



CONTRACT DE VANZARE-CUMPARARE
Nr. 24-03 din 20 ianuarie 2025

mun. Chisinau

1. PĂRȚILE CONTRACTANTE

“Team Art Construct” SRL cu sediul în mun. Chișinău, c. Bacioi, str. Campiilor, 1, c/f 1017600051672 reprezentată de directorul dl. **Andries Andrei** în calitate de **VANZATOR**, pe de o parte, și

“Neledimpex” SRL cu sediul în mun. Chișinău, com. Bacioi, str. Doina, 38, c/f 1007600055200, reprezentată de directorul dl. **Crudu Eduard** numit în continuare “**Cumparator**”, activând în baza Statutului pe de alta parte, au stabilit următoarele:

2. INTERPRETARE

2.1. În prezentul contract, cu excepția unei prevederi contrare, cuvintele la forma singular vor include forma de plural și vice versa, acolo unde acest lucru este permis de context.

2.2. Termenul “zi” sau “zile” sau orice referire la zile reprezintă zile calendaristice dacă nu se specifică în mod diferit.

3. OBIECTUL PRINCIPAL AL CONTRACTULUI

3.1. În baza prezentului contract, vânzătorul vinde, iar cumparatorul cumpără :

Indicatoare rutiere în asortiment și alte elemente de siguranță rutieră

3.2. Părțile declară și garantează că obligațiile stabilite în sarcina lor prin acest contract sunt valabile și le sunt pe deplin opozabile, că pot fi puse în executare, iar încheierea sa nu încalcă în vre-un fel actul său constitutiv sau prevederile normative în vigoare, inclusiv cerințele legale de autorizare.

3.3. Cumparatorul se obligă să plătească prețul convenit în prezentul contract pentru echipamentul achiziționat.

4. PREȚUL CONTRACTULUI

4.1. Valoarea totală a bunurilor este – conform solicitărilor Cumparatorului.

5. MODALITATE DE PLATA

5.1. Plata bunurilor se va realiza în MDL, la cursul comercial al bancii la ziua plății în contul Vânzătorului, conform p.5.2 din contract.

5.2 Termenele de plată pentru bunuri sunt:

- în decurs de 60 zile după livrarea bunurilor, în rate convenite de părți.

6. GARANȚII

6.1 Calitatea produselor este atestată prin certificat de calitate și garanție care va însoți obligatoriu marfa livrată.

Termenul de garanție, reprezintă termenii și condițiile producătorului. În conformitate cu certificatele de garanție a producătorului anexate.

7. OBLIGAȚIILE VANZĂTORULUI:

7.1. Sa predea bunurile cumparatorului și sa încheie proces - verbal de Predare-Primire.

8. OBLIGAȚIILE PRINCIPALE ALE CUMPARĂTORULUI

8.1. Sa verifice la data primirii dacă bunurile sunt în stare corespunzătoare și în caz afirmativ, sa semneze procesul verbal de Predare-Primire a bunurilor.





8.2. Sa plateasca pretul contractului in conditiile, modalitatile si la termenele stipulate in prezentul Contract.

9. RĂSPUNDEREA CONTRACTUALĂ

9.1. Pentru neexecutarea sau executarea necorespunzătoare a obligațiilor asumate prin prezentul Contract, părțile contractante poartă răspundere conform prevederilor legislației din R. Moldova. În situația în care una dintre părți nu-și îndeplinește îndatoririle asumate prin contract fără justificare, ea este răspunzătoare pentru prejudiciul cauzat celeilalte păți și se obligă la repararea integrală a acestuia în termen de cel mult 7 zile calendaristice de la solicitare.

9.2. Partea care nu își execută obligația/obligațiile la termenul/termenele prevăzute în prezentul contract este de drept în întârziere la împlinirea termenului/termenelor la care trebuia să-și îndeplinească obligația/obligațiile, fără să fie necesară îndeplinirea vreunei formalități prealabile.

10. FORȚA MAJORĂ

10.1. Forța majoră exonerează de răspundere partea care o invoca în condițiile legii, cu cerința notificării scrise prealabil în termen de 7 zile de la apariția cazului de forța majora.

11. SOLUȚIONAREA LITIGIILOR

11.1. Prezentul Contract este guvernat de legea R. Moldova si va fi interpretat in conformitate cu aceasta. Orice disputa rezultata din sau care are legătura cu prezentul Contract va fi solutionata pe cale amiabila. In cazul in care acest lucru nu este posibil, orice astfel de disputa, va fi supusa instantei judecatoresti competente conform legislației din R.Moldova.

12. DISPOZITII FINALE

12.1. Modificarea termenilor prezentului contract de către ambele părți este posibilă numai prin act adițional.


12.2. Contractul poate fi reziliat numai cu acordul scris al ambelor părți.


12.3. Contractul intra în vigoare de la data semnării sale de către VANZATOR și CUMPARATOR.

12.4. Prezentul contract s-a încheiat azi **20 ianuarie 2025**, în doua exemplare, cate unul pentru fiecare parte contractanta, ambele cu valoare de original.

