

TEST REPORT N° 2014B VEC 22379-3a

Including 14 pages + 1 annex
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Mons, September 8th, 2014

REQUESTED BY : **AGC Glass Europe - Technovation Centre**
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REFERENCE OF THE REQUEST : Order n°450560867

CONCERNED MANUFACTURER : **AGC Glass Europe SA**
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NUMBER OF SAMPLES AND IDENTIFICATION : **Lacobel T – SG500**

PURPOSE OF THE REQUESTED : Tests according to EOTA – ETAG 002
Mechanical Performances *

SAMPLES RECEIVED ON : 20/01/2014 and 14/07/2014

TESTING DATE : From 30/01/2014

REMARKS : * Test under BELAC accreditation

 Notified body (Id.N°1174)
according to Regulation (EU) No 305/2011 - Construction products

TECHNICAL REPORT
ADHESION PERFORMANCES ACCORDING TO ETAG 002
GUIDELINE

SAMPLES

Samples were prepared by Sika on 19/12/2013 (see annex 1) and 30/06/2014 (see annex 2)

Lacobel T Royal Blue + Sikasil SG-500+ Lacobel T Ligth Blue

Batch A/B : MI-10109135/MI-02505132
Number of samples prepared : 90

Batch A/B : MI-09904145/MI-02505132
Number of samples prepared : 20

RESULTS

The tests were conducted in compliance with the methods described in the "Guideline for European Technical Approval for Structural Sealant Glazing System (SSGS)" ETAG n° 002.

Définitions :

K_x = Stiffness of the sample at x% elongation in the initial state

$K_{x,c}$ = Stiffness of the sample at x% elongation after conditioning
 $= 100 \cdot \sigma_x / x$

$R_{u,5}$ = the characteristic breaking stress giving 75% confidence that 95% of the test result will be higher than this value
 $= X_{mean} - \tau_{\alpha\beta} \cdot S$

S = standard deviation of the serie under consideration

$X_{mean,n}$ = the average breaking stress, either under tension or shear in the initial state

$X_{mean,c}$ = the average breaking stress, either under tension or shear after conditioning

$\Delta X_{mean} = X_{mean,c} / X_{mean,n}$

Mechanical performances

5.1.4.1. INITIAL TESTS – INITIAL MECHANICAL STRENGTH

5.1.4.1.1. TENSION – RUPTURE*

a) Results for 10 samples conditioned at +23°C

Sample number	Section (mm ²)	Limited to 5% stretch. (N/mm ²)	Limited to 10 % stretch. (N/mm ²)	Limited to 15% stretch. (N/mm ²)	Limited to 20% stretch. (N/mm ²)	Limited to 25% stretch. (N/mm ²)	Limit of breakage (N/mm ²)	Stretch on breaking (%)	Type of breakage (*)
1	585	0.11	0.22	0.33	0.43	0.51	1.23	91	100C
2	580	0.11	0.23	0.34	0.43	0.52	1.08	69	100C
3	571	0.12	0.25	0.35	0.44	0.52	1.17	82	100C
4	589	0.12	0.25	0.35	0.44	0.52	1.07	73	100C
5	587	0.11	0.23	0.33	0.42	0.50	1.36	107	100C
6	589	0.11	0.22	0.32	0.41	0.49	1.13	78	100C
7	607	0.11	0.22	0.32	0.40	0.48	1.13	83	100C
8	578	0.10	0.22	0.32	0.41	0.50	1.21	86	100C
9	583	0.11	0.23	0.34	0.43	0.52	1.16	73	100C
10	585	0.09	0.20	0.30	0.39	0.47	1.24	90	100C
Average	585	0.11	0.23	0.33	0.42	0.50	1.18	83	
Standard deviation	9	0.01	0.01	0.02	0.02	0.02	0.09	11	
Minimum	571	0.09	0.20	0.30	0.39	0.47	1.07	69	
Maximum	607	0.12	0.25	0.35	0.44	0.52	1.36	107	

