



CERTIFICATE OF QUALITY

EcoSure® Type GP Cement

NZS3122:2009 (Bulk & Bag Dispatch)



Issued to: National Sales Manager

Test Report No: 24#112

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 (SO ₃) | |
|----------------------------|----------------------|-----------------------|--------------------|-------------|-----------|-----------|----------------------|----------|----------|----------|--------|--------|-----------|--------------------------|-------------------------------------|---------|
| | | | | | | | ISOCEN | | | Concrete | | | | | | |
| | | | | | | | 3 days | 7 days | 28 days | Slump | 3 days | 7 days | | | | 28 days |
| Mean | | 362 | 29.5 | 164 | 4:01 | 1 | 33.7 | 46.0 | 64.5 | 96 | 26.7 | 36.9 | 47.8 | 1.5 | 0.53 | 2.32 |
| Standard Deviation | | 7 | 0.1 | 9 | 0:10 | 0.4 | 1.1 | 1.5 | 1.5 | 6 | 2.4 | 2.2 | 2.8 | 0.2 | 0.01 | 0.06 |
| Min | | 350 | 28.9 | 150 | 3:45 | 0 | 30.3 | 42.8 | 63.0 | 90 | 22.5 | 33.0 | 44.0 | 1.1 | 0.51 | 2.15 |
| Max | | 370 | 29.6 | 180 | 4:15 | 2 | 35.4 | 48.9 | 70.0 | 105 | 31.5 | 42.5 | 53.0 | 2.0 | 0.55 | 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 | | m ² /kg | % | minutes | hrs:mins | mm | MPa | MPa | MPa | mm | MPa | MPa | MPa | % | % | % |
| 240828-359-GP | 28/08/24 | 360 | 29.5 | 180 | 4:15 | 2 | 35.4 | | | 100 | 23.5 | | | 1.2 | 0.55 | 2.30 |
| 240825-201-GP | 25/08/24 | 350 | 29.5 | 165 | 4:00 | 1 | 33.4 | 44.6 | | 100 | 26.0 | 36.5 | | 1.3 | 0.54 | 2.24 |
| 240814-777-GP | 14/08/24 | 350 | 29.5 | 180 | 4:00 | 2 | 33.1 | 46.6 | | 100 | 25.5 | 36.5 | | 1.3 | 0.55 | 2.25 |
| 240806-438-GP | 06/08/24 | 365 | 29.6 | 180 | 4:15 | 1 | 32.6 | 46.9 | | 90 | 27.0 | 37.5 | | 1.5 | 0.54 | 2.31 |
| 240801-139-GP | 01/08/24 | 370 | 29.4 | 165 | 4:00 | 1 | 33.7 | 47.0 | 64.8 | | | | | 1.8 | 0.53 | 2.31 |
| 240729-137-GP | 29/07/24 | 370 | 29.6 | 165 | 3:45 | 1 | 32.9 | 44.4 | 63.2 | 90 | 28.5 | 36.5 | 47.0 | 1.7 | 0.54 | 2.31 |
| 240724-875-GP | 24/07/24 | 355 | 29.5 | 165 | 4:00 | 1 | 32.8 | 43.9 | 63.6 | 90 | 26.5 | 36.5 | 46.5 | 1.9 | 0.54 | 2.27 |
| 240718-573-GP | 18/07/24 | 350 | 29.5 | 165 | 4:15 | 1 | 32.7 | 45.1 | 64.6 | | | | | 1.5 | 0.53 | 2.35 |