VANZATOR,

Team Art Construct SRL

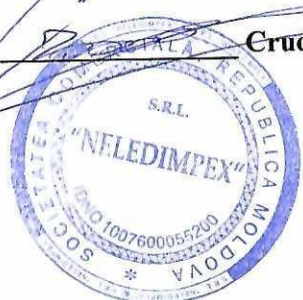
Director  **Andrieș Andrei**



CUMPARATOR,

Neledimpex SRL

Director  **Crudu Eduard**





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J17/439/2009 GALATI-ROMANIA



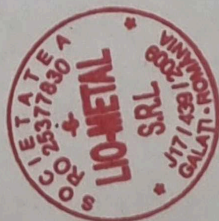
URS is a member of Registrar of Standards (Holdings) Ltd.
Nr. Certificat: 67732/A/0001/UK/Ro

DECLARATIE DE CONFORMITATE

0099/05-10-2023

SC LIO METAL SRL, avînd sediul în Galați, înregistrată cu nr.J17/439/2009 cod fiscal, CUI Ro25377830, declarăm pe proprie răspundere faptul că produsele livrate cu factura **LIOE NR.528/11.08.2023**, către importator din Republica Moldova, fac obiectul acestei declarații de conformitate, reprezentînd **TEAVĂ ZINCATA 60,3x2** cu utilizare în construcții, executată din fișii de tablă zincată, sunt în conformitate cu normativul tehnic SR EN 10219

INGINER PRODUCTIE,
GHEORGHE NECHIFOR



1

Banca: BRD

IBAN: (RON) RO74BRDE180SV44359601800
IBAN: (EUR) RO46BRDE180SV65490641800



Prüf-, Überwachungs- und Zertifizierungsgemeinschaft der Straßenausstatter e.V.

Notifiziert unter 0913 durch DIBt nach BauPVO



Attachment to Certificate of constancy of performance 0913-CPR-2016/11 (3 pages)

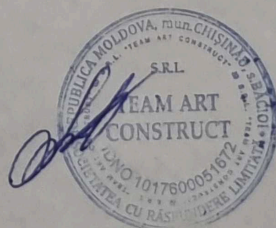
The description in this attachment refer to the ETB (ETAssessment)

- ETA-16/0579, from 2017-09-11,
- ETA-16/0580, from 2017-09-11,
- ETA-16/0581, from 2016-10-20.

The above certified microprismatic retroreflective sheeting ORALITE® 6710 Engineer Prismatic Grade to be used for fixed, vertical road traffic signs is admitted for the following originally dyed colours:

Originally dyed retroreflective sheeting:

Colour	Name of the product	Visibility characteristics		Durability	
		Daylight chromaticity & luminance factor ETA 16/0579 annex 1	Coefficient of retroreflection ETA 16/0579 annex 2	Impact resistance according to EN 12899-1	Resistance to weathering ETA 16/0579 annex 3
White	ORALITE® 6710-010 Engineer Prismatic Grade	pass	pass	pass	pass
Yellow	ORALITE® 6710-020 Engineer Prismatic Grade	pass	pass	pass	pass
Blue	ORALITE® 6710-050 Engineer Prismatic Grade	pass	pass	pass	pass
Green	ORALITE® 6710-060 Engineer Prismatic Grade	pass	pass	pass	pass
Orange	ORALITE® 6710-035 Engineer Prismatic Grade	pass	pass	pass	pass
Brown	ORALITE® 6710-080 Engineer Prismatic Grade	pass	pass	pass	pass



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The above certified retroreflective sheeting ORALITE® 6710 Engineer 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 16/0580 annex 1	Coefficient of retroreflection ETA 16/0580 annex 2	Impact resistance according to EN 12899-1	Resistance to weathering ETA 16/0580 annex 3
on white sheeting	ORALITE® 6710-010 Engineer Prismatic Grade and				
Yellow	ORALITE® 5018-020 Screen Printing Ink	pass	pass	pass	pass
Red	ORALITE® 5018-030 Screen Printing Ink	pass	pass	pass	pass
Blue	ORALITE® 5018-050 Screen Printing Ink	pass	pass	pass	pass
Green	ORALITE® 5018-060 Screen Printing Ink	pass	pass	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 Screen Printing Ink	NR1	-	pass	pass



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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 a transparent protective laminate.

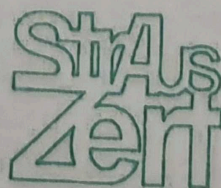
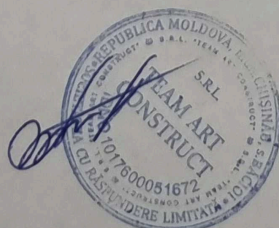
Transparent protective laminate ORALITE® 5062-000 Transparent Film:

Colour	Name of the product	Visibility characteristics		Durability	
		Daylight chromaticity & luminance factor ETA 16/0581 annex 1	Coefficient of retroreflection ETA 16/0581 annex 2	Impact resistance according to EN 12899-1	Resistance to weathering ETA 16/0581 annex 3
on white sheeting	ORALITE® 6710-010 Engineer Prismatic Grade and				
White	ORALITE® 5062-000 Transparent Film	pass	pass	pass	pass
Yellow	ORALITE® 5019-020 UV Digital Printing Ink and ORALITE® 5062-000 Transparent Film	pass	pass	pass	pass
Red	ORALITE® 5019-030 UV Digital Printing Ink and ORALITE® 5062-000 Transparent Film	pass	pass	pass	pass
Blue	ORALITE® 5019-050 UV Digital Printing Ink and ORALITE® 5062-000 Transparent Film	pass	pass	pass	pass
Green	ORALITE® 5019-060 UV Digital Printing Ink and ORALITE® 5062-000 Transparent Film	pass	pass	pass	pass
Orange	ORALITE® 5019-035 UV Digital Printing Ink and ORALITE® 5062-000 Transparent Film	pass	pass	pass	pass
Brown	ORALITE® 5019-080 UV Digital Printing Ink and ORALITE® 5062-000 Transparent Film	pass	pass	pass	pass
Grey	ORALITE® 5019-073 UV Digital Printing Ink and ORALITE® 5062-000 Transparent Film	pass	pass	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® 5062-000 Transparent 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, 18 September 2018



Christian Barga
Christian Barga
Dipl.-Ing.
Leiter StrAus-Zert

Certificate of constancy of performance

No. 0913-CPR-2016/11

In compliance with Regulation 305/2011/EU of the European Parliament and of the Council of 9 March 2011 (the Construction Products Regulation or CPR), this certificate applies to the construction product

Microprismatic Retroreflective Sheeting
ORALITE® 6710 Engineer Prismatic Grade, originally dyed
for fixed, vertical road traffic signs,
(modalities attached, pursuant to ETA 16/0579 from 2016-10-20),

placed on the market under the name of

Orafol Europe GmbH
Orafolstraße 1
D-16515 Oranienburg
Germany

and produced in the manufacturing plant:

Orafol Europe GmbH
Orafolstraße 1
D-16515 Oranienburg
Germany.