() xC: x% cohesive*

K_{12,5} = 2.28

Ru,5 = 0.99

b) Results for 5 samples conditioned at -20°C

Sample number	Section (mm ²)	Limited to 5% stretch. (N/mm ²)	Limited to 10 % stretch. (N/mm ²)	Limited to 15% stretch. (N/mm ²)	Limited to 20% stretch. (N/mm ²)	Limited to 25% stretch. (N/mm ²)	Limit of breakage (N/mm ²)	Stretch on breaking (%)	Type of breakage (*)
1	592	0.06	0.16	0.29	0.40	0.50	1.40	91	100C
2	588	0.10	0.22	0.33	0.42	0.51	1.22	83	100C bubble
3	587	0.08	0.19	0.29	0.39	0.47	1.85	167	100C
4	589	0.10	0.21	0.31	0.40	0.48	1.72	138	100C
5	585	0.09	0.19	0.30	0.39	0.47	1.28	94	100C
Average	588	0.09	0.19	0.30	0.40	0.49	1.49	115	
Standard deviation	2	0.02	0.02	0.02	0.01	0.02	0.28	36	
Minimum	585	0.06	0.16	0.29	0.39	0.47	1.22	83	
Maximum	592	0.10	0.22	0.33	0.42	0.51	1.85	167	

(*) xC: x% cohesive

$$R_{u,5} = 0.80$$

$$\Delta X_{\text{mean}} = 1.26$$

c) Results for 5 samples conditioned at +80°C

Sample number	Section (mm ²)	Limited to 5% stretch. (N/mm ²)	Limited to 10 % stretch. (N/mm ²)	Limited to 15% stretch. (N/mm ²)	Limited to 20% stretch. (N/mm ²)	Limited to 25% stretch. (N/mm ²)	Limit of breakage (N/mm ²)	Stretch on breaking (%)	Type of breakage (*)
1	581	0.07	0.18	0.29	0.38	0.47	1.22	85	100C
2	586	0.08	0.20	0.31	0.40	0.48	1.12	75	100C
3	587	0.09	0.20	0.31	0.40	0.48	1.13	75	100C
4	594	0.08	0.18	0.28	0.38	0.46	0.86	52	100C bubble
5	582	0.09	0.18	0.27	0.37	0.50	1.16	80	100C
Average	586	0.08	0.19	0.29	0.39	0.48	1.10	73	
Standard deviation	5	0.01	0.01	0.02	0.01	0.01	0.14	13	
Minimum	581	0.07	0.18	0.27	0.37	0.46	0.86	52	
Maximum	594	0.09	0.20	0.31	0.40	0.50	1.22	85	

(*) xC: x% cohesive

$$R_{u,5} = 0.76$$

$$\Delta X_{\text{mean}} = 0.93$$

5.1.4.1.2. SHEAR – RUPTURE*

a) Results for 10 samples conditioned at +23°C

Sample number	Section (mm ²)	Limited to 5% stretch. (N/mm ²)	Limited to 10 % stretch. (N/mm ²)	Limited to 15% stretch. (N/mm ²)	Limited to 20% stretch. (N/mm ²)	Limited to 25% stretch. (N/mm ²)	Limit of breakage (N/mm ²)	Stretch on breaking (%)	Type of breakage (*)
1	604	0.04	0.08	0.11	0.15	0.18	0.99	149	100C
2	605	0.04	0.08	0.11	0.14	0.17	0.90	137	100C
3	598	0.03	0.06	0.09	0.12	0.15	0.99	151	100C
4	607	0.02	0.05	0.07	0.10	0.13	0.80	153	100C
5	588	0.03	0.07	0.10	0.13	0.16	0.81	130	100C
6	604	0.04	0.07	0.10	0.13	0.16	0.95	140	100C
7	603	0.03	0.06	0.10	0.13	0.16	0.84	135	100C
8	600	0.03	0.06	0.09	0.12	0.15	0.68	119	100C bubble
9	601	0.03	0.06	0.09	0.12	0.15	0.88	138	100C
10	598	0.02	0.03	0.04	0.09	0.12	0.94	149	100C
Average	601	0.03	0.06	0.09	0.12	0.15	0.88	140	
Standard deviation	5	0.01	0.01	0.02	0.02	0.02	0.10	10	
Minimum	588	0.02	0.03	0.04	0.09	0.12	0.68	119	
Maximum	607	0.04	0.08	0.11	0.15	0.18	0.99	153	

