

Approval body for construction products
and types of construction

Bautechnisches Prüfamt

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European Technical Assessment

ETA-17/1031
of 14 June 2018

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General Part

Technical Assessment Body issuing the
European Technical Assessment:

Deutsches Institut für Bautechnik

Trade name of the construction product

DM7600 High Intensity Prismatic (HIP) Grade Series -
originally dyed

Product family
to which the construction product belongs

Microprismatic retro-reflective sheetings

Manufacturer

Daoming Optics & Chemical Co., Ltd
No.581 Dongwu Road
Yongkang Economic Development Zone
321399 Yongkang City, Zhejiang Province
VOLKSREPUBLIK CHINA

Manufacturing plant

Daoming Optics & Chemical Co., Ltd
No.581 Dongwu Road
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321399 Yongkang City, Zhejiang Province
VOLKSREPUBLIK CHINA

This European Technical Assessment
contains

17 pages including 3 annexes which form an integral part
of this assessment

This European Technical Assessment is
issued in accordance with Regulation (EU)
No 305/2011, on the basis of

EAD 120001-01-0106

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Specific Part

1 Technical description of the product

The product consists of retro-reflective sheeting on the basis of microprisms which consist of optical elements where the retro-reflection is created by total internal reflection on prisms. The microprisms are moulded in a transparent polymer enclosed in air capsules and provided with an adhesive which can connect the sheeting with a substrate. The sheeting has a smooth surface and a regular structure visible on the surface forming the air capsules and serving to identify the orientation.

The product is delivered as reflective sheeting, the types of which are stated in Table 1.

Trade name	Component	Colour/Code		Properties
DM7600 High Intensity Prismatic (HIP) Grade	Self-adhesive retro-reflective sheeting on the basis of microprisms	White	DM 7601	Sheeting thickness (without protective paper and adhesive): 0,375 mm Dimension of the roll: 1,22 m x 45,7 m, or customized
		Yellow	DM 7602	
		Red	DM 7604	
		Green	DM 7605	
		Blue	DM 7606	
		Fluorescent Yellow-Green	DM 7610	

Tab. 1: Types of reflective sheeting "DM7600 High Intensity Prismatic (HIP) Grade Series - originally dyed"

The indications of the manufacturer regarding the definition of the colours comply with the colour boxes of the CIE system (according to class CR2 of EN 12899-1) and are shown in Table 2.

Colour		Daylight chromaticity				Luminance factors
		1	2	3	4	
White*	x	0,305	0,335	0,325	0,295	≥ 0,27
	y	0,315	0,345	0,355	0,325	
Yellow*	x	0,494	0,470	0,513	0,545	≥ 0,16
	y	0,505	0,480	0,437	0,454	
Red*	x	0,735	0,700	0,610	0,660	≥ 0,03
	y	0,265	0,250	0,340	0,340	
Green*	x	0,110	0,170	0,170	0,110	≥ 0,03
	y	0,415	0,415	0,500	0,500	
Blue*	x	0,130	0,160	0,160	0,130	≥ 0,01
	y	0,090	0,090	0,140	0,140	
Fluorescent Yellow-Green	x	0,387	0,460	0,438	0,376	≥ 0,70
	y	0,610	0,540	0,508	0,568	

Tab. 2: Daylight chromaticity and luminance factors according to the indications of the manufacturer

* in compliance with class CR2 of EN 12899-1

2 Specification of the intended use in accordance with the applicable European Assessment Document

The construction product described here is used to manufacture signal aspects of fixed, vertical traffic signs (see also EN 12899-1:2007). The further intended applications are all other traffic signs and traffic installations, route guidance with retro-reflective elements and variable message signs.

However, the intended use excludes the manufacture of road marking elements according to EN 1436. The intended sign support material is aluminium, galvanised steel, polycarbonate or other materials. Tests within the framework of this assessment were carried out on aluminium-based samples.