This certificate attests that all provisions concerning the assessment and verification of constancy of performance described in the

ETA 16/0579, issued on 11/09/2017

and

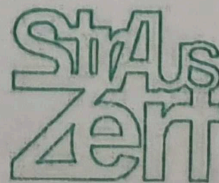
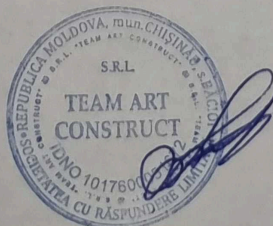
EAD 120001-01-0106

under system 1 for the performance set out in in the ETA are applied and that the factory production control conducted by the manufacturer is assessed to ensure the

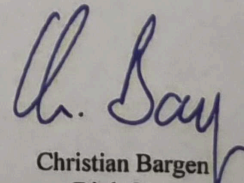
the constancy of performance of the construction product.

This certificate was first issued on November 15th 2016 and will remain valid as long as neither the ETA, the EAD, the construction product, the AVCP methods nor the manufacturing conditions in the plant are modified significantly, unless suspended or withdrawn by the product certification body.

Hagen, 18 September 2018



StrAus-Zert



Christian Bargaen
Dipl.-Ing.
Leiter StrAus-Zert

Report of the classification of the reaction to fire performance

No. 230009556-3

issued 29.10.2014

English version

Sponsor

ORAFOL Europe GmbH
Orafolstraße 2

16515 Oranienburg

Order

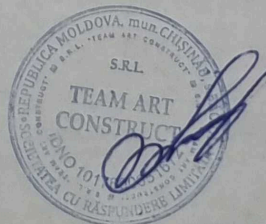
Classification of the reaction to fire performance according to DIN EN 13501-1:2010-01

Date of order: 06.06.2014

Name of the classified product:

Self-adhesive foil „ORACAL 8300 Transparent Cal“

This report gives the classification of the above-mentioned building product in accordance to the procedure given in DIN EN 13501-1.



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This classification report consists of 3 pages.

1 Description of the building product

UV-stabilized, transparent, different coloured PVC-foils with glossy surface for the production of illuminated advertising facilities and to design back-lit glass planes; the PVC-foils are provided with a permanent adhesive on acrylic basis on the backside.

Thickness of the PVC-foil without adhesive coating: 0.080 mm

Thickness of the PVC-foil with adhesive coating: 0.1 mm ± 10 %

Mass per unit area of the PVC-foil with adhesive coating: 124 g/m² ± 10 %

2. Test reports and test results supporting the classification

2.1 Test reports

Name of the test laboratory	Sponsor	No. of the test report	Test procedure
MPA NRW	ORAFOL Europe GmbH	230009556-1 of 29.10.14 230009556-2 of 29.10.14	DIN EN ISO 11925 – 2 DIN EN 13823

2.2 Test results

The following test results are the basis of the classification

Test method	Parameter	Number of tests performed	Test results	
			Average values of continuously parameter	Requirements of discrete parameter
DIN EN ISO 11925-2 30 s flaming time	Flamespread ≤150 mm	24	--	yes
	Burning droplets/particles			no
DIN EN 13823	FIGRA _{0,2} in W/s	3	0	--
	FIGRA _{0,4} in W/s			--
	THR _{600s} in MJ			0,4
	LFS _{edge}			< edge
	SMOGR _A in m ² /s ²			--
	TSP _{600s} in m ²			50
	Duration of burning droplets/particles in s			0



3. Classification and direct field of application

3.1 Reference

This classification was carried out in accordance to the clauses 11 and 14 of the standard DIN EN 13501-1:2010-01.

3.2 Classification

The tested building product in relation to its reaction to fire behaviour is classified as: **B**

The additional classification in relation to smoke production is: **s1**

The additional classification in relation to flaming droplets/particles is: **d0**

The classification of the reaction to fire performance is therefore:

Fire behaviour	Smoke development	Flaming droplets
B	s1	d0

i. e. **B – s1,d0**

3.3 Field of application of the product

The classification is valid solely for the product described in clause 1 for the application on glass substrates.

4. Restrictions

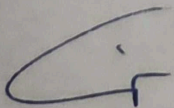
This classification report does not represent type approval or certification of the product.

5. Remark

This classification report written in English language is issued additionally to the report written in German language with the same report number. In case of doubt the German version is valid solely.

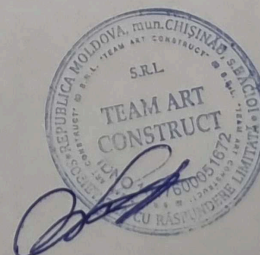
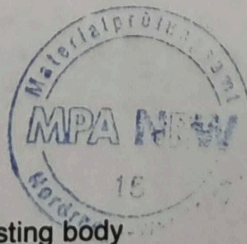
Erwitte, 29.10.2014

On behalf



Dipl.-Ing. Schreiner

Assistant head of notified testing body



Date of issue of this English version: 15.12.2014

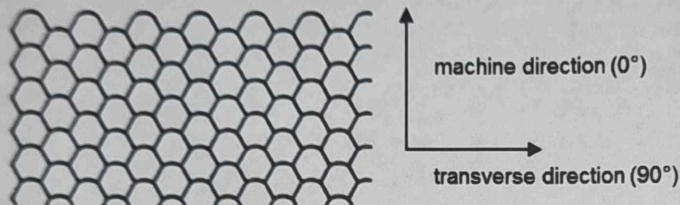
Description

ORALITE® retroreflective films series 6700 Engineer Prismatic Grade is a reflective, weatherproof, self-adhesive sheeting with excellent corrosion and solvent resistance. The product was specifically developed for the manufacture of traffic control, guidance, warning and information signs, which are intended for long term vertical outdoor use.

