

Attachment to EC Certificate of Conformity 0913 - CPD - 2012 / 07 (7 pages)

The descriptions in this attachment refer to the ETA (Approval)

ETA-12/0478, valid from 2013-06-27 to 2018-01-21

as well as ETA (Assessment)

ETA-16/0465, from 2016-07-18,

ETA-16/0466, from 2016-07-18.

The above certified microprismatic retroreflective sheeting ORALITE® 5910 High Intensity Prismatic Grade to be used for fixed, vertical road traffic signs is admitted for the following original dyed colours:

Original dyed retroreflective sheeting:

Colour	Name of the product	Visibility characteristics		Durability	
		Daylight chromaticity & luminance factor ETA 12/0478 tab. 2	Coefficient of retroreflection ETA 12/0478 tab. 3	Impact resistance ETA 12/0478 tab. 5	Resistance to weathering ETA 12/0478 tab. 6 und 7
White	ORALITE® 5910-010 High Intensity Prismatic Grade	pass, B2	R2 Europe	pass	pass
Yellow	ORALITE® 5910-020 High Intensity Prismatic Grade	pass, B2	R2 Europe	pass	pass
Red	ORALITE® 5910-030 High Intensity Prismatic Grade	pass, B2	R2 Europe	pass	pass
Blue	ORALITE® 5910-050 High Intensity Prismatic Grade	pass, B2	R2 Europe	pass	pass
Green	ORALITE® 5910-060 High Intensity Prismatic Grade	pass, B2	R2 Europe	pass	pass
Brown	ORALITE® 5910-080 High Intensity Prismatic Grade	pass, B2	R2 Europe	pass	pass

The above certified microprismatic retroreflective sheeting ORALITE® 5910 High Intensity Prismatic Grade to be used for fixed, vertical road traffic signs is accepted to be coloured by the below listed materials:

Lettering Film:

Colour	Name of the product	Visibility characteristics		Durability	
		Daylight chromaticity & luminance factor EN 12899-1 7.3.1.3	Coefficient of retroreflection EN 12899-1 4.1.1.4	Impact resistance EN 12899-1 4.1.2.1	Resistance to weathering EN 12899-1 4.1.1.5
Black	ORALITE® 5081-070 Lettering Film	NR1	-	pass	pass

Screen Printing Colours:

Colour	Name of the product	Visibility characteristics		Durability	
		Daylight chromaticity & luminance factor ETA 12/0478 tab. 8	Coefficient of retroreflection ETA 12/0478 tab. 9	Impact resistance ETA 12/0478 tab. 11	Resistance to weathering ETA 12/0478 tab. 12 und 13
on white sheeting	ORALITE® 5910-010 High Intensity Prismatic Grade and				
Yellow	ORALITE® 5018-020 Screen Printing Ink	pass, B2	R2 Europe	pass	pass
Red	ORALITE® 5018-030 Screen Printing Ink	pass, B2	R2 Europe	pass	pass
Blue	ORALITE® 5018-050 Screen Printing Ink	pass, B2	R2 Europe	pass	pass
Green	ORALITE® 5018-060 Screen Printing Ink	pass, B2	R2 Europe	pass	pass
Orange	ORALITE® 5018-035 Screen Printing Ink	pass, B2	R2 Europe	pass	pass

Colour	Name of the product	Visibility characteristics		Durability	
		Daylight chromaticity & luminance factor EN 12899-1 7.3.1.3	Coefficient of retroreflection EN 12899-1 4.1.1.4	Impact resistance EN 12899-1 4.1.2.1	Resistance to weathering EN 12899-1 4.1.1.5
Black	ORALITE® 5018-070 Screenprinting Ink	NR1	-	pass	pass

Coloured Laminates:

Colour	Name of the product	Visibility characteristics		Durability	
		Daylight chromaticity & luminance factor ETA 12/0478 tab. 14	Coefficient of retroreflection ETA 12/0478 tab. 15	Impact resistance ETA 12/0478 tab. 17	Resistance to weathering ETA 12/0478 tab. 18 und 19
on white sheeting	ORALITE® 5910-010 High Intensity Prismatic Grade and				
Transpa- rent	ORALITE® 5061-000 Transparent Film	pass, B2	R2 Europe	pass	pass
Yellow	ORALITE® 5061-020 Transparent Film	pass, B2	R2 Europe	pass	pass
Red	ORALITE® 5061-030 Transparent Film	pass, B2	R2 Europe	pass	pass
Blue	ORALITE® 5061-050 Transparent Film	pass, B2	R2 Europe	pass	pass
Green	ORALITE® 5061-060 Transparent Film	pass, B2	R2 Europe	pass	pass
Orange	ORALITE® 5061-035 Transparent Film	pass, B2	R2 Europe	pass	pass
Brown	ORALITE® 5061-080 Transparent Film	pass, B2	R2 Europe	pass	pass