The performances given in section 3 are only valid if the conditions laid down in the accompanying product data sheets and in the processing instructions given by the manufacturer have been respected throughout the production, processing, packaging, transport and storage of "DM7600 High Intensity Prismatic (HIP) Grade Series - originally dyed".

The verifications and assessment methods as well as the product information of the manufacturer on which this European Technical Assessment is based lead to the assumption of a working life of this product of at least 10 years. The indications given on the working life cannot be interpreted as a guarantee given by the manufacturer, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

3 Performance of the product and references to the methods used for its assessment

3.1 Safety and accessibility in use (BWR 4)

For the preparation of the specimens, the test pieces of the reflective sheeting were applied by the manufacturer on a plane aluminium plate with a thickness of 2,0 mm (± 0,05 mm).

Essential characteristic	Performance
Visibility of "DM 7600 High Intensity Prismatic Grade, originally dyed"	
Daylight chromaticity and luminance factors	See Annex 1
Night-time colour	No performance assessed
Coefficient of retro-reflection and rotational symmetry	See Annex 2
Durability of "DM 7600 High Intensity Prismatic Grade, originally dyed"	
Impact resistance	Passed according to EN 12899-1
Temperature resistance	No performance assessed
Visibility after artificial weathering	See Annex 3
Visibility after natural weathering	No performance assessed
Adhesion	No performance assessed

Tab. 3: Performances of the essential characteristics acc. to EAD 120001-01-0106

4 System of assessment and verification of constancy of performance (AVCP) to be applied, with reference to its legal base

In accordance with EAD 120001-01-0106, the applicable European legal act is: Decision 96/579/EC.

The system is: 1

5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with Deutsches Institut für Bautechnik.

6 Reference list

This European Technical Assessment is based on the following test report:

- Test report No. V3-001/2017 of 7 February 2018 by Federal Highway Research Institute (Bundesanstalt für Straßenwesen - BAST) on the testing of microprismatic reflective sheetings

Issued in Berlin on 14 June 2018 by Deutsches Institut für Bautechnik

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Head of Department

beglaubigt:
Petrik

Annex 1

Daylight chromaticity and luminance factors according to clause 2.2.1 of the EAD

Colour	Sample	x	y	β
White	1	0,303	0,316	0,47
	2	0,303	0,316	0,47
	3	0,303	0,316	0,47
Yellow	1	0,543	0,451	0,24
	2	0,542	0,452	0,24
	3	0,543	0,450	0,24
Red	1	0,663	0,314	0,06
	2	0,662	0,314	0,06
	3	0,662	0,314	0,06
Green	1	0,136	0,434	0,07
	2	0,135	0,432	0,07
	3	0,135	0,430	0,07
Blue	1	0,144	0,107	0,04
	2	0,145	0,106	0,04
	3	0,144	0,106	0,04
Fluorescent Yellow-Green	1	0,390	0,565	0,81
	2	0,390	0,566	0,80
	3	0,390	0,565	0,81

DM7600 High Intensity Prismatic (HIP) Grade Series - originally dyed

Daylight chromaticity and luminance factors according to clause 2.2.1 of the EAD

Annex 1

English translation prepared by DIBt

Annex 2

Coefficient of retro-reflection and rotational symmetry according to clause 2.2.3 of the EAD
Coefficient of retro-reflection for "White" (Part 1)

Colour				White			Average of the three samples tested
Sample				Single test result of each sample			
α	β_1	β_2	ϵ	1	2	3	
0,1°	5°			1156	1014	1059	1076
	15°			1030	874	903	936
	20°			898	767	794	820
	30°			491	442	464	466
	40°			164	154	168	162
0,2°	5°			534	500	518	517
	15°			498	480	496	491
	20°			462	444	464	457
	30°			320	301	320	314
	40°			142	132	146	140
0,33°	5°			311	266	277	285
	15°			337	277	286	300
	20°			335	284	295	305
	30°			206	199	210	205
	40°			109	103	113	108
0,5°	5°			379	352	375	369
	15°			360	342	361	354
	20°	0°	0°	350	341	357	349
	30°			209	208	212	210
	40°			79	77	84	80
1,0°	5°			79	114	118	104
	15°			66	124	133	108
	20°			58	116	125	100
	30°			43	60	64	56
	40°			20	17,0	17,7	18,2
1,5°	5°			33	36	37	35
	15°			27	30	31	29
	20°			26	30	31	29
	30°			18,1	29	30	26
	40°			12,9	8,9	9,6	10,5
2°	5°			12,3	15,0	15,3	14,2
	15°			13,0	14,2	14,7	14,0
	20°			11,1	12,7	13,1	12,3
	30°			9,1	9,2	9,6	9,3
	40°			4,9	6,3	6,8	6,0