Product Construction

ORALITE® 6700 sheeting consists of sealed cells of air backed microprisms, using total internal reflection. The distinct shape of the sealing identifies the machine direction and the manufacturer of the sheeting, shown in figure 1.

Figure 1 - Sealing pattern and application directions



Reflectivity

ORALITE® 6700 meets and/or exceeds the minimum coefficient of retroreflection (R_A) shown in Table 1 when tested in accordance with ASTM E810, "Standard Test Method for Coefficient of Retroreflection of Retroreflective Sheeting Utilizing the Coplanar Geometry". ORALITE® 6700 fully meets and/or exceeds the requirements of ASTM D4956 for Type I.

Daytime Color

ORALITE® 6700 conforms to the daytime color requirements in Table 2 when tested in accordance with ASTM D4956. ORALITE® 6700 is available in white, yellow, orange, green, red, blue, and brown.

Nighttime Color

ORALITE® 6700 conforms to the nighttime color requirements in Table 3 when tested in accordance with ASTM D4956 and ASTM E811. The sheeting shall be measured using CIE Illuminant A, an observation angle of 0.33° and an entrance angle of $+5^\circ$.

Adhesive

The adhesive is protected by a release liner which shall be removed by peeling, without soaking in water or other solvents. The adhesive produces such a bond that a 1" (50 mm) strip shall support a 1 3/4 pound (0.79 kg) weight for 5 minutes without the strip peeling for a distance of more than 2" (50 mm) when applied to a smooth aluminum surface as specified in the ASTM D4956, section 7.5 adhesion test.

Impact Resistance

Following application to a smooth surface aluminum rectangle, $0.040" \times 3" \times 6"$ [$1.01\text{mm} \times 75\text{mm} \times 150\text{mm}$], the specimen is conditioned for 24 hours at $73^\circ \pm 3^\circ\text{F}$ ($23^\circ \pm 2^\circ\text{C}$) and 50% relative humidity, subject the sheeting to an impact of a 2 lb (0.91 kg) weight with a 5/8" (16 mm) rounded tip dropped from a 10 in-lb (1.13 N-m) setting on a Gardner variable impact tester, IG-1120, as per ASTM D4956, section S2.2.1. The sheeting shall show no cracking or delamination outside the actual area of impact.

Flexibility

The sheeting is conditioned for 24 hours at 72°F [23°C] and 50% relative humidity. The release liner is removed and the sheeting is sufficiently flexible to show no cracking when bent in one second's time around a 1/8-inch [3.2mm] diameter mandrel with the adhesive contacting the mandrel.

Weatherability

ORALITE® 6700 meets the requirements of ASTM D4956, Section 6.4. The material is weather resistant and shows no appreciable cracking, scaling, pitting, blistering, edge lifting, or curling, or more than 1/32" (0.8 mm) shrinkage or expansion. Retroreflectivity measurements are conducted after outdoor weathering with an observation angle of 0.20° and entrance angles of -4° and $+30^\circ$. The minimum coefficient of retroreflection (R_A) after weathering is 80% of the Table 1 values.



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Phone: 800.654.7570

ORAFOL Canada
2831 Bristol Circle
Oakville, Ontario L6H 6X5
Phone: 888.727.3374

reflective-americas@orafol.com

www.orafolamericas.com



Solvent Resistance

ORALITE® 6700 meets the requirements of LS-300C solvent resistance, section 3.6.7, when tested as specified in Table VI, test method 4.4.6.

Specular Gloss

ORALITE® 6700 shall have a specular gloss of not less than 40 when tested per ASTM D523 at an angle of 85°

Shrinkage

A 9 inch by 9 inch [229mm by 229mm] specimen of the sheeting with liner is conditioned a minimum of one hour at 72°F [23°C] and 50% relative humidity. The liner is then removed and the specimen is placed on a flat surface with the adhesive side up. Ten minutes after the liner is removed and again after 24 hours, the specimen is measured to determine the amount of dimensional change. The specimen will not shrink in any dimension more than 1/32 inch [0.8mm] in 10 minutes and 1/8 inch [3.2mm] in 24 hours.

Application Instructions

The recommended application temperature to achieve best results is 65°F [18°C] or above.

Warranty

7-year limited warranty

Contact your ORAFOL Americas Inc. representative for details.

Table 1, Coefficient of Retroreflection (R_A)*

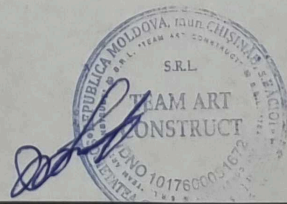
Observation Angle	Entrance Angle	White	Yellow	Orange	Green	Red	Blue	Brown
0.20°	-4°	70	50	25	9.0	14	4.0	1
	30°	30	22	7.0	3.5	6.0	1.7	0.3
0.50°	-4°	30	25	13	4.5	7.5	2.0	0.3
	30°	15	13	4.0	2.2	3.0	0.8	0.2

*all values have units of cd/ft² (cd/lx/m²)

Table 2, Color Specification Limits (Daytime)

Color	Chromaticity Coordinates†								Luminance Factor (Y%)	
	1		2		3		4		Min.	Max.
	x	y	x	y	x	y	x	y		
White	0.303	0.300	0.368	0.366	0.340	0.393	0.274	0.329	≥ 27	
Yellow	0.498	0.412	0.557	0.442	0.479	0.520	0.438	0.472	15	45
Orange	0.558	0.352	0.636	0.364	0.570	0.429	0.506	0.404	10	30
Green	0.026	0.399	0.166	0.364	0.286	0.446	0.207	0.771	3.0	12
Red	0.648	0.351	0.735	0.265	0.629	0.281	0.565	0.346	2.5	15
Blue	0.140	0.035	0.244	0.210	0.190	0.255	0.065	0.216	1.0	10
Brown	0.430	0.340	0.610	0.390	0.550	0.450	0.430	0.390	1.0	9.0

†The four pairs of chromaticity coordinates determine the acceptable color in terms of the CIE 1931 Standard Colorimetric System measured with Standard Illuminant D65.



