

PRÜFSTELLE TEXTIL



SÄCHSISCHES
TEXTIL
FORSCHUNGS
INSTITUT e.V.

Durch die Deutsche Akkreditierungsstelle GmbH nach DIN EN ISO / IEC 17025 akkreditierte Prüfstelle. Nicht im Akkreditierungsumfang enthaltene Prüfverfahren sind mit einem * gekennzeichnet.



Durch Zentralstelle der Länder für Sicherheitstechnik (ZLS) akkreditierte Prüfstelle für Produkte im Sinne der EG-Richtlinie für Persönliche Schutzausrüstung 89/686/EWG.



Von der Federation Internationale de L'Automobile (FIA) Paris zugelassene Stelle zur Prüfung von hitze- und flammresistenter Schutzkleidung für Auto-Rennfahrer gemäß Standard FIA 8856-2000

UNTERSUCHUNGSBERICHT | TESTREPORT

Order number STFI: 20141512.3
PO. No

Report date: 2014-07-21
Person responsible: Mehlhorn

Orderer: Création Baumann AG
Simone Hürzeler
Bern-Zürich-Str.23
4901 Langenthal
Schweiz

Test order:
Date: 2014-07-09
Order received: 2014-07-09
Material received: 2014-07-15

Material to analyse:

16 sample fabric

signed by orderer	Color	code for order processing
SHELTER 100% PLF	101	P1512_14_31
SHELTER 100% PLF	102	P1512_14_32
SHELTER 100% PLF	103	P1512_14_33
SHELTER 100% PLF	104	P1512_14_34
SHELTER 100% PLF	105	P1512_14_35
SHELTER 100% PLF	106	P1512_14_36
SHELTER 100% PLF	107	P1512_14_37
SHELTER 100% PLF	108	P1512_14_38
SHELTER 100% PLF	109	P1512_14_39
SHELTER 100% PLF	110	P1512_14_40
SHELTER 100% PLF	111	P1512_14_41
SHELTER 100% PLF	112	P1512_14_42
SHELTER 100% PLF	113	P1512_14_43
SHELTER 100% PLF	114	P1512_14_44
SHELTER 100% PLF	115	P1512_14_45
SHELTER 100% PLF	116	P1512_14_46

The samples had been extracted by the orderer, concerning this no information is existing in the test department

Analysis content:

- (1) Remission and transmission in the visible light range in accordance with DIN EN 410: April 2011
- (2) Remission and transmission in the global radiation range in accordance with DIN EN 410: April 2011.
- (3) calculation of total energy permeability degree g_t of window system, following DIN EN 13363-1 October 2007 and approximated calculation of reduce factor F_c following DIN EN 14501 February 2006

Conditions for optical tests:

test parameter	symbol	range of radiation
light transmission degree	$\tau_{v,B}$	380...780 nm (standard light D65)
light remission degree	$\rho_{v,B}$	380...780 nm (standard light D65)
UV- transmission degree	τ_{UV}	280...380 nm (UV-radiation)
solar transmission degree	$\tau_{e,B}$	280...2500 nm (global radiation)
solar remission degree	$\rho_{e,B}$	280...2500 nm (global radiation)

Equipment: spectral photometer Lambda 900, PERKIN - ELMER Corp., USA
150 mm sphere

Test results:**(1) Light range****UV-range**

Code	light transmission degree	light remission degree	light absorption coefficient	UV-transmission degree
P1512_14	$\tau_{v,B}$	$\rho_{v,B}$	$\alpha_{v,B}$	τ_{UV}
31	0,0490	0,3883	0,5627	0,0493
32	0,0483	0,3957	0,5560	0,0477
33	0,0593	0,4067	0,5340	0,0480
34	0,0673	0,4170	0,5157	0,0460
35	0,0833	0,4217	0,4950	0,0770
36	0,0637	0,4053	0,5310	0,0567
37	0,0433	0,3977	0,5590	0,0453
38	0,0413	0,3980	0,5607	0,0437
39	0,0367	0,3827	0,5806	0,0400
40	0,0480	0,3817	0,5703	0,0507
41	0,0583	0,3964	0,5453	0,0543
42	0,0620	0,3990	0,5390	0,0537
43	0,0567	0,3900	0,5533	0,0547
44	0,0523	0,3930	0,5547	0,0507
45	0,0510	0,3960	0,5530	0,0473
46	0,0400	0,3700	0,5900	0,0417

(2) Global radiation range

Code	solar transmission degree	solar remission degree	solar absorption coefficient
P1512_14	$\tau_{e,B}$	$\rho_{e,B}$	$\alpha_{e,B}$
31	0,0673	0,4107	0,5220
32	0,0647	0,4130	0,5223
33	0,0677	0,4180	0,5143
34	0,0703	0,4257	0,5040
35	0,0830	0,4317	0,4853
36	0,0757	0,4190	0,5053
37	0,0613	0,4190	0,5197
38	0,0597	0,4260	0,5143
39	0,0546	0,4147	0,5307
40	0,0663	0,4087	0,5250
41	0,0717	0,4123	0,5160
42	0,0727	0,4113	0,5160
43	0,0727	0,4080	0,5193
44	0,0693	0,4130	0,5177
45	0,0667	0,4153	0,5180
46	0,0607	0,3996	0,5397

(3) Total energy permeability degree g_t and reduce factor F_c

Code	g_t	F_c
P1512_14		
31	0,47	0,67
32	0,47	0,67
33	0,47	0,67
34	0,46	0,66
35	0,46	0,66
36	0,47	0,67
37	0,46	0,66
38	0,46	0,66
39	0,47	0,67
40	0,47	0,67
41	0,47	0,67
42	0,47	0,67
43	0,47	0,67
44	0,47	0,67
45	0,47	0,67
46	0,47	0,68

F_c and g_t results are valid for the following presumptions in accordance with DIN EN 13363-1:

- Double glass with thermal protective covering, thermal permeability degree $U = 1,6 \text{ W/m}^2\text{K}$ and total energy permeability degree $g = 0,70$
- sun protective material inside, closed.

The results are mean values from three measurements; spectrograms are kept in the test department.

less otherwise agreed, all materials we received within this order will be kept for a maximum time of 6 month. Materials which are not stored because of technical or safety reasons are excluded from that.

The testing period is defined as timeframe between receipt of samples and issue date of test report.

The test results are referring to the submitted samples. These test report is not allowed to copy in parts.



Dr. Matthias Mägel
head of test department



Dipl.-Phys. Heidrun Mehlhorn
field responsible collaborator