



Table 1 Parameters of Fatigue Tests - ELACO® generic specimens

Client ID	Specimen ID	Conditioning	Max Load (kN)	Min Load (kN)	Amplitude (kN)	Frequency (Hz)	No. of Cycles	Fatigue Mode	Waveform Type
00 VE/C Glass Lam F1	05-073/1/B/FAT1	None	1.017	0.101	0.4578	5	100,000	Tension- Tension	Sine
00 VE/C Glass Lam F2	05-073/1/B/FAT2	None	2.728	0.2728	1.2276	5	100,000	Tension- Tension	Sine
00 VE/C Glass Lam F3	05-073/1/B/FAT3	None	4.9898	0.4989	2.2454	5	14,520	Tension- Tension	Sine
01 Glass F1	05-073/1/F/FAT1	None	0.48599	0.04859	0.2187	5	100,000	Tension- Tension	Sine
01 Glass F2	05-073/1/F/FAT2	None	2.2750	0.22750	0.5263	5	100,000	Tension- Tension	Sine
01 Glass F3	05-073/1/F/FAT3	None	4.9898	0.4989	1.066	5	5773.3	Tension- Tension	Sine
02 Hybrid F1	05-073/1/J/FAT1	None	0.4547	0.04547	0.2046	5	100,000	Tension- Tension	Sine
02 Hybrid F2	05-073/1/J/FAT2	None	1.19566	0.11956	0.5380	5	100,000	Tension- Tension	Sine
02 Hybrid F3	05-073/1/J/FAT3	None	2.2750	0.22750	1.0237	5	100,000	Tension- Tension	Sine

Notes on Results:

During the fatigue cycle the wrong load was applied to two specimens due to operator error.

Specimen 05-073/1/F/FAT2 received **100% of the Tension Strength instead of the 25%** which it was to receive. The specimen broke during the Fatigue phase.

Specimen 05-073/1/F/FAT3 also **received 100% of the Tension Strength instead of the 50%** which it was to receive. The specimen did not break during the fatigue phase and was tested residually.



Table 2 Parameters of Tension Test - ELACO® generic specimens

Test Information:

Test Type	Tensile	Material Supplier	Elaco
Test standard	EN 2561	Material Type	Glass
Specimen conditioning	None	Job Number	05-073
Test Conditions	Ambient	Job Name	Elaco
Tested By	DóM	Date of test	18.11.05
Test Machine	Zwick 1		

Results:

Specimen name	Client ID	Fmax. N	Tens Strength MPa	E-Modulus GPa	μ	Thickness mm	Width mm	Failure Mode
05-073/1/A/t 1	00 VE/E- Glass Lam T 1	10588.37	311.5	21.9	0.14	2.49	13.65	CF
05-073/1/A/t 2	00 VE/E- Glass Lam T 2	8686.89	261.9	23.0	0.15	2.42	13.71	CF
05-073/1/A/t 3	00 VE/E- Glass Lam T 3	8393.61	253.0	22.7	0.14	2.39	13.86	CF
05-073/1/A/t 4	00 VE/E- Glass Lam T 4	13590.91	418.7	22.6	0.14	2.40	13.51	CF
05-073/1/A/t 5	00 VE/E- Glass Lam T 5	9303.11	286.0	23.3	0.13	2.38	13.65	CF



Table 3 Parameters of Flexural Test - ELACO® generic specimens

Test Information:

Test Type	Flexure	Material Supplier	Elaco
Test standard	EN 2562	Material Type	Glass
Specimen conditioning	None	Job Number	05-073
Test Conditions	Ambient	Job Name	Elaco
Tested By	DóM	Date of test	18/11/05
Span	57.69mm	Test Machine	Zwick 3

Results:

Specimen name	Client ID	Fmax. N	Flex strength MPa	Flex mod MPa	Thickness mm	Width mm	Failure Mode
05-073/1/C/FL 1	00 VE/C Glass Lam B1	922.70	569.05	19183	2.42	23.89	CF/TF
05-073/1/C/FL 2	00 VE/C Glass Lam B2	942.17	581.35	18898	2.41	24.21	CF/TF
05-073/1/C/FL 3	00 VE/C Glass Lam B3	968.56	590.09	19577	2.39	24.80	CF/TF
05-073/1/C/FL 4	00 VE/C Glass Lam B4	972.76	574.36	19022	2.42	24.96	CF/TF
05-073/1/C/FL 5	00 VE/C Glass Lam B5	968.26	600.38	19792	2.37	24.78	CF/TF

Following Graph shows typical bending stress-strain characteristics for ELACO generic configuration. There is no sudden catastrophic damage of structure, due ELACO unique concept of internal loading/energy dissipation and controlled crack propagation.