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 Phone: 800.654.7570

ORAFOL Canada
 2831 Bristol Circle
 Oakville, Ontario L6H 6X5
 Phone: 888.727.3374

reflective-americas@orafol.com

www.orafolamericas.com

Table 3, Color Specification Limits (Nighttime)

Color	Chromaticity Coordinates‡							
	1		2		3		4	
	x	y	x	y	x	y	x	y
White	0.475	0.452	0.360	0.415	0.392	0.370	0.515	0.409
Yellow	0.513	0.487	0.500	0.470	0.545	0.425	0.572	0.425
Orange	0.595	0.405	0.565	0.405	0.613	0.355	0.643	0.355
Green	0.007	0.570	0.200	0.500	0.322	0.590	0.193	0.782
Red	0.650	0.348	0.620	0.348	0.712	0.255	0.735	0.265
Blue	0.033	0.370	0.180	0.370	0.230	0.240	0.091	0.133
Brown	0.595	0.405	0.540	0.405	0.570	0.365	0.643	0.355

‡ The four pairs of chromaticity coordinates determine the acceptable color in terms of the CIE 1931 Standard Colorimetric System measured with Standard Illuminant A.

Note:

All ORALITE® products are manufactured within an ISO 9001:2008 controlled manufacturing environment and batch traceability is possible on the basis of the roll number.

IMPORTANT NOTICE

When using ORALITE® sheeting, please comply with relevant national specifications. ORAFOL recommends obtaining the current requirements from your local authority and ensure product conformance with such requirements. Please contact ORAFOL for further information.

All ORALITE® products are subject to careful quality control throughout the manufacturing process and are warranted to be of merchantable quality and free from manufacturing defects. Published information concerning ORALITE® products is based upon research which the Company believes to be reliable, although, such information does not constitute a warranty. Because of the variety of uses of ORALITE® products and the continuing development of new applications, the purchaser should carefully consider the suitability and performance of the product for each intended use, and the purchaser shall assume all risks regarding such use. All specifications are subject to change without prior notice.

Surfaces to which the material will be applied must be thoroughly cleaned from dust, grease or any contamination which could affect the adhesion of the material. Freshly lacquered or painted surfaces should be allowed to dry for at least three weeks and to completely cure respectively. The compatibility of selected lacquers and paints should be tested by the user, prior to application of the material. The self-adhesive reflective material can only be used for dry application. The low tensile strength of the material can make the removability of the reflective film more difficult. Please review applicable application information published by ORAFOL.

No warranty is given for purposes other than those listed in the Technical Datasheet or which are not processed according to ORAFOL's processing and handling instructions. The durability of the signs will depend on a variety of factors, including but not limited to substrate selection and preparation, compliance with recommended application guidelines, geographic area, exposure conditions and maintenance of the product and finished sign. Sign failures caused by the substrate or improper surface preparations are not the responsibility of ORAFOL. Please refer to the full warranty document available at www.orafolamericas.com for detailed information.

WARNING: This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

ORALITE® is a trademark of ORAFOL Europe GmbH



ORAFOL Americas – GA
 1100 Oracal Parkway
 Black Creek, GA 31308
 Phone: 888.672.2251

ORAFOL Americas – CT
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 Phone: 800.654.7570

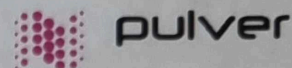
ORAFOL Canada
 2831 Bristol Circle
 Oakville, Ontario L6H 6X5
 Phone: 888.727.3374

reflective-americas@orafol.com www.orafolamericas.com



ТЕХНИЧЕСКИЕ ХАРАКТЕРИСТИКИ ПРОДУКТА

09038.07016



RAL7016 PP-MAT (RAL7016)

Полиэфирная (без ТГИЦ)

Qualicoat	: P-0781 CLASS 1
Область Применения.....	: Краска для наружных изделий
Вид Поверхности.....	: Гладкий
Цвет.....	: RAL 7016
Блеск(60°).....	: 25 ± 5 Gloss
Плотность.....	: 1,49 ± 0,05 gr/cm ³
Температура полимеризации	: 180°C-10' 170°C 18-32' 180°C 10-15' 190°C 8-12'
Тип пистолета.....	: Корона/Трибо
Толщина плёнки покрытия	: 65 ± 5 µm
Условия хранения.....	: 12 мес. с даты производства в сухой и прохладной среде (≤27 ° C).

Физико-механические свойства

ТЕСТ	СТАНДАРТ	ЗНАЧЕНИЕ
Обратный удар	ASTM D 2794	min. 25 kg.cm
Обратный удар	ASTM D 2794	min. 25 kg.cm
Гибкость	ISO 1520	min. 6 mm
Адгезия	ISO 2409	Gt 0

Коррозионные свойства

ТЕСТ	СТАНДАРТ	ЗНАЧЕНИЕ
Влагостойкость (Фосфат железа)	ISO 6270-2	За 240 часов не образуются пузыри или потеря блеска
Стойкость к солевому туману (Фосфат железа)	ISO 9227	За 240 часов прогрессирование ржавчины с царапины ≤ 2 мм

ПРЕДУПРЕЖДЕНИЕ: Информация, содержащаяся в этом отчёте, предоставлена Pulver Kimya добросовестно и не является обязательной для исполнения. Pulver Kimya не несет ответственности за какие-либо ошибки или упущения.