Coefficient of retro-reflection started at $\epsilon=0^\circ$ [$\text{cd m}^{-2} \text{lx}^{-1}$]

DM7600 High Intensity Prismatic (HIP) Grade Series - originally dyed

Coefficient of retro-reflection and rotational symmetry according to clause 2.2.3 of the EAD

Annex 2

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Coefficient of retro-reflection and rotational symmetry according to clause 2.2.3 of the EAD
Coefficient of retro-reflection for "Yellow" (Part 2)

Colour				Yellow			Average of the three samples tested
Sample				Single test result of each sample			
α	β_1	β_2	ε	1	2	3	
0,1°	5°			1016	844	966	942
	15°			876	674	788	779
	20°			751	552	661	655
	30°			406	264	346	339
	40°			130	89	135	118
0,2°	5°			579	502	586	556
	15°			554	451	518	508
	20°			502	395	459	452
	30°			302	211	273	262
	40°			114	80	122	105
0,33°	5°			269	278	322	290
	15°			268	266	294	276
	20°			262	242	268	257
	30°			184	140	179	168
	40°			89	62	98	83
0,5°	5°			256	227	268	250
	15°			261	224	258	248
	20°	0°	0°	262	214	240	239
	30°			152	107	129	129
	40°			62	40	67	56
1,0°	5°			90	97	104	97
	15°			80	101	110	97
	20°			73	96	106	92
	30°			65	64	74	68
	40°			18,2	12,4	17,7	16,1
1,5°	5°			26	28	32	29
	15°			29	28	33	30
	20°			26	26	30	27
	30°			22	19,5	22	21
	40°			5,7	8,2	10,2	8,0
2°	5°			10,2	10,8	12,4	11,1
	15°			8,8	9,0	10,8	9,5
	20°			9,7	9,2	10,8	9,9
	30°			6,7	7,3	8,1	7,4
	40°			3,0	4,2	4,4	3,9

Coefficient of retro-reflection started at $\varepsilon=0^\circ$ [$\text{cd m}^{-2} \text{lx}^{-1}$]

DM7600 High Intensity Prismatic (HIP) Grade Series - originally dyed

Coefficient of retro-reflection and rotational symmetry according to clause 2.2.3 of the EAD

Annex 2

English translation prepared by DIBt

Coefficient of retro-reflection and rotational symmetry according to clause 2.2.3 of the EAD
Coefficient of retro-reflection for "Red" (Part 3)

Colour		Sample				Red			Average of the three samples tested
						Single test result of each sample			
α	β_1	β_2	ε	1	2	3			
0,1°	5°	0°	0°	150	180	181	170		
	15°			125	153	156	145		
	20°			105	131	134	123		
	30°			48	67	69	61		
	40°			16,8	24	24	22		
0,2°	5°	0°	0°	104	119	120	114		
	15°			92	111	112	105		
	20°			80	99	100	93		
	30°			40	55	57	51		
	40°			15,1	21	22	19,4		
0,33°	5°	0°	0°	66	64	63	64		
	15°			60	61	61	61		
	20°			53	58	58	56		
	30°			28	38	39	35		
	40°			12,0	17,3	17,0	15,4		
0,5°	5°	0°	0°	51	50	49	50		
	15°			48	46	46	47		
	20°			45	45	45	45		
	30°			21	28	27	25		
	40°			8,3	12,5	12,5	11,1		
1,0°	5°	0°	0°	35	30	29	31		
	15°			35	27	26	29		
	20°			32	26	25	28		
	30°			17,6	20	20	19,2		
	40°			3,0	4,3	4,5	3,9		
1,5°	5°	0°	0°	11,2	11,7	12,0	11,6		
	15°			9,8	11,2	11,7	10,9		
	20°			9,0	10,0	10,5	9,8		
	30°			5,0	5,8	6,0	5,6		
	40°			1,7	1,2	1,2	1,4		
2°	5°	0°	0°	3,9	3,5	3,6	3,7		
	15°			3,5	3,1	3,3	3,3		
	20°			3,4	3,4	3,6	3,5		
	30°			3,0	2,6	2,6	2,7		
	40°			1,0	0,7	0,7	0,8		