(*) xC: x% cohesive

Ru,5 = 0.67

b) Results for 5 samples conditioned at -20°C

Sample number	Section (mm ²)	Limited to 5% stretch. (N/mm ²)	Limited to 10 % stretch. (N/mm ²)	Limited to 15% stretch. (N/mm ²)	Limited to 20% stretch. (N/mm ²)	Limited to 25% stretch. (N/mm ²)	Limit of breakage (N/mm ²)	Stretch on breaking (%)	Type of breakage (*)
1	571	0.04	0.07	0.11	0.14	0.17	1.07	151	100C
2	582	0.03	0.06	0.09	0.12	0.15	1.30	180	100C
3	591	0.03	0.06	0.09	0.12	0.15	1.27	171	100C
4	584	0.04	0.07	0.10	0.12	0.15	1.07	160	100C
5	580	0.03	0.07	0.10	0.13	0.16	0.98	147	100C
Average	582	0.03	0.07	0.10	0.13	0.16	1.14	162	
Standard deviation	7	0.01	0.01	0.01	0.01	0.01	0.14	14	
Minimum	571	0.03	0.06	0.09	0.12	0.15	0.98	147	
Maximum	591	0.04	0.07	0.11	0.14	0.17	1.30	180	

(*) xC: x% cohesive

$$R_{u,5} = 0.79$$

$$\Delta X_{\text{mean}} = 1.30$$

c) Results for 5 samples conditioned at +80°C

Sample number	Section (mm ²)	Limited to 5% stretch. (N/mm ²)	Limited to 10 % stretch. (N/mm ²)	Limited to 15% stretch. (N/mm ²)	Limited to 20% stretch. (N/mm ²)	Limited to 25% stretch. (N/mm ²)	Limit of breakage (N/mm ²)	Stretch on breaking (%)	Type of breakage (*)
1	585	0.04	0.08	0.12	0.15	0.18	0.83	124	100C
2	583	0.05	0.09	0.12	0.15	0.18	0.91	139	100C
3	594	0.03	0.06	0.09	0.13	0.16	0.97	145	100C
4	578	0.03	0.07	0.10	0.13	0.16	0.62	100	100C
5	584	0.03	0.06	0.09	0.12	0.15	0.76	124	100C
Average	585	0.04	0.07	0.10	0.14	0.17	0.82	126	
Standard deviation	6	0.01	0.01	0.02	0.01	0.01	0.14	17	
Minimum	578	0.03	0.06	0.09	0.12	0.15	0.62	100	
Maximum	594	0.05	0.09	0.12	0.15	0.18	0.97	145	

(*) xC: x% cohesive

$$R_{u,5} = 0.48$$

$$\Delta X_{\text{mean}} = 0.93$$

5.1.4.2. RESIDUAL MECHANICAL STRENGTH AFTER ARTIFICIAL AGEING

5.1.4.2.1 IMMERSION IN WATER AT HIGH TEMPERATURE WITH SOLAR RADIATION*

a) *Conditioning :*

- Duration : 2 x 21 days
- Water temperature : 45°C ± 0.1°C
- Conductivity of the water : 8 µs

b) *Results of the traction test after the artificial ageing :*

Lacobel T Royal Blue

After 21 days :

Sample number	Section (mm ²)	Limited to 5% stretch. (N/mm ²)	Limited to 10 % stretch. (N/mm ²)	Limited to 15% stretch. (N/mm ²)	Limited to 20% stretch. (N/mm ²)	Limited to 25% stretch. (N/mm ²)	Limit of breakage (N/mm ²)	Stretch on breaking (%)	Type of breakage (*)
1	587	0.09	0.17	0.23	0.29	0.34	0.92	96	100C
2	570	0.08	0.16	0.22	0.27	0.32	0.98	133	100C
3	593	0.08	0.15	0.21	0.27	0.31	0.99	134	100C
4	566	0.08	0.15	0.22	0.27	0.32	1.09	151	100C
5	593	0.06	0.14	0.20	0.25	0.30	1.07	154	100C
Average	582	0.08	0.15	0.22	0.27	0.32	1.01	134	
Standard deviation	13	0.01	0.01	0.01	0.01	0.01	0.07	23	
Minimum	566	0.06	0.14	0.20	0.25	0.30	0.92	96	
Maximum	593	0.09	0.17	0.23	0.29	0.34	1.09	154	

(*) xC: x% cohesive

$$\Delta X_{\text{mean}} = 0.86$$

After 42 days :