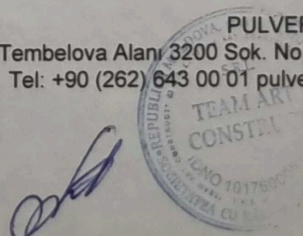
FR.07.03.18 Rev. 01 08.03.2021

Страница 1/2

Дата печати : 21.06.2022

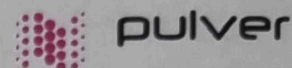
55977/1-22711/1*

PULVER KİMYA SANAYİ VE TİCARET A.Ş.
GOSB Tembelova Alanı 3200 Sok. No:3201 Gebze, 41400 Kocaeli/Turkey
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ТЕХНИЧЕСКИЕ ХАРАКТЕРИСТИКИ ПРОДУКТА

09038.07016



RAL7016 PP-MAT (RAL7016)

Полиэфирная (без ТГИЦ)

ТЕСТ	СТАНДАРТ	ЗНАЧЕНИЕ
Стойкость к солевому туману (Фосфат цинка)	ISO 9227	За 480 часов прогрессирующее ржавление с царапины ≤ 2 мм
Стойкость к солевому туману (Хроматирование / Эквивалент)	ISO 9227	За 1000 часов прогрессирующее ржавление с царапины ≤ 2 мм

ВНЕШНЯЯ СТОЙКОСТЬ

ТЕСТ	ЗНАЧЕНИЕ
QUV-B (CLASS 1)	Через 300 часов > 50% сохранение блеска
FLORIDA (CLASS 1)	Через 1 год > 50% сохранение блеска

ПРИМЕНЕНИЕ

Предварительная обработка поверхности

Окрашиваемая поверхность должна быть предварительно полностью обезжирена. В частности, если требуется высокая коррозионная стойкость и стойкость покрытия, рекомендуется фосфатация или хроматирование.

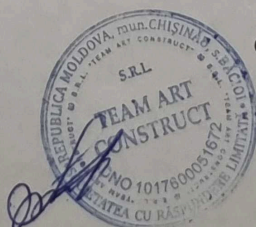
ПРЕДУПРЕЖДЕНИЕ: Информация, содержащаяся в этом отчёте, предоставлена Pulver Kimya добросовестно и не является обязательной для исполнения. Pulver Kimya не несет ответственности за какие-либо ошибки или упущения.

FR.07.03.18 Rev. 01 08.03.2021

Страница 2/2

Дата печати : 21.06.2022

55977/1-22711/1



PULVER KİMYA SANAYİ VE TİCARET A.Ş.
GOSB Tembelova Alanı 3200 Sok. No:3201 Gebze, 41400 Kocaeli/Turkey
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**Declaration of Performance
No. 5510.001.20220208**



according to:

COMMISSION DELEGATED REGULATION (EU) No 574/2014 of 21 February 2014 amending Annex III to Regulation (EU) No 305/2011 of the European Parliament and of the Council on the model to be used for drawing up a declaration of performance on construction products

1. Unique identification code of the product-type:

ORALITE 5510 Engineer Grade

ORALITE 5510 Engineer Grade + 5071-070 Lettering film (black)

ORALITE 5510 Engineer Grade + 5018 Screen printing ink (yellow, red, blue, green)

ORALITE 5510 Engineer Grade + 5018 Screen printing ink (black)

2. Intended use/es:

Retroreflective sheeting for use in the manufacture of traffic signs and traffic control equipment

Retroreflective sign face material based on glass-beads technology for the manufacturing of fixed vertical road traffic signs

3. Manufacturer:

Orafol Europe GmbH
Orafolstrasse 1
16515 Oranienburg

Telephone: +49 3301 864 - 0
E-Mail: info@orafol.de
Internet: www.orafol.com

4. Authorised representative – *not relevant*

5. 5. System/s of AVCP: **1**

6 a) Harmonised standard:

EN 12899-1:2007 : *Fixed, vertical road traffic signs - Part 1: fixed signs*

Notified body/ies:

Number: **0913**

Name: **StrAus-Zert**; Fleyer Straße 204; 58097 Hagen

Certificate No.: **0913 – CPD – 2015 / 001**

6 b) European Assessment Document: - *not applicable*

European Technical Assessment: - *not applicable*

Technical Assessment Body: - *not applicable*

Notified body/ies: - *not applicable*



**Declaration of Performance
No. 5510.001.20220208**



7. Declared performance/s:

Main features	Description	Performance
Daylight chromaticity and luminance factors	EN 12899-1 4.1.1.3 (Table 2)	CR 2 Attachment 1 Table 1
Coefficient of retroreflection	EN 12899-1 4.1.1.4 (Table 3)	RA 1 Attachment 1 Table 2
Durability		
Impact resistance	EN 12899-1 4.1.2.1	Fulfilled Attachment 2
Resistance to weathering (artificial weathering / three years natural weathering)	EN 12899-1 4.1.1.5	CR 1 Attachment 3 Table 3 Table 4

8. Appropriate Technical Documentation and/or
Specific Technical Documentation:

Posted on Webpage:

<https://www.orafol.com>

The performance of the product identified above is in conformity with the set of declared performance/s. This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of the manufacturer by:

i.A. Dipl.-Ing. Jürgen Ewald

Global Regulatory Affairs Manager

[Name and function]

Oranienburg, 08.02.2022

i.A.