| 240716-571-GP | 16/07/24 | 355 | 29.5 | 165 | 4:15 | 1 | 33.5 | 46.3 | 64.5 | 90 | 26.5 | 36.5 | 46.5 | 1.6 | 0.53 | 2.39 |
| 240712-250-GP | 12/07/24 | 360 | 29.6 | 165 | 4:00 | 2 | 35.2 | 47.1 | 66.1 | 105 | 26.0 | 35.0 | 46.0 | 1.3 | 0.54 | 2.37 |
| 240708-248-GP | 08/07/24 | 365 | 28.9 | 165 | 4:00 | 1 | 34.1 | 46.4 | 64.9 | | | | | 1.6 | 0.52 | 2.37 |
| 240703-939-GP | 03/07/24 | 360 | 29.6 | 165 | 4:00 | 1 | 35.2 | 48.9 | 70.0 | | | | | 1.5 | 0.51 | 2.32 |
| 240630-937-GP | 30/06/24 | 365 | 29.5 | 165 | 4:00 | 1 | 33.9 | 44.8 | 64.7 | 100 | 26.5 | 35.5 | 48.5 | 1.4 | 0.52 | 2.28 |
| 240626-520-GP | 26/06/24 | 365 | 29.5 | 150 | 4:00 | 2 | 30.3 | 42.8 | 63.9 | 100 | 25.0 | 35.5 | 47.0 | 2.0 | 0.52 | 2.15 |
| 240621-275-GP | 21/06/24 | 355 | 29.5 | 165 | 3:45 | 2 | 34.4 | 45.4 | 63.3 | 100 | 29.0 | 39.5 | 52.5 | 1.1 | 0.51 | 2.36 |
| 240613-081-GP | 13/06/24 | 360 | 29.5 | 165 | 4:15 | 2 | 35.0 | 46.8 | 64.6 | | | | | 1.6 | 0.51 | 2.31 |
| 240610-799-GP | 10/06/24 | 365 | 29.6 | 165 | 4:15 | 0 | 33.4 | 45.8 | 63.0 | 90 | 28.5 | 37.5 | 48.5 | 1.5 | 0.53 | 2.28 |
| 240605-537-GP | 05/06/24 | 370 | 29.6 | 150 | 3:45 | 1 | 34.9 | 45.2 | 63.7 | 105 | 22.5 | 33.0 | 44.0 | 1.6 | 0.54 | 2.33 |
| 240531-218-GP | 31/05/24 | 370 | 29.6 | 165 | 4:00 | 1 | 33.8 | 45.7 | 63.5 | 100 | 23.5 | 34.5 | 44.0 | 1.8 | 0.52 | 2.34 |
| 240523-036-GP | 23/05/24 | 370 | 29.6 | 150 | 4:15 | 1 | 32.7 | 47.7 | 63.7 | 90 | 28.0 | 37.0 | 48.5 | 1.5 | 0.53 | 2.33 |
| 240514-875-GP | 14/05/24 | 370 | 29.5 | 150 | 4:15 | 1 | 34.7 | 48.8 | 65.5 | | | | | 1.7 | 0.54 | 2.39 |
| 240512-873-GP | 12/05/24 | 365 | 29.6 | 165 | 4:00 | 2 | 34.0 | 47.0 | 65.0 | 90 | 31.5 | 40.0 | 51.0 | 1.8 | 0.54 | 2.37 |
| 240506-706-GP | 06/05/24 | 370 | 29.6 | 150 | 3:45 | 1 | 35.0 | 47.3 | 63.7 | 90 | 30.5 | 42.5 | 53.0 | 1.6 | 0.55 | 2.36 |
| 240502-364-GP | 02/05/24 | 360 | 29.5 | 165 | 4:00 | 2 | 32.9 | 44.4 | 64.4 | | | | | 1.6 | 0.53 | 2.38 |
| 240429-360-GP | 29/04/24 | 360 | 29.5 | 165 | 3:45 | 2 | 33.6 | 46.1 | 64.4 | 100 | 26.0 | 38.0 | 46.0 | 1.4 | 0.53 | 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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Marley Korach-Salt
Chemical Technician



