



# Gesellschaft für Qualitätssicherung und Materialprüfung mbH

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45307 Essen

PRÜF-, ÜBERWACHUNGS- UND  
ZERTIFIZIERUNGSSTELLE

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**Test Certificate No.**

**006/08/R/2**

**Applicant:**

J. Coelho da Silva, S.A.  
Albergaria  
2480-071 Juncal  
Portugal

**Sample received on:** 21.02.2008

**Sample taken by:** Applicant

**Identification:** Tecno GS CE 21 12 07  
CCS IV 26 12 07 15  
JUNCAL- PORTUGAL

**Contents of application:**

Roof tile test According to DIN EN 539-2 Freeze  
resistance test – part B.

**Designation of samples:** Flat interlocking tile, fragment colour red, surface natural red

**DIN EN 539 – 2 – Freeze resistance test – part B**

Sample No.		mass dry g	mass wet before freezing			mass wet after 150 freeze-thaw cycles		
			g	+g	%	g	+g	%
1F/31	HWI	3973	4210	237	5,97	4227	254	6,39
1F/37	HWII	3965	4201	236	5,95	4221	256	6,46
1F/40	MWI	3962	4187	225	5,68	4207	245	6,18
1F/56	MWII	3981	4208	227	5,70	4232	251	6,30
1F/57	TWI	3953	4163	210	5,31	4185	232	5,87
1F/58	TWII	3992	4206	214	5,36	4225	233	5,84
<b>Mean value:</b>					<b>5,66</b>			<b>6,17</b>

During the freeze thaw cycles the 6 tested roof tiles showed no signs of damage.

**DIN EN 539 – 2 – Part B - Water absorption of the samples**

Manufacture's no. or ID	Sample No.	Mass dry g	Mass wet after 2 days in water g	Water-absorption %
	1F/31	3973	4210	5,97
	1F/32	4019	4242	5,55
	1F/33	3927	4154	5,78
	1F/34	3938	4169	5,87
	1F/35	3979	4206	5,70
	1F/36	3978	4202	5,63
	1F/37	3965	4201	5,95
	1F/38	4033	4253	5,45
	1F/39	3942	4161	5,56
	1F/40	3962	4187	5,68
	1F/41	3877	4099	5,73
	1F/42	3973	4204	5,81
	1F/43	3964	4191	5,73
	1F/44	3963	4189	5,70
	1F/45	3995	4221	5,66
	1F/46	3927	4156	5,83
	1F/47	3989	4219	5,77
	1F/48	4000	4224	5,60
	1F/49	3919	4147	5,82
	1F/50	3978	4205	5,71
	1F/51	3955	4181	5,71
	1F/52	3989	4219	5,77
	1F/53	4015	4244	5,70
	1F/54	3985	4207	5,57
	1F/55	3994	4222	5,71
	1F/56	3981	4208	5,70
	1F/57	3953	4163	5,31
	1F/58	3992	4206	5,36
	1F/59	3999	4215	5,40
	1F/60	3989	4217	5,72
<b>Lowest value (l.v.)</b>				5,31
<b>Average value (a.v.)</b>				5,68
<b>Highest:: (h.v.)</b>				5,97

**Overall result**

The testing of this roof tiles according to DIN EN 539 – 2 – Freeze resistance test – part B was successful.

Essen 28.04.2008  
Schi/Pc

The Head of the Testing Laboratory

  
(Dipl.-Ing. F. Rehme)



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Am Zenthof 197-203

The Reponsible Official

  
(R. Schilfberg)