Sample number	Section (mm ²)	Limited to 5% stretch. (N/mm ²)	Limited to 10 % stretch. (N/mm ²)	Limited to 15% stretch. (N/mm ²)	Limited to 20% stretch. (N/mm ²)	Limited to 25% stretch. (N/mm ²)	Limit of breakage (N/mm ²)	Stretch on breaking (%)	Type of breakage (*)
1	577	0.07	0.13	0.19	0.24	0.28	0.92	168	100C
2	587	0.05	0.11	0.17	0.23	0.28	0.95	168	100C
3	579	0.07	0.14	0.20	0.25	0.30	0.89	153	100C
4	587	0.05	0.11	0.18	0.23	0.28	0.78	112	100C
5	625	0.07	0.11	0.17	0.22	0.27	0.84	145	100C
Average	591	0.06	0.12	0.18	0.23	0.28	0.88	149	
Standard deviation	19	0.01	0.01	0.01	0.01	0.01	0.07	23	
Minimum	577	0.05	0.11	0.17	0.22	0.27	0.78	112	
Maximum	625	0.07	0.14	0.20	0.25	0.30	0.95	168	

(*) xC: x% cohesive

$$\Delta X_{\text{mean}} = 0.75$$

Lacobel T Light Blue

After 21 days :

Sample number	Section (mm ²)	Limited to 5% stretch. (N/mm ²)	Limited to 10 % stretch. (N/mm ²)	Limited to 15% stretch. (N/mm ²)	Limited to 20% stretch. (N/mm ²)	Limited to 25% stretch. (N/mm ²)	Limit of breakage (N/mm ²)	Stretch on breaking (%)	Type of breakage (*)
1	570	0.08	0.16	0.23	0.28	0.33	1.13	172	100C
2	581	0.09	0.18	0.24	0.30	0.35	0.93	129	100C
3	575	0.08	0.16	0.23	0.28	0.33	1.02	135	100C
4	593	0.07	0.15	0.21	0.26	0.31	1.18	174	100C
5	579	0.12	0.19	0.25	0.30	0.34	1.03	147	100C
Average	579	0.09	0.17	0.23	0.28	0.33	1.06	152	
Standard deviation	9	0.02	0.02	0.01	0.02	0.01	0.10	21	
Minimum	570	0.07	0.15	0.21	0.26	0.31	0.93	129	
Maximum	593	0.12	0.19	0.25	0.30	0.35	1.18	174	

(*) xC: x% cohesive

$$\Delta X_{\text{mean}} = 0.90$$

After 42 days :

Sample number	Section (mm ²)	Limited to 5% stretch. (N/mm ²)	Limited to 10 % stretch. (N/mm ²)	Limited to 15% stretch. (N/mm ²)	Limited to 20% stretch. (N/mm ²)	Limited to 25% stretch. (N/mm ²)	Limit of breakage (N/mm ²)	Stretch on breaking (%)	Type of breakage (*)
1	573	0.06	0.13	0.19	0.25	0.29	0.92	155	100C
2	591	0.08	0.14	0.20	0.24	0.28	0.89	154	100C
3	589	0.06	0.12	0.18	0.22	0.27	0.88	134	100C
4	553	0.06	0.13	0.20	0.25	0.29	0.93	157	100C
5	576	0.08	0.14	0.20	0.25	0.30	0.85	138	100C
Average	576	0.07	0.13	0.19	0.24	0.29	0.89	148	
Standard deviation	15	0.01	0.01	0.01	0.01	0.01	0.03	11	
Minimum	553	0.06	0.12	0.18	0.22	0.27	0.85	134	
Maximum	591	0.08	0.14	0.20	0.25	0.30	0.93	157	

(*) xC: x% cohesive

$$\Delta X_{\text{mean}} = 0.75$$

5.1.4.2.2 HUMIDITY AND NaCl ATMOSPHERE*

a) Conditioning :

- Duration : 480 hours
- NaCl concentration : 48.4 g/l
- pH : 6.6

b) Results of the traction test after the artificial ageing :