Coefficient of retro-reflection started at $\varepsilon=0^\circ$ [$\text{cd m}^{-2} \text{lx}^{-1}$]

DM7600 High Intensity Prismatic (HIP) Grade Series - originally dyed

Coefficient of retro-reflection and rotational symmetry according to clause 2.2.3 of the EAD

Annex 2

English translation prepared by DIBt

Coefficient of retro-reflection and rotational symmetry according to clause 2.2.3 of the EAD
Coefficient of retro-reflection for "Green" (Part 4)

Colour		Green			Average of the three samples tested		
Sample		Single test result of each sample					
α	β_1	β_2	ε	1		2	3
0,1°	5°	0°	0°	108	162	172	147
	15°			88	128	131	116
	20°			75	104	103	94
	30°			38	51	43	44
	40°			13,2	15,2	11,8	13,4
0,2°	5°	0°	0°	63	81	82	75
	15°			62	79	74	72
	20°			56	71	63	63
	30°			31	38	31	33
	40°			11,4	12,5	9,7	11,2
0,33°	5°	0°	0°	42	46	51	46
	15°			36	41	48	42
	20°			34	40	43	39
	30°			23	25	21	23
	40°			8,6	8,8	6,8	8,1
0,5°	5°	0°	0°	45	53	57	52
	15°			41	51	58	50
	20°			38	49	56	48
	30°			18,6	23	25	22
	40°			5,5	5,7	4,7	5,3
1,0°	5°	0°	0°	21	21	20	21
	15°			16,5	17,8	16,5	16,9
	20°			14,1	15,6	14,2	14,6
	30°			9,4	9,7	7,9	9,0
	40°			1,9	2,2	1,7	1,9
1,5°	5°	0°	0°	5,8	6,0	6,3	6,0
	15°			6,0	6,0	6,5	6,2
	20°			5,3	5,1	5,2	5,2
	30°			4,3	4,0	4,0	4,1
	40°			1,0	1,1	1,3	1,1
2°	5°	0°	0°	2,3	2,6	2,8	2,6
	15°			2,1	2,2	2,6	2,3
	20°			2,0	2,1	2,5	2,2
	30°			1,2	1,3	1,3	1,3
	40°			0,4	0,5	0,6	0,5

Coefficient of retro-reflection started at $\varepsilon=0^\circ$ [$\text{cd m}^{-2} \text{lx}^{-1}$]

DM7600 High Intensity Prismatic (HIP) Grade Series - originally dyed

Coefficient of retro-reflection and rotational symmetry according to clause 2.2.3 of the EAD

Annex 2

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Coefficient of retro-reflection and rotational symmetry according to clause 2.2.3 of the EAD
Coefficient of retro-reflection for "Blue" (Part 5)