Colour	Name of the product	Visibility characteristics		Durability	
		Daylight chromaticity & luminance factor evaluation according to ETA 16/0465 annex A	Coefficient of retroreflection evaluation according to ETA 16/0465 annex A	Impact resistance evaluation according to EN 12899-1	Resistance to weathering evaluation according to ETA 16/0465 annex A
on white sheeting	ORALITE® 5910-010 High Intensity Prismatic Grade and				
Darkgreen	ORALITE® 5061-625 Transparent Film	pass	pass	pass	pass

Digital Printing Colours:

The digital printing is processed on white retroreflective sheeting with the digital printing systems ORALITE® UV Digital Traffic Sign Printer or AGFA ANAPURNA M2050 High-Speed-UV-Inkjet-System and is to be laminated with a transparent protective laminate.

Transparent protective laminate ORALITE® 5061-000 Transparent Film:

Colour on white sheeting	Name of the product	Visibility characteristics		Durability	
		Daylight chromaticity & luminance factor ETA 12/0478 tab. 32	Coefficient of retroreflection ETA 12/0478 tab. 33	Impact resistance ETA 12/0478 tab. 35	Resistance to weathering ETA 12/0478 tab. 36 und 37
Yellow	ORALITE® 5019-020 UV Digital Printing Ink and ORALITE® 5061-000 Transparent Film	pass, B2	R2 Europe	pass	pass
Red	ORALITE® 5019-030 UV Digital Printing Ink and ORALITE® 5061-000 Transparent Film	pass, B2	R2 Europe	pass	pass
Blue	ORALITE® 5019-050 UV Digital Printing Ink and ORALITE® 5061-000 Transparent Film	pass, B2	R2 Europe	pass	pass
Green	ORALITE® 5019-060 UV Digital Printing Ink and ORALITE® 5061-000 Transparent Film	pass, B2	R2 Europe	pass	pass
Brown	ORALITE® 5019-080 UV Digital Printing Ink and ORALITE® 5061-000 Transparent Film	pass, B2	R2 Europe	pass	pass

Colour	Name of the product	Visibility characteristics		Durability	
		Daylight chromaticity & luminance factor EN 12899-1 7.3.1.3	Coefficient of retroreflection EN 12899-1 4.1.1.4	Impact resistance EN 12899-1 4.1.2.1	Resistance to weathering EN 12899-1 4.1.1.5
Black	ORALITE® 5019-070 UV Digital Printing Ink and ORALITE® 5061-000 Transparent Film	NR1	-	pass	pass

Transparent protective laminate ORALITE® 5090-000 Anti-Dew Film:

Colour on white sheeting	Name of the product	Visibility characteristics		Durability	
		Daylight chromaticity & luminance factor evaluation according to ETA 16/0466 annex A	Coefficient of retroreflection evaluation according to ETA 16/0466 annex A	Impact resistance evaluation according to EN 12899-1	Resistance to weathering evaluation according to ETA 16/0466 annex A
Yellow	ORALITE® 5019-020 UV Digital Printing Ink and ORALITE® 5090-000 Anti-Dew Film	pass	pass	pass	pass
Red	ORALITE® 5019-030 UV Digital Printing Ink and ORALITE® 5090-000 Anti-Dew Film	pass	pass	pass	pass
Blue	ORALITE® 5019-050 UV Digital Printing Ink and ORALITE® 5090-000 Anti-Dew Film	pass	pass	pass	pass
Orange	ORALITE® 5019-035 UV Digital Printing Ink and ORALITE® 5090-000 Anti-Dew Film	pass	pass	pass	pass
Brown	ORALITE® 5019-080 UV Digital Printing Ink and ORALITE® 5090-000 Anti-Dew Film	pass	pass	pass	pass
Grey	ORALITE® 5019-073 UV Digital Printing Ink and ORALITE® 5090-000 Anti-Dew Film	pass	pass	pass	pass

