

EC Certificate of Conformity

0913 – CPD – 2009 / 035

In compliance with Council Directive 89/106/EEC of 21 December 1988 on the approximation of laws, regulations and administrative provisions of the Member States relating to construction products (the Construction Products Directive or CPD), as later amended, it has been stated that the construction product

**Retroreflective Sheetting Oralite 5810 High Intensity Grade
for fixed, vertical road traffic signs,
using glass bead technology (modalities attached),
Daylight chromaticity according to EN 12899-1:2007 Table 2 Class CR2,
Coefficient of retrorefelction according to EN 12899-1:2007 Table 4 Class RA2,**

placed on the market by:

**ORAFOL Europe GmbH
Orafolstraße 2
16515 Oranienburg**

and produced in the factory:

**Werk Oranienburg
Orafolstraße 2
16515 Oranienburg**

is submitted by the manufacturer to a factory production control and to the further testing of samples taken at the factory in accordance with a prescribed test plan and that the notified body No. 0913 - Prüf-, Überwachungs- und Zertifizierungsgemeinschaft der Straßenausstatter (StrAus-Zert) - has performed the initial type-testing for the relevant characteristics of the product, the initial inspection of the factory and of the factory production control and performs the continuous surveillance, assessment and approval of the factory production control.

This certificate attests that all provisions concerning the attestation of conformity and the performances described in Annex ZA, Table ZA.1, of the standard

EN 12899-1:2007,

were applied and that the product fulfils all the prescribed requirements.

This certificate was first issued on **March 17th 2009** and remains valid as long as the conditions laid down in the harmonised technical specification in reference or the manufacturing conditions in the factory or the FPC itself are not modified significantly.

Hagen, 27 June 2012



StrAus-Zert

Christian Barga
Dipl.-Ing.
Leiter StrAus-Zert

Attachment to EC Certificate of Conformity 0913 – CPD – 2009 / 035 (4 pages)

The above certified retroreflective sheeting ORALITE® 5810 High Intensity Grade to be used for fixed, vertical road traffic signs using glass bead technology is admitted for the following original dyed colours:

Colour	Name of the product	Visibility characteristics		Durability	
		Daylight chromaticity & luminance factor 4.1.1.3	Coefficient of retroreflection 4.1.1.4	Impact resistance 4.1.2.1	Resistance to weathering 4.1.1.5
White	ORALITE® 5810-010 High Intensity Grade	CR2	RA2	pass	pass
Yellow	ORALITE® 5810-020 High Intensity Grade	CR2	RA2	pass	pass
Red	ORALITE® 5810-030 High Intensity Grade	CR2	RA2	pass	pass
Blue	ORALITE® 5810-050 High Intensity Grade	CR2	RA2	pass	pass
Green	ORALITE® 5810-060 High Intensity Grade	CR2	RA2	pass	pass
Brown	ORALITE® 5810-080 High Intensity Grade	CR2	RA2	pass	pass

The above certified retroreflective sheeting ORALITE® 5810 High Intensity Grade to be used for fixed, vertical road traffic signs using glass bead technology is accepted to be coloured by the below listed materials:

Lettering Film:

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

Coloured Laminates:

Colour	Name of the product	Visibility characteristics		Durability	
		Daylight chromaticity & luminance factor 4.1.1.3	Coefficient of retroreflection 4.1.1.4	Impact resistance 4.1.2.1	Resistance to weathering 4.1.1.5
Yellow	ORALITE® 5061-020 Transparent Film	CR2	RA2	pass	pass
Red	ORALITE® 5061-030 Transparent Film	CR2	RA2	pass	pass
Blue	ORALITE® 5061-050 Transparent Film	CR2	RA2	pass	pass
Green	ORALITE® 5061-060 Transparent Film	CR2	RA2	pass	pass
Brown	ORALITE® 5061-080 Transparent Film	CR2	RA2	pass	pass

Screenprinting Colours:

Colour	Name of the product	Visibility characteristics		Durability	
		Daylight chromaticity & luminance factor 4.1.1.3	Coefficient of retroreflection 4.1.1.4	Impact resistance 4.1.2.1	Resistance to weathering 4.1.1.5
Yellow	ORALITE® 5018-020 Screen Printing Ink	CR2	RA2	pass	pass
Red	ORALITE® 5018-030 Screen Printing Ink	CR2	RA2	pass	pass
Blue	ORALITE® 5018-050 Screen Printing Ink	CR2	RA2	pass	pass
Green	ORALITE® 5018-060 Screen Printing Ink	CR2	RA2	pass	pass
Black	ORALITE® 5018-070 Screen Printing Ink	NR1	-	pass	pass

Digital Printing Colours:

The digital printing is processed on white retroreflective sheeting with the digital printing system AGFA ANAPURNA M2050 High-Speed-UV-Inkjet-System and is to be laminated with the transparent laminate ORALITE® 5061-000 Transparent Film.