[place and date of issue]

[signature]



**Declaration of Performance
No. 5510.001.20220208**



Attachement 1

Table 1: Specific Coefficient of Retroreflection R_A (Unit: $\text{cd} \cdot \text{m}^{-2} \cdot \text{lx}^{-1}$) for traffic signs in new condition: Class RA1 according to DIN EN 12899-1

Geometry		Colour						
α	β_1 ($\beta_2 = 0$)	White	Yellow	Red	Green	Blue	Brown	Orange
0,2°	+ 5°	70	50	14,5	9	4	1	25
	+ 30°	30	22	6	3,5	1,7	0,3 ¹⁾	10
	+ 40°	10	7	2	1,5	0,5	#	2,2
0,33°	+ 5°	50	35	10	7	2	0,6	20
	+ 30°	24	16	4	3	1	0,2 ¹⁾	8
	+ 40°	9	6	1,8	1,2	#	#	2,2
2°	+ 5°	5	3	1	0,5	#	#	1,2
	+ 30°	2,5	1,5	0,5	0,3 ¹⁾	#	#	0,5
	+ 40°	1,5	1	0,5	0,2 ¹⁾	#	#	#

Indicates "Value greater than zero but not significant or applicable"

¹⁾ Values less than 0,5 are not evaluated

Table 2: Daylight chromaticity coordinates and luminance factors for traffic signs in new condition: Class CR 2 according to DIN EN 12899-1

Colour	Chromaticity Coordinates								Luminance Factor β
	1		2		3		4		
	x	y	x	y	x	y	x	y	
White	0,305	0,315	0,335	0,345	0,325	0,355	0,295	0,325	> 0,35
Yellow	0,494	0,505	0,470	0,480	0,513	0,437	0,545	0,454	> 0,27
Red	0,735	0,265	0,700	0,250	0,610	0,340	0,660	0,340	> 0,05
Green	0,110	0,415	0,170	0,415	0,170	0,500	0,110	0,500	> 0,04
Blue	0,130	0,090	0,160	0,090	0,160	0,140	0,130	0,140	> 0,01
Brown	0,455	0,397	0,523	0,429	0,479	0,373	0,558	0,394	$0,03 \leq \beta \leq 0,09$
Orange	0,610	0,390	0,535	0,375	0,506	0,404	0,570	0,429	> 0,17



**Declaration of Performance
No. 5510.001.20220208**



Attachement 2

Impact resistance: The requirement for impact resistance depends on DIN EN 12899-1. Outside a circle with a radius of 6 mm from the center of the impact circle, no cracks or delamination from any substrate.

Attachement 3

Table 3: Specific Coefficient of Retroreflection R_A (Unit: $\text{cd} \cdot \text{m}^{-2} \cdot \text{lx}^{-1}$) for traffic signs in after weathering: Class RA1 according to DIN EN 12899-1

Geometry		Colour						
α	β_1 ($\beta_2 = 0$)	White	Yellow	Red	Green	Blue	Brown	Orange
0,33°	+ 5°	40	28	8	5,6	1,6	0,48	16
0,33°	+ 30°	19,2	12,8	3,2	2,4	0,8	0,16	6,4

Indicates "Value greater than zero but not significant or applicable"

Table 4: Daylight chromaticity coordinates and luminance factors for traffic signs after weathering: Class CR 1 according to DIN EN 12899-1

Colour	Chromaticity Coordinates								Luminance Factor β
	1		2		3		4		
	x	y	x	y	x	y	x	y	
White	0,355	0,355	0,305	0,305	0,285	0,325	0,335	0,375	> 0,35
Yellow	0,545	0,454	0,487	0,423	0,427	0,483	0,465	0,534	> 0,27
Red	0,735	0,265	0,674	0,236	0,569	0,341	0,655	0,345	> 0,05
Green	0,007	0,703	0,248	0,409	0,177	0,362	0,026	0,399	> 0,04
Blue	0,078	0,171	0,150	0,220	0,210	0,160	0,137	0,038	> 0,01
Brown	0,455	0,397	0,523	0,429	0,479	0,373	0,558	0,394	$0,03 \leq \beta \leq 0,09$
Orange	0,610	0,390	0,535	0,375	0,506	0,404	0,570	0,429	> 0,17



**Declaration of Performance
No. 5910.001.20220208**



according to:

COMMISSION DELEGATED REGULATION (EU) No 574/2014 of 21 February 2014 amending Annex III to Regulation (EU) No 305/2011 of the European Parliament and of the Council on the model to be used for drawing up a declaration of performance on construction products

1. Unique identification code of the product-type:

ORALITE 5910 High Intensity Prismatic Grade

ORALITE 5910 High Intensity Prismatic Grade + 5071-070 lettering film (black)

ORALITE 5910 High Intensity Prismatic Grade + 5090 anti-dew film (white, yellow, red, blue, green, brown)

ORALITE 5910 High Intensity Prismatic Grade + 5071-070 lettering film (black) + 5090 anti-dew Film

ORALITE 5910 High Intensity Prismatic Grade + 5095 anti-graffiti film (white, yellow, red, blue, green, brown)

ORALITE 5910 High Intensity Prismatic Grade + 5071-070 lettering film (black) + 5095 anti-graffiti film

ORALITE 5910 High Intensity Prismatic Grade + 5018 Screen printing ink (all colours)

ORALITE 5910 High Intensity Prismatic Grade + 5018 Screen printing ink (all colours) + 5097 anti-sticker film

ORALITE 5910 High Intensity Prismatic Grade + 5061 coloured film (all colours)

ORALITE 5910 High Intensity Prismatic Grade + 5061 coloured film (all colours) + 5090 anti-dew film

ORALITE 5910 High Intensity Prismatic Grade + 5019 UV digital printing ink (all colours) for use with UV Digital Traffic Sign Printer + 5061 transparent film

ORALITE 5910 High Intensity Prismatic Grade + 5019 UV digital printing ink (all colours) for use with UV Digital Traffic Sign Printer + 5090 anti-dew film

ORALITE 5910 High Intensity Prismatic Grade + 5019 UV digital printing ink (all colours) for use with UV Digital Traffic Sign Printer + 5095 anti-graffiti film