Transparent protective laminate ORALITE® 5095-000 Anti-Graffiti Film:

Colour on white sheeting	Name of the product	Visibility characteristics		Durability	
		Daylight chromaticity & luminance factor evaluation according to ETA 16/0466 annex B	Coefficient of retroreflection evaluation according to ETA 16/0466 annex B	Impact resistance evaluation according to EN 12899-1	Resistance to weathering evaluation according to ETA 16/0466 annex B
Yellow	ORALITE® 5019-020 UV Digital Printing Ink and ORALITE® 5095-000 Anti-Graffiti Film	pass	pass	pass	pass
Red	ORALITE® 5019-030 UV Digital Printing Ink and ORALITE® 5095-000 Anti-Graffiti Film	pass	pass	pass	pass
Blue	ORALITE® 5019-050 UV Digital Printing Ink and ORALITE® 5095-000 Anti-Graffiti Film	pass	pass	pass	pass
Grün	ORALITE® 5019-060 UV Digital Printing Ink and ORALITE® 5095-000 Anti-Graffiti Film	pass	pass	pass	pass
Orange	ORALITE® 5019-035 UV Digital Printing Ink and ORALITE® 5095-000 Anti-Graffiti Film	pass	pass	pass	pass
Brown	ORALITE® 5019-080 UV Digital Printing Ink and ORALITE® 5095-000 Anti-Graffiti Film	pass	pass	pass	pass
Darkgreen	ORALITE® 5019-625 UV Digital Printing Ink and ORALITE® 5095-000 Anti-Graffiti Film	pass	pass	pass	pass
Grey	ORALITE® 5019-073 UV Digital Printing Ink and ORALITE® 5095-000 Anti-Graffiti Film	pass	pass	pass	pass

If the colour Black is printed solely, this material combination is admitted to be used without the transparent laminate.

Colour	Name of the product	Visibility characteristics		Durability	
		Daylight chromaticity & luminance factor evaluation according to EN 12899-1 7.3.1.3	Coefficient of retroreflection EN 12899-1 4.1.1.4	Impact resistance EN 12899-1 4.1.2.1	Resistance to weathering EN 12899-1 4.1.1.5
Black	ORALITE® 5019-070 UV Digital Printing Ink	NR1	-	pass	pass

Clear protective overlay film:

Clear protective overlay films (Anti-Dew and Anti-Graffiti) are always admitted in combination with retroreflective sheeting and a colouring process.

Anti-Dew:

The original dyed retroreflective sheeting is accepted to be laminated with the clear protective overlay film ORALITE® 5090 Anti-Dew Film for the following colours.

Original dyed retroreflective-sheeting ORALITE® 5910 High Intensity Prismatic Grade

Colour	Name of the product	Visibility characteristics		Durability	
		Daylight chromaticity & luminance factor ETA 12/0478 tab. 20	Coefficient of retroreflection ETA 12/0478 tab. 21	Impact resistance ETA 12/0478 tab. 23	Resistance to weathering ETA 12/0478 tab. 24 und 25
White	ORALITE® 5910-010 High Intensity Prismatic Grade and ORALITE® 5090 Anti-Dew Film	pass, B2	R2 Europe	pass	pass
Yellow	ORALITE® 5910-020 High Intensity Prismatic Grade and ORALITE® 5090 Anti-Dew Film	pass, B2	R2 Europe	pass	pass
Red	ORALITE® 5910-030 High Intensity Prismatic Grade and ORALITE® 5090 Anti-Dew Film	pass, B2	R2 Europe	pass	pass
Blue	ORALITE® 5910-050 High Intensity Prismatic Grade and ORALITE® 5090 Anti-Dew Film	pass, B2	R2 Europe	pass	pass
Green	ORALITE® 5910-060 High Intensity Prismatic Grade and ORALITE® 5090 Anti-Dew Film	pass, B2	R2 Europe	pass	pass
Brown	ORALITE® 5910-080 High Intensity Prismatic Grade and ORALITE® 5090 Anti-Dew Film	pass, B2	R2 Europe	pass	pass

The original dyed white retroreflective sheeting is accepted to be laminated with the coloured transparent laminate ORALITE® 5061 Transparent Film and the clear protective overlay film ORALITE® 5090 Anti-Dew Film for the following colours.