Colour on white sheeting	Name of the product	Visibility characteristics		Durability	
		Daylight chromaticity & luminance factor 4.1.1.3	Coefficient of retroreflection 4.1.1.4	Impact resistance 4.1.2.1	Resistance to weathering 4.1.1.5
White	ORALITE® 5810-010 High Intensity Grade and ORALITE® 5061-000 Transparent Film	CR2	RA2	pass	pass
Yellow	ORALITE® 5019-020 UV Digital Printing Ink and ORALITE® 5061-000 Transparent Film	CR2	RA2	pass	pass
Red	ORALITE® 5019-030 UV Digital Printing Ink and ORALITE® 5061-000 Transparent Film	CR2	RA2	pass	pass
Blue	ORALITE® 5019-050 UV Digital Printing Ink and ORALITE® 5061-000 Transparent Film	CR2	RA2	pass	pass
Green	ORALITE® 5019-060 UV Digital Printing Ink and ORALITE® 5061-000 Transparent Film	CR2	RA2	pass	pass
Brown	ORALITE® 5019-080 UV Digital Printing Ink and ORALITE® 5061-000 Transparent Film	CR2	RA2	pass	pass
Dark Green	ORALITE® 5019-625 UV Digital Printing Ink and ORALITE® 5061-000 Transparent Film	CR2	RA2	pass	pass
Grey	ORALITE® 5019-073 UV Digital Printing Ink and ORALITE® 5061-000 Transparent Film	CR2	RA2*	pass	pass

* Coefficient of retroreflection: Value for printed colours 70% of RA2.

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

Clear overlay film with special function:

Clear overlay films with special function (anti-dew and anti-graffiti) are always admitted in combination with a dyed sheeting and a colouring process.

Anti-Dew:

The dyed sheeting and the combination with coloured laminates is accepted to be processed with the clear overlay film with anti-dew function ORALITE® 5090 Anti-Dew Film for the following colours.

Dyed Retroreflective Sheeting

Colour	Name of the product	Visibility characteristics		Durability	
		Daylight chromaticity & luminance factor 4.1.1.3	Coefficient of retroreflection 4.1.1.4	Impact resistance 4.1.2.1	Resistance to weathering 4.1.1.5
White	ORALITE® 5810-010 High Intensity Grade and ORALITE® 5090 Anti-Dew Film	CR2	RA2	pass	pass
Yellow	ORALITE® 5810-020 High Intensity Grade and ORALITE® 5090 Anti-Dew Film	CR2	RA2	pass	pass
Red	ORALITE® 5810-030 High Intensity Grade and ORALITE® 5090 Anti-Dew Film	CR2	RA2	pass	pass
Blue	ORALITE® 5810-050 High Intensity Grade and ORALITE® 5090 Anti-Dew Film	CR2	RA2	pass	pass

Dyed Retroreflective Sheeting ORALITE® 5810 High Intensity Grade with Coloured Laminate

Colour	Name of the product	Visibility characteristics		Durability	
		Daylight chromaticity & luminance factor 4.1.1.3	Coefficient of retroreflection 4.1.1.4	Impact resistance 4.1.2.1	Resistance to weathering 4.1.1.5
Yellow	ORALITE® 5061-020 Transparent Film und ORALITE® 5090 Anti-Dew Film	CR2	RA2	pass	pass
Red	ORALITE® 5061-030 Transparent Film und ORALITE® 5090 Anti-Dew Film	CR2	RA2	pass	pass
Blue	ORALITE® 5061-050 Transparent Film und ORALITE® 5090 Anti-Dew Film	CR2	RA2	pass	pass

Dyed Retroreflective Sheeting ORALITE® 5810 High Intensity Grade with Lettering-Film

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

Anti-Graffiti:

The dyed sheeting and the combination with coloured laminates is accepted to be processed with the clear overlay film with anti-graffiti function ORALITE® 5090 5095 Anti-Graffiti Film for the following colours.

Dyed Retroreflective Sheeting

Colour	Name of the product	Visibility characteristics		Durability	
		Daylight chromaticity & luminance factor 4.1.1.3	Coefficient of retroreflection 4.1.1.4	Impact resistance 4.1.2.1	Resistance to weathering 4.1.1.5
White	ORALITE® 5810-010 High Intensity Grade and ORALITE® 5095 Anti-Graffiti Film	CR2	RA2	pass	pass
Yellow	ORALITE® 5810-020 High Intensity Grade and ORALITE® 5095 Anti-Graffiti Film	CR2	RA2	pass	pass
Red	ORALITE® 5810-030 High Intensity Grade and ORALITE® 5095 Anti-Graffiti Film	CR2	RA2	pass	pass
Blue	ORALITE® 5810-050 High Intensity Grade and ORALITE® 5095 Anti-Graffiti Film	CR2	RA2	pass	pass

Dyed Retroreflective Sheeting ORALITE® 5810 High Intensity Grade with Coloured Laminate

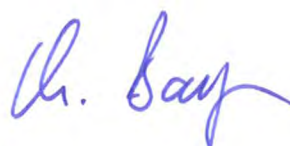
Colour	Name of the product	Visibility characteristics		Durability	
		Daylight chromaticity & luminance factor 4.1.1.3	Coefficient of retroreflection 4.1.1.4	Impact resistance 4.1.2.1	Resistance to weathering 4.1.1.5
Yellow	ORALITE® 5061-020 Transparent Film und ORALITE® 5095 Anti-Graffiti Film	CR2	RA2	pass	pass
Red	ORALITE® 5061-030 Transparent Film und ORALITE® 5095 Anti-Graffiti Film	CR2	RA2	pass	pass
Blue	ORALITE® 5061-050 Transparent Film und ORALITE® 5095 Anti-Graffiti Film	CR2	RA2	pass	pass

Dyed Retroreflective Sheeting ORALITE® 5810 High Intensity Grade with Lettering-Film

Colour	Name of the product	Visibility characteristics		Durability	
		Daylight chromaticity & luminance factor 7.3.1.3	Coefficient of retroreflection 4.1.1.4	Impact resistance 4.1.2.1	Resistance to weathering 4.1.1.5
Black	ORALITE® 5081-070 Lettering Film und 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, 21 March 2014

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