Colour		Sample				Blue			Average of the three samples tested
						Single test result of each sample			
α	β_1	β_2	ε	1	2	3			
0,1°	5°	0°	0°	80	75	72	76		
	15°			71	75	65	70		
	20°			63	68	58	63		
	30°			38	41	36	38		
	40°			14,4	13,5	13,3	13,7		
0,2°	5°	0°	0°	62	53	58	58		
	15°			54	51	50	52		
	20°			48	47	45	47		
	30°			30	31	28	30		
	40°			12,7	11,5	11,7	12,0		
0,33°	5°	0°	0°	43	34	42	40		
	15°			37	28	36	34		
	20°			32	26	30	29		
	30°			19,9	19,3	18,9	19,4		
	40°			9,6	8,6	8,9	9,0		
0,5°	5°	0°	0°	37	33	36	35		
	15°			34	30	33	32		
	20°			30	27	28	28		
	30°			16,5	17,5	15,8	16,6		
	40°			6,2	5,8	5,9	6,0		
1,0°	5°	0°	0°	19,1	16,9	20	18,7		
	15°			18,2	14,1	19,5	17,3		
	20°			17,3	12,4	18,7	16,1		
	30°			9,9	7,8	10,5	9,4		
	40°			1,7	1,9	1,5	1,7		
1,5°	5°	0°	0°	6,2	6,0	6,7	6,3		
	15°			5,7	5,4	6,1	5,7		
	20°			5,1	5,0	5,5	5,2		
	30°			3,3	2,6	3,4	3,1		
	40°			1,0	0,9	1,0	1,0		
2°	5°	0°	0°	2,0	1,9	2,1	2,0		
	15°			1,7	1,6	1,7	1,7		
	20°			1,5	1,5	1,5	1,5		
	30°			1,2	1,0	1,2	1,1		
	40°			0,5	0,4	0,5	0,5		

Coefficient of retro-reflection started at $\varepsilon=0^\circ$ [$\text{cd m}^{-2} \text{lx}^{-1}$]

DM7600 High Intensity Prismatic (HIP) Grade Series - originally dyed

Coefficient of retro-reflection and rotational symmetry according to clause 2.2.3 of the EAD

Annex 2

Coefficient of retro-reflection and rotational symmetry according to clause 2.2.3 of the EAD
Coefficient of retro-reflection for "Fluorescent Yellow-Green" (Part 6)

Colour				Fluorescent Yellow-Green			Average of the three samples tested
Sample				Single test result of each sample			
α	β_1	β_2	ϵ	1	2	3	
0,1°	5°	0°	0°	1389	1294	1317	1333
	15°			1209	1132	1127	1156
	20°			1059	998	975	1011
	30°			602	579	507	563
	40°			187	190	144	174
0,2°	5°			670	588	590	616
	15°			634	563	534	577
	20°			584	525	487	532
	30°			392	372	314	359
	40°			160	163	120	148
0,33°	5°			291	279	301	290
	15°			286	276	300	287
	20°			283	277	288	283
	30°			214	218	185	206
	40°			117	123	88	109
0,5°	5°	368	380	378	375		
	15°	348	355	350	351		
	20°	337	344	339	340		
	30°	213	225	197	212		
	40°	78	84	64	75		
1,0°	5°	82	91	76	83		
	15°	92	102	70	88		
	20°	86	93	63	81		
	30°	56	53	42	50		
	40°	15,3	14,6	17,3	15,7		
1,5°	5°	23	24	26	24		
	15°	22	23	25	23		
	20°	22	24	25	24		
	30°	24	25	16,5	22		
	40°	8,8	10,1	9,8	9,6		
2°	5°	10,4	10,8	11,5	10,9		
	15°	9,2	9,8	10,4	9,8		
	20°	9,3	9,6	8,9	9,3		
	30°	6,6	7,5	9,4	7,8		
	40°	5,6	6,5	4,0	5,4		

Coefficient of retro-reflection started at $\epsilon=0^\circ$ [$\text{cd m}^{-2} \text{lx}^{-1}$]

DM7600 High Intensity Prismatic (HIP) Grade Series - originally dyed

Coefficient of retro-reflection and rotational symmetry according to clause 2.2.3 of the EAD

Annex 2

Rotational symmetry

Colour Sample				White		
α	β ₁	β ₂	ε	1	2	3
0,33	5	0	-75	344	354	356
			-50	385	354	369
			-25	338	285	303
			0*	311	266	277
			25	370	307	315
			50	372	328	342
Ratio				1,24	1,33	1,33

