

# PRÜFSTELLE TEXTIL



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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:** 20151931.12

**Report date:** 2015-11-16

**Person responsible:** Mehlhorn

**Orderer:** Création Baumann AG  
Kristi Joga  
Bern-Zürich-Str.23  
4901 LANGENTHAL  
SCHWEIZ

**Test order:**

**Date:** 2015-09-03

**Order received:** 2015-09-07

**Material received:** 2015-10-07

**Material to analyse:**

7 samples sun protective material

signed by orderer	Color
ALU NET 300cm	101
ALU NET 300cm	102
ALU NET 300cm	103
ALU NET 300cm	104
ALU NET 300cm	105
ALU NET 300cm	106
ALU NET 300cm	107

The sampling was supplied by the issuer. The test department is not informed about the sampling procedure

**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 the total energy permeability degree  $g_t$  of window system with sun protective materials, following DIN EN 13363-1 September 2007 and approximated calculation of reduce factor  $F_c$  following DIN EN 14501 February 2006
- (4) Normally und diffuse transmission measurement in the visible light range in accordance with DIN EN 410 April 2011

Conditions for optical tests:

test parameter	symbol	range of radiation
light transmission degree	$\tau_{v,n-h}$	380...780 nm (standard light D65)
light remission degree	$\rho_{v,n-h}$	380...780 nm (standard light D65)
light absorption degree	$\alpha_v$	380...780 nm
UV- transmission degree	$\tau_{uv}$	280...380 nm (UV-radiation)
solar transmission degree	$\tau_{e,n-h}$	280...2500 nm (global radiation)
solar remission degree	$\rho_{e,n-h}$	280...2500 nm (global radiation)
Solarabsorptionsgrad	$\alpha_e$	280...2500 nm
normally / normally transmission degree	$\tau_{v, n-n}$	380...780 nm (standard light D65)
normally / diffuse light transmission degree	$\tau_{v, n-dif}$	380...780 nm (standard light D65)

Equipment: spectral photometer Lambda 900, PERKIN - ELMER Corp., USA  
150 mm sphere; 8° slope of the sample area to the light incidence axis.

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

Color	light transmission degree	light remission degree	light absorption coefficient	UV-transmission degree
	$\tau_{v,n-h}$	$\rho_{v,n-h}$	$\alpha_v$	$\tau_{UV}$
101	0,5187	0,4217	0,0596	0,4573
102	0,4217	0,2800	0,2983	0,4177
103	0,4000	0,2893	0,3107	0,3977
104	0,3980	0,2860	0,3160	0,3940
105	0,4037	0,2957	0,3006	0,4017
106	0,3917	0,2867	0,3216	0,3933
107	0,3863	0,2643	0,3494	0,3910

**(2) Global radiation range**

Color	solar transmission degree	solar remission degree	solar absorption coefficient
	$\tau_{e,n-h}$	$\rho_{e,n-h}$	$\alpha_e$
101	0,5190	0,4143	0,0667
102	0,4247	0,2853	0,2900
103	0,4087	0,3017	0,2896
104	0,4047	0,2973	0,2980
105	0,4140	0,3103	0,2757
106	0,4014	0,3040	0,2946
107	0,4023	0,2847	0,3130

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

Color	thermal regulated treble glazing U=2,0 g=0,65		double glass with thermal protective covering U=1,6 g=0,70	
	$g_{tot}$	$F_c$	$g_{tot}$	$F_c$
101	0,47	0,72	0,49	0,70
102	0,51	0,79	0,54	0,78
103	0,50	0,77	0,54	0,77
104	0,51	0,78	0,54	0,77
105	0,51	0,78	0,53	0,76
106	0,51	0,78	0,53	0,76
107	0,51	0,79	0,54	0,78

**(4) Diffuse and normally transmission degree (visible range)**

Color	light transmission degree normal / diffuse	light transmission degree normal / normal
	$\tau_{v,n-dif}$	$\tau_{v,n-n}$
101	0,1563	0,3623
102	0,0320	0,3897
103	0,0257	0,3743
104	0,0227	0,3753
105	0,0150	0,3887
106	0,0127	0,3790
107	0,0100	0,3763

The test results are referring to the submitted samples.

The materials received within this order will be kept for a maximum time of 6 month.

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

These test report is not allowed to copy in parts.



Dr. Matthias Mägel  
head of test department



Dipl.-Phys. Heidrun Mehlhorn  
field responsible collaborator