Original dyed retroreflective-sheeting ORALITE® 5910 High Intensity Prismatic Grade and coloured transparent laminate ORALITE® 5061 Transparent Film

Colour on white sheeting	Name of the product	Visibility characteristics		Durability	
		Daylight chromaticity & luminance factor ETA 12/0478 tab. 38	Coefficient of retroreflection ETA 12/0478 tab. 39	Impact resistance ETA 12/0478 tab. 41	Resistance to weathering ETA 12/0478 tab. 42 und 43
Yellow	ORALITE® 5061-020 Transparent Film and ORALITE® 5090 Anti-Dew Film	pass, B2	R2 Europe	pass	pass
Red	ORALITE® 5061-030 Transparent Film and ORALITE® 5090 Anti-Dew Film	pass, B2	R2 Europe	pass	pass
Blue	ORALITE® 5061-050 Transparent Film and ORALITE® 5090 Anti-Dew Film	pass, B2	R2 Europe	pass	pass
Green	ORALITE® 5061-060 Transparent Film and ORALITE® 5090 Anti-Dew Film	pass, B2	R2 Europe	pass	pass

Original dyed retroreflective-sheeting ORALITE® 5910 High Intensity Prismatic Grade and Lettering-Film

Colour	Name of the product	Visibility characteristics		Durability	
		Daylight chromaticity & luminance factor EN 12899-1 7.3.1.3	Coefficient of retroreflection EN 12899-1 4.1.1.4	Impact resistance EN 12899-1 4.1.2.1	Resistance to weathering EN 12899-1 4.1.1.5
Black	ORALITE® 5081-070 Lettering Film and ORALITE® 5090 Anti-Dew Film	NR1	-	pass	pass

Anti-Graffiti:

The original dyed retroreflective sheeting is accepted to be laminated with the clear protective overlay film ORALITE® 5095 Anti-Graffiti Film for the following colours.

Original dyed retroreflective-sheeting ORALITE® 5910 High Intensity Prismatic Grade

Colour	Name of the product	Visibility characteristics		Durability	
		Daylight chromaticity & luminance factor ETA 12/0478 tab. 26	Coefficient of retroreflection ETA 12/0478 tab. 27	Impact resistance ETA 12/0478 tab. 29	Resistance to weathering ETA 12/0478 tab. 30 und 31
White	ORALITE® 5910-010 High Intensity Prismatic Grade and ORALITE® 5095 Anti-Graffiti Film	pass, B2	R2 Europe	pass	pass
Yellow	ORALITE® 5910-020 High Intensity Prismatic Grade and ORALITE® 5095 Anti-Graffiti Film	pass, B2	R2 Europe	pass	pass
Red	ORALITE® 5910-030 High Intensity Prismatic Grade and ORALITE® 5095 Anti-Graffiti Film	pass, B2	R2 Europe	pass	pass
Blue	ORALITE® 5910-050 High Intensity Prismatic Grade and ORALITE® 5095 Anti-Graffiti Film	pass, B2	R2 Europe	pass	pass
Green	ORALITE® 5910-060 High Intensity Prismatic Grade and ORALITE® 5095 Anti-Graffiti Film	pass, B2	R2 Europe	pass	pass
Brown	ORALITE® 5910-080 High Intensity Prismatic Grade and ORALITE® 5095 Anti-Graffiti Film	pass, B2	R2 Europe	pass	pass

Original dyed retroreflective-sheeting ORALITE® 5910 High Intensity Prismatic Grade and Lettering-Film

Colour	Name of the product	Visibility characteristics		Durability	
		Daylight chromaticity & luminance factor EN 12899-1 7.3.1.3	Coefficient of retroreflection EN 12899-1 4.1.1.4	Impact resistance EN 12899-1 4.1.2.1	Resistance to weathering EN 12899-1 4.1.1.5
Black	ORALITE® 5081-070 Lettering Film and ORALITE® 5095 Anti-Graffiti Film	NR1	-	pass	pass

The manufacturer of the fixed vertical road traffic sign is responsible for conformity with the mandated characteristics according to EN 12899-1 by using these materials.

Hagen, 29 September 2016



Christian Barga
Dipl.-Ing.
Leiter Straus-Zert