Sample number	Section (mm ²)	Limited to 5% stretch. (N/mm ²)	Limited to 10 % stretch. (N/mm ²)	Limited to 15% stretch. (N/mm ²)	Limited to 20% stretch. (N/mm ²)	Limited to 25% stretch. (N/mm ²)	Limit of breakage (N/mm ²)	Stretch on breaking (%)	Type of breakage (*)
1	584	0.13	0.24	0.32	0.39	0.46	1.10	96	100C
2	580	0.10	0.20	0.28	0.35	0.41	1.19	113	100C
3	574	0.10	0.18	0.27	0.34	0.41	1.34	129	100C
4	582	0.12	0.22	0.31	0.39	0.46	1.07	82	100C
5	570	0.10	0.20	0.29	0.36	0.43	1.05	90	100C
6	588	0.11	0.21	0.29	0.36	0.42	1.04	95	100C
7	586	0.09	0.18	0.26	0.33	0.39	1.22	123	100C
8	578	0.13	0.24	0.32	0.39	0.45	1.02	89	100C
9	591	0.09	0.19	0.27	0.34	0.40	1.05	96	100C
10	575	0.10	0.19	0.28	0.36	0.43	0.96	79	100C
Average	581	0.11	0.21	0.29	0.36	0.43	1.10	99	
Standard deviation	7	0.01	0.02	0.02	0.02	0.02	0.11	17	
Minimum	570	0.09	0.18	0.26	0.33	0.39	0.96	79	
Maximum	591	0.13	0.24	0.32	0.39	0.46	1.34	129	

(*) xC: x% cohesive

$$\Delta X_{\text{mean}} = 0.93$$

5.1.4.2.3 HUMIDITY AND SO₂ ATMOSPHERE*

a) *Conditioning :*

- Duration : 20 cycles
- 0.2l SO₂

b) *Results of the traction test after the artificial ageing :*

Sample number	Section (mm ²)	Limited to 5% stretch. (N/mm ²)	Limited to 10 % stretch. (N/mm ²)	Limited to 15% stretch. (N/mm ²)	Limited to 20% stretch. (N/mm ²)	Limited to 25% stretch. (N/mm ²)	Limit of breakage (N/mm ²)	Stretch on breaking (%)	Type of breakage (*)
1	593	0.10	0.19	0.27	0.33	0.39	0.99	101	100C
2	590	0.10	0.19	0.27	0.34	0.39	1.21	143	100C
3	579	0.10	0.19	0.27	0.34	0.39	1.06	117	100C
4	571	0.11	0.20	0.28	0.35	0.41	1.08	109	100C
5	585	0.09	0.19	0.27	0.34	0.40	1.16	129	100C
6	573	0.08	0.17	0.25	0.31	0.37	1.10	123	100C
7	574	0.10	0.20	0.28	0.35	0.42	1.07	103	100C
8	592	0.10	0.20	0.27	0.34	0.40	1.12	130	100C
9	580	0.09	0.18	0.26	0.33	0.40	1.11	109	100C
10	Glass broken								100C
Average	582	0.10	0.19	0.27	0.34	0.40	1.10	118	
Standard deviation	8	0.01	0.01	0.01	0.01	0.01	0.06	14	
Minimum	571	0.08	0.17	0.25	0.31	0.37	0.99	101	
Maximum	593	0.11	0.20	0.28	0.35	0.42	1.21	143	

(*) xC: x% cohesive

$$\Delta X_{\text{mean}} = 0.93$$

5.1.4.2.4 Facade cleaning product*

a) Results for 10 samples conditioned at +23°C

Sample number	Section (mm ²)	Limited to 5% stretch. (N/mm ²)	Limited to 10 % stretch. (N/mm ²)	Limited to 15% stretch. (N/mm ²)	Limited to 20% stretch. (N/mm ²)	Limited to 25% stretch. (N/mm ²)	Limit of breakage (N/mm ²)	Stretch on breaking (%)	Type of breakage (*)
1	587	0.08	0.19	0.29	0.39	0.47	1.21	94	100C
2	594	0.11	0.23	0.33	0.42	0.50	1.31	114	100C
3	593	0.09	0.20	0.31	0.40	0.48	1.11	82	100C
4	573	0.10	0.21	0.32	0.41	0.49	1.12	81	100C
5	603	0.10	0.22	0.32	0.42	0.50	1.20	94	100C
6	602	0.09	0.20	0.30	0.39	0.47	1.25	103	100C
7	595	0.10	0.22	0.32	0.42	0.50	1.16	87	100C
8	581	0.10	0.21	0.31	0.41	0.49	1.24	95	100C
9	603	0.11	0.22	0.32	0.41	0.48	1.13	90	100C
10	580	0.10	0.21	0.32	0.41	0.49	1.22	95	100C
Average	591	0.10	0.21	0.31	0.41	0.49	1.20	93	
Standard deviation	11	0.01	0.01	0.01	0.01	0.01	0.06	10	
Minimum	573	0.08	0.19	0.29	0.39	0.47	1.11	81	
Maximum	603	0.11	0.23	0.33	0.42	0.50	1.31	114	