* Rotational symmetry started at $\varepsilon=0^\circ$ [$\text{cd m}^{-2} \text{lx}^{-1}$]

Colour Sample				Green		
α	β ₁	β ₂	ε	1	2	3
0,33	5	0	-75	43	46	52
			-50	47	56	56
			-25	44	53	55
			0*	42	46	51
			25	49	54	54
			50	53	56	58
Ratio				1,26	1,22	1,14

* Rotational symmetry started at $\varepsilon=0^\circ$ [$\text{cd m}^{-2} \text{lx}^{-1}$]

Colour Sample				Yellow		
α	β ₁	β ₂	ε	1	2	3
0,33	5	0	-75	234	230	228
			-50	285	275	252
			-25	299	301	293
			0*	269	278	322
			25	292	273	344
			50	269	263	297
Ratio				1,28	1,31	1,51

* Rotational symmetry started at $\varepsilon=0^\circ$ [$\text{cd m}^{-2} \text{lx}^{-1}$]

Colour Sample				Blue		
α	β ₁	β ₂	ε	1	2	3
0,33	5	0	-75	23	22	22
			-50	25	24	24
			-25	35	30	33
			0*	43	34	42
			25	37	31	36
			50	26	24	24
Ratio				1,87	1,55	1,91

* Rotational symmetry started at $\varepsilon=0^\circ$ [$\text{cd m}^{-2} \text{lx}^{-1}$]

Colour Sample				Red		
α	β ₁	β ₂	ε	1	2	3
0,33	5	0	-75	45	43	47
			-50	49	51	56
			-25	58	59	63
			0*	66	64	63
			25	71	73	67
			50	64	67	62
Ratio				1,58	1,70	1,43

* Rotational symmetry started at $\varepsilon=0^\circ$ [$\text{cd m}^{-2} \text{lx}^{-1}$]

Colour Sample				Fluo. Yellow-Green		
α	β ₁	β ₂	ε	1	2	3
0,33	5	0	-75	426	444	449
			-50	382	383	382
			-25	322	304	341
			0*	291	279	301
			25	332	314	336
			50	391	385	367
Ratio				1,46	1,59	1,49

* Rotational symmetry started at $\varepsilon=0^\circ$ [$\text{cd m}^{-2} \text{lx}^{-1}$]

DM7600 High Intensity Prismatic (HIP) Grade Series - originally dyed

Coefficient of retro-reflection and rotational symmetry according to clause 2.2.3 of the EAD

Annex 2

Annex 3

Visibility after accelerated artificial weathering according to clause 2.2.6 of the EAD using non-insulated black panel thermometer. Test results obtained on test specimen of dimensions (5,5 x 11)cm.

Daylight chromaticity and luminance factors after accelerated artificial weathering

Colour	Sample	x	y	β
White	1	0,306	0,322	0,47
	2	0,306	0,322	0,47
	3	0,305	0,322	0,47
Yellow	1	0,549	0,448	0,23
	2	0,546	0,450	0,23
	3	0,545	0,451	0,24
Red	1	0,672	0,317	0,06
	2	0,672	0,316	0,06
	3	0,672	0,316	0,06
Green	1	0,131	0,432	0,07
	2	0,131	0,428	0,07
	3	0,132	0,432	0,07
Blue	1	0,141	0,110	0,04
	2	0,141	0,111	0,04
	3	0,141	0,110	0,04
Fluorescent Yellow-Green	1	0,375	0,527	0,67
	2	0,374	0,528	0,66
	3	0,376	0,529	0,67

Coefficients of retro-reflection after accelerated artificial weathering for "White"

Colour	Sample				White			Average of the three samples tested
					Single test result of each sample			
α	β_1	β_2	ϵ	1	2	3		
0,2°	5°	30°		477	508	504	496	
				269	287	273	276	
0,33°	5°	0°	0°	336	340	286	321	
				180	187	180	182	
1,0°	5°	30°		86	87	107	93	
				48	49	58	52	

