

PRÜFSTELLE TEXTIL



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Stelle zur Prüfung von Schutzkleidung für Auto-Rennfahrer - FIA standard
8856-2000



UNTERSUCHUNGSBERICHT | TESTREPORT

Order number STFI: 1379.4/10

Report date: 2010-08-06
Person responsible: Mehlhorn

Orderer: création baumann Weavers and Dyers Ltd.
Mr René Hofmann
4901 LANGENTHAL
SCHWEIZ

Test order:

Date: 2010-07-13
Order received: 2010-07-13
Material received: 2010-07-16

Material to analyse:

17 samples fabric

signed by orderer	color	code for order processing
GECKO CRYPTA II	5001	Pm81_10_7
GECKO CRYPTA II	5031	Pm81_10_8
GECKO CRYPTA II	5033	Pm81_10_9
GECKO CRYPTA II	5034	Pm81_10_10
GECKO CRYPTA II	5035	Pm81_10_11
GECKO CRYPTA II	5036	Pm81_10_12
GECKO CRYPTA II	5037	Pm81_10_13
GECKO CRYPTA II	5038	Pm81_10_14
GECKO CRYPTA II	5039	Pm81_10_15
GECKO CRYPTA II	5040	Pm81_10_16
GECKO CRYPTA II	5041	Pm81_10_17
GECKO CRYPTA II	5042	Pm81_10_18
GECKO CRYPTA II	5043	Pm81_10_19
GECKO CRYPTA II	5044	Pm81_10_20
GECKO CRYPTA II	5045	Pm81_10_21
GECKO CRYPTA II	5046	Pm81_10_22
GECKO CRYPTA II	5047	Pm81_10_23

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: 1998.
- (2) Remission and transmission in the global radiation range in accordance with DIN EN 410: 1998.
- (3) calculation of total energy permeability degree g_t of window system, following DIN EN 13363-1 2007 and approximated calculation of reduce factor F_c following DIN EN 14501 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
Pm81_10	$\tau_{v,B}$	$\rho_{v,B}$	$\alpha_{v,B}$	τ_{UV}
7	0,7265	0,2455	0,0280	0,6279
8	0,5915	0,1398	0,2687	0,5058
9	0,6430	0,1817	0,1753	0,5298
10	0,7274	0,2227	0,0499	0,6062
11	0,6990	0,2300	0,0710	0,5523
12	0,6749	0,2218	0,1033	0,5100
13	0,5274	0,1424	0,3302	0,4149
14	0,5515	0,1213	0,3272	0,4534
15	0,6729	0,1930	0,1341	0,5599
16	0,6802	0,1890	0,1308	0,4888
17	0,5160	0,1780	0,3060	0,3252
18	0,6088	0,1685	0,2227	0,4855
19	0,4256	0,0908	0,4836	0,3614
20	0,3606	0,0970	0,5424	0,3079
21	0,4378	0,1422	0,4200	0,3543
22	0,2292	0,0551	0,7157	0,2162
23	0,4135	0,0649	0,5216	0,3671

(2) Global radiation range

Code	solar transmission degree	solar remission degree	solar absorption coefficient
Pm81_10	$\tau_{e,B}$	$\rho_{e,B}$	$\alpha_{e,B}$
7	0,7232	0,2420	0,0348
8	0,6032	0,1481	0,2487
9	0,6570	0,1965	0,1465
10	0,7194	0,2223	0,0583
11	0,6914	0,2268	0,0818
12	0,6722	0,2201	0,1077
13	0,6171	0,1881	0,1948
14	0,5824	0,1414	0,2762
15	0,6786	0,2019	0,1195
16	0,6739	0,1864	0,1397
17	0,5459	0,2004	0,2537
18	0,6497	0,2020	0,1483
19	0,5210	0,1412	0,3378
20	0,5583	0,1908	0,2509
21	0,5540	0,1981	0,2479
22	0,2316	0,0557	0,7127
23	0,4501	0,0730	0,4769

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

Code	g_t	F_c
Pm81_10		
7	0,58	0,83
8	0,61	0,88
9	0,60	0,85
10	0,59	0,84
11	0,58	0,83
12	0,59	0,84
13	0,60	0,85
14	0,61	0,88
15	0,59	0,85
16	0,60	0,86
17	0,59	0,84
18	0,59	0,85
19	0,61	0,87
20	0,59	0,85
21	0,59	0,84
22	0,63	0,90
23	0,64	0,91

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.

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



Dr. Matthias Mägel
head of test department



Dipl.-Phys. Heidrun Mehlhorn
field responsible collaborator