Portland Works, Portland, Whangarei 0178

Date issued: 6/09/2024

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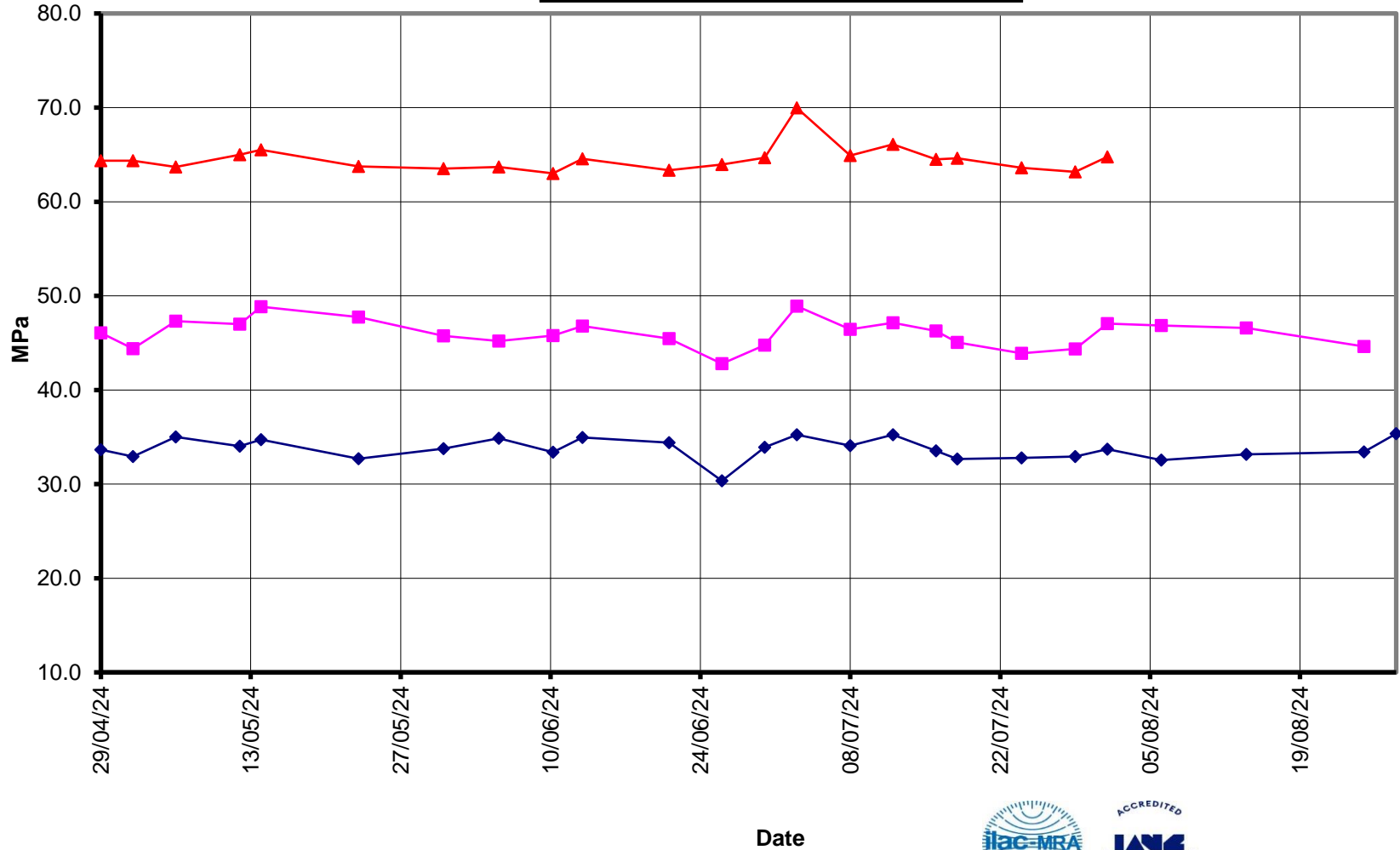


EcoSure® Type GP Cement

Compressive Strength ISO-CEN Mortar (Bulk Dispatch)



28 Days 7 Days 3 Days





EcoSure® Type GP Cement

Compressive Strength Concrete (Bulk Dispatch)



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