Coefficient of retro-reflection after accelerated artificial weathering started at $\epsilon=0^\circ$ [$\text{cd m}^{-2} \text{lx}^{-1}$]

DM7600 High Intensity Prismatic (HIP) Grade Series - originally dyed

Visibility after accelerated artificial weathering according to clause 2.2.6 of the EAD

Annex 3

Coefficients of retro-reflection after accelerated artificial weathering for "Yellow"

Colour				Yellow			Average of the three samples tested
Sample				Single test result of each sample			
α	β_1	β_2	ε	1	2	3	
0,2°	5°	0°	0°	554	421	508	494
	30°			240	188	221	216
0,33°	5°			267	224	240	244
	30°			146	123	136	135
1,0°	5°			67	82	66	72
	30°			43	52	49	48

Coefficient of retro-reflection after accelerated artificial weathering started at $\varepsilon=0^\circ$ [$\text{cd m}^{-2} \text{lx}^{-1}$]

Coefficients of retro-reflection after accelerated artificial weathering for "Red"

Colour				Red			Average of the three samples tested
Sample				Single test result of each sample			
α	β_1	β_2	ε	1	2	3	
0,2°	5°	0°	0°	145	147	154	149
	30°			53	62	71	62
0,33°	5°			76	71	77	75
	30°			35	39	47	40
1,0°	5°			34	32	33	33
	30°			17,0	18,4	18,8	18,1

Coefficient of retro-reflection after accelerated artificial weathering started at $\varepsilon=0^\circ$ [$\text{cd m}^{-2} \text{lx}^{-1}$]

DM7600 High Intensity Prismatic (HIP) Grade Series - originally dyed

Visibility after accelerated artificial weathering according to clause 2.2.6 of the EAD

Annex 3

Coefficients of retro-reflection after accelerated artificial weathering for "Green"

Colour				Green			Average of the three samples tested
Sample				Single test result of each sample			
α	β_1	β_2	ϵ	1	2	3	
0,2°	5°	0°	0°	110	104	116	110
	30°			47	38	51	45
0,33°	5°			62	71	64	66
	30°			30	29	31	30
1,0°	5°			19,5	16,7	19,8	18,7
	30°			10,1	8,4	9,5	9,3

Coefficient of retro-reflection after accelerated artificial weathering started at $\epsilon=0^\circ$ [$\text{cd m}^{-2} \text{lx}^{-1}$]

Coefficients of retro-reflection after accelerated artificial weathering for "Blue"

Colour				Blue			Average of the three samples tested
Sample				Single test result of each sample			
α	β_1	β_2	ϵ	1	2	3	
0,2°	5°	0°	0°	61	67	65	64
	30°			31	34	32	32
0,33°	5°			39	38	42	40
	30°			19,6	22	21	21
1,0°	5°			13,8	13,9	14,8	14,2
	30°			5,8	6,4	6,8	6,3

Coefficient of retro-reflection after accelerated artificial weathering started at $\epsilon=0^\circ$ [$\text{cd m}^{-2} \text{lx}^{-1}$]

DM7600 High Intensity Prismatic (HIP) Grade Series - originally dyed

Visibility after accelerated artificial weathering according to clause 2.2.6 of the EAD

Annex 3

Coefficients of retro-reflection after accelerated artificial weathering for "Fluorescent Yellow-Green"

Colour				Fluorescent Yellow-Green			Average of the three samples tested
α	β_1	Sample		Single test result of each sample			
		β_2	ε	1	2	3	
0,2°	5°			505	592	691	596
	30°			279	376	412	356
0,33°	5°	0°	0°	292	308	337	312
	30°			177	224	244	215
1,0°	5°			81	88	83	84
	30°			46	52	51	50

Coefficient of retro-reflection after accelerated artificial weathering started at $\varepsilon=0^\circ$ [$\text{cd m}^{-2} \text{lx}^{-1}$]