(*) xC: x% cohesive

c) *Conditioning :*

- Duration : 21 days
- Temperature : 46.2 °C ± 0.5 °C
- Cleaning product : Palmolive (1% on water)

d) *Results of the traction test after the artificial ageing :*

Sample number	Section (mm ²)	Limited to 5% stretch. (N/mm ²)	Limited to 10 % stretch. (N/mm ²)	Limited to 15% stretch. (N/mm ²)	Limited to 20% stretch. (N/mm ²)	Limited to 25% stretch. (N/mm ²)	Limit of breakage (N/mm ²)	Stretch on breaking (%)	Type of breakage (*)
1	591	0.08	0.16	0.24	0.30	0.35	0.98	141	100C
2	634	0.07	0.16	0.24	0.30	0.35	0.92	123	100C
3	581	0.04	0.12	0.20	0.26	0.32	0.89	123	100C
4	521	0.07	0.17	0.25	0.31	0.37	1.03	135	100C
5	586	0.08	0.17	0.24	0.31	0.36	0.94	127	100C
6	593	0.06	0.14	0.21	0.27	0.33	0.94	134	100C
7	578	0.07	0.16	0.24	0.30	0.36	0.97	126	100C
8	572	0.08	0.17	0.24	0.30	0.36	0.93	116	100C
9	588	0.07	0.16	0.23	0.29	0.35	0.93	120	100C
10	629	0.08	0.17	0.25	0.31	0.36	0.98	136	100C
Average	587	0.07	0.16	0.23	0.30	0.35	0.95	128	
Standard deviation	31	0.01	0.02	0.02	0.02	0.02	0.04	8	
Minimum	521	0.04	0.12	0.20	0.26	0.32	0.89	116	
Maximum	634	0.08	0.17	0.25	0.31	0.37	1.03	141	

(*) xC: x% cohesive

$$\Delta X_{\text{mean}} = 0.79$$

SUMMARY

ETAG GUIDELINE TEST NUMBER	TEST	TEST CONDI- TIONS	CRITERIA				
			X _{mean} Mpa	ΔX_{mean} ≥ 0.75	K _{12.5} For $0 \leq x\% \leq 12.5$ $0.5 \leq K_{x,c}/K_x \leq 1.10$	R _{u,5}	TYPE OF BREAKAGE ($\geq 90\% C$)
5.1.4.1.1	Tension	+23°C	1.18	-	$\sigma_{12.5} = 0.28$ $K_{12.5} = 2.23$	1.15	100C
		-20°C	1.49	1.26		1.19	100C
		+80°C	1.10	0.93		1.00	100C
5.1.4.1.2	Shear	+23°C	0.88	-		0.78	100C
		-20°C	1.14	1.30		0.99	100C
		+80°C	0.82	0.93		0.63	100C
5.1.4.2.1	H ₂ O at 45°C + UV Lacobel T Royal Blue	500 h	1.01	0.86			100C
		1000 h	0.88	0.75	$\sigma_{12.5,c} = 0.15$ $K_{12.5,c} = 1.21$ $K_{12.5,c}/K_{12.5} = 0.54$		100C
5.1.4.2.1	H ₂ O at 45°C + UV Lacobel T Light Blue	500 h	1.06	0.90			100C
		1000 h	0.89	0.75	$\sigma_{12.5,c} = 0.16$ $K_{12.5,c} = 1.30$ $K_{12.5,c}/K_{12.5} = 0.59$		100C
5.1.4.2.2	H ₂ O + NaCl	480h	1.10	0.93			100C
5.1.4.2.3	H ₂ O + SO ₂	20 cycles	1.10	0.93			100C
5.1.4.2.4	Cleaning product	Tension at 23°C	1.20	-			100C
		Cleaning product 21 days	0.95	0.79			100C

x_C = x% cohesive

D. LIBERT
Head of Department

Glazing and Components - INISMa

Annex 1

Preparation of samples 19/12/2014

Annex 2

Preparation of samples 30/06/2014