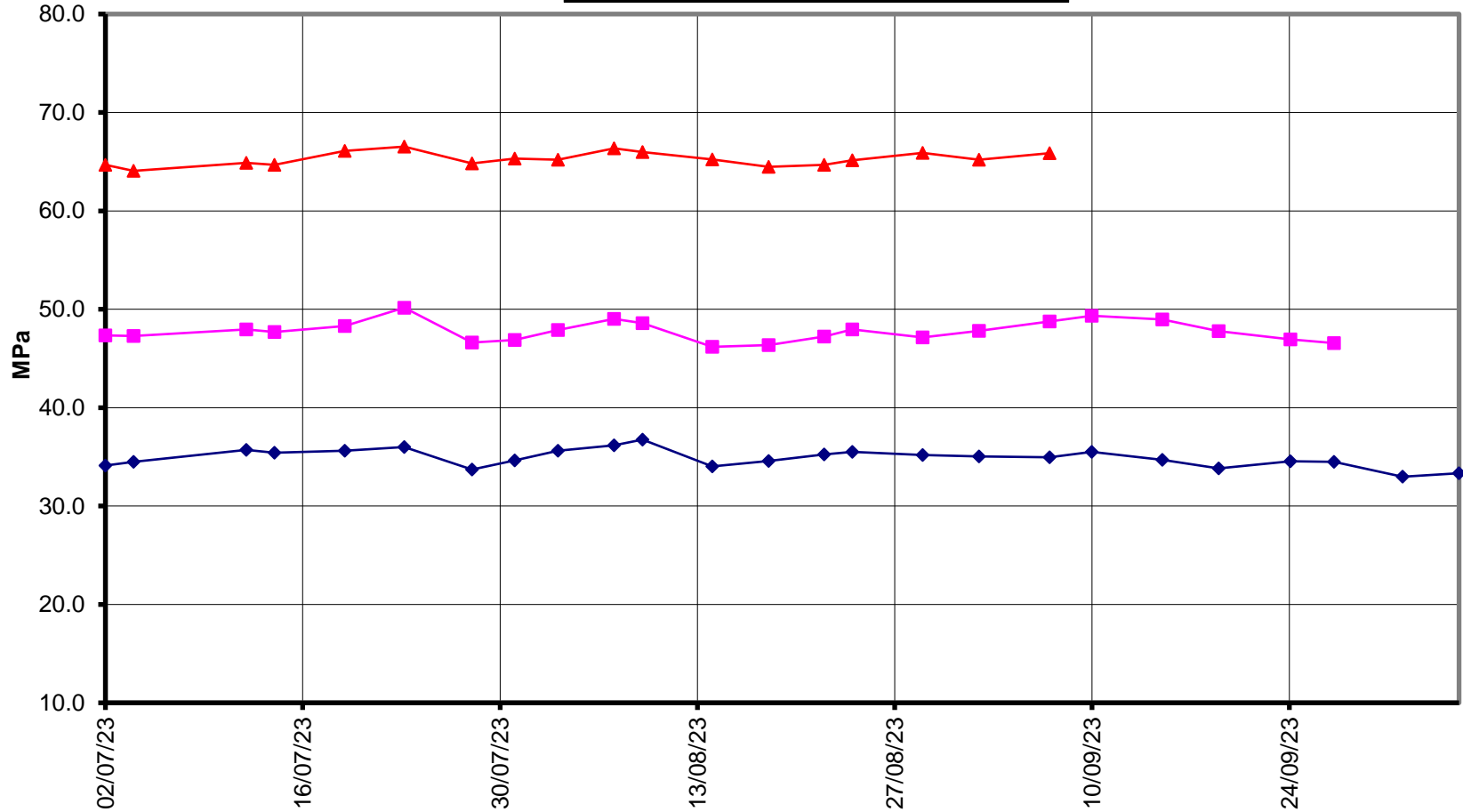
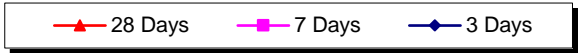
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Page 1 of 3



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