ORALITE 5910 High Intensity Prismatic Grade + 5019 UV digital printing ink (all colours) for use with UV Digital Traffic Sign Printer + 5097 anti-sticker film

ORALITE 5910 High Intensity Prismatic Grade + 5019i UV digital printing ink (all colours) for use with UV Digital Traffic Sign Printer + 5061 transparent film

ORALITE 5910 High Intensity Prismatic Grade + 5019i UV digital printing ink (all colours) for use with UV Digital Traffic Sign Printer + 5090 anti-dew film

ORALITE 5910 High Intensity Prismatic Grade + 5019i UV digital printing ink (all colours) for use with UV Digital Traffic Sign Printer + 5095 anti-graffiti film

ORALITE 5910 High Intensity Prismatic Grade + 5019i UV digital printing ink (all colours) for use with UV Digital Traffic Sign Printer + 5097 anti-sticker film



**Declaration of Performance
No. 5910.001.20220208**



2. Intended use/es:

**Retroreflective sheeting for use in the manufacture of traffic signs
and traffic control equipment**

Retroreflective sign face material based on micro prismatic technology
for the manufacturing of fixed vertical road traffic signs

3. Manufacturer:

Orafol Europe GmbH
Orafolstrasse 1
16515 Oranienburg

Telephone: +49 3301 864 - 0
E-Mail: info@orafol.de
Internet: www.orafol.com

4. Authorised representative – *not relevant*

5. System/s of AVCP: **1**

6 a) Harmonised standard: - *not applicable*

Notified body/ies: - *not applicable*

6 b) European Assessment Document:

Number	Date of issue
EAD 12001-01-0106	September 2016

European Technical Assessment:

Number	Date of issue
ETA-12/0478	24.07.2017
ETA 16/0465	18.07.2016
ETA 16/0466	18.07.2016
ETA 16/0612	16.11.2016
ETA 17/0282	24.07.2017
ETA 19/0084	29.03.2019
ETA 19/0085	29.03.2019



**Declaration of Performance
No. 5910.001.20220208**



Technical Assessment Body:

Technický a skúšobný ústav stavebný, n. o.
Building Testing and Research Institute
Studená 3, 821 04 Bratislava, Slovak Republic

Notified body/ies:

Kennnummer: **0913**

Name: **StrAus-Zert**; Fleyer Straße 204; 58097 Hagen

Zertifikat Nr.: 0913 – CPR – 2017 / 005

7. Declared performance/s:

Main features	Description	Performance
Daylight chromaticity and luminance factors	CR 2	Attachment 1 Table 2
Coefficient of retroreflection	RA 2	Attachment 1 Table 1
Symmetry of retroreflection	< 2,5 : 1	Attachment 1
Durability		
Impact resistance	Fulfilled	Attachment 2
Resistance to weathering (artificial weathering / three years natural weathering)	CR 1	Attachment 3 Table 3 Table 4

8. Appropriate Technical Documentation and/or
Specific Technical Documentation:

Posted on Webpage:

<https://www.orafol.com>



**Declaration of Performance
No. 5910.001.20220208**



The performance of the product identified above is in conformity with the set of declared performance/s. This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of the manufacturer by:

i.A. Dipl.-Ing. Jürgen Ewald

Global Regulatory Affairs Manager

[Name and function]

Oranienburg, 08.02.2022

i.A.

[place and date of issue]

[signature]



**Declaration of Performance
No. 5910.001.20220208**



Attachment 1

Table 1: Specific Coefficient of Retroreflection R_A (Unit: $\text{cd} \cdot \text{m}^{-2} \cdot \text{lx}^{-1}$) for traffic signs in new condition: Class RA2 according to DIN EN 12899-1

Geometry		Colour							
α	β_1 ($\beta_2 = 0$)	White	Yellow	Red	Green	Blue	Brown	Orange	Grey
0,2°	+ 5°	250	170	45	45	20	12	100	125
	+ 30°	150	100	25	25	11	8,5	60	75
	+ 40°	110	70	15	12	8	5	29	55
0,33°	+ 5°	180	120	25	21	14	8	65	90
	+ 30°	100	70	14	12	8	5	40	50
	+ 40°	95	60	13	11	7	3	20	47
2°	+ 5°	5	3	1	0,5	0,2 ¹⁾	0,2 ¹⁾	1,5	2,5
	+ 30°	2,5	1,5	0,4 ¹⁾	0,3 ¹⁾	#	#	1	1,2
	+ 40°	1,5	1	0,3 ¹⁾	0,2 ¹⁾	#	#	#	0,7

Indicates "Value greater than zero but not significant or applicable"

¹⁾ Values less than 0,5 are not evaluated

Table 2: Daylight chromaticity coordinates and luminance factors for traffic signs in new condition: Class CR 2 according to DIN EN 12899-1

Colour	Chromaticity Coordinates								Luminance Factor β
	1		2		3		4		
	x	y	x	y	x	y	x	y	
White	0,305	0,315	0,335	0,345	0,325	0,355	0,295	0,325	> 0,27
Yellow	0,494	0,505	0,470	0,480	0,513	0,437	0,545	0,454	> 0,16
Red	0,735	0,265	0,700	0,250	0,610	0,340	0,660	0,340	> 0,03
Green	0,110	0,415	0,170	0,415	0,170	0,500	0,110	0,500	> 0,03
Blue	0,130	0,090	0,160	0,090	0,160	0,140	0,130	0,140	> 0,01
Brown	0,455	0,397	0,523	0,429	0,479	0,373	0,558	0,394	$0,03 \leq \beta \leq 0,09$
Orange	0,610	0,390	0,535	0,375	0,506	0,404	0,570	0,429	> 0,14
Grey	0,305	0,315	0,335	0,345	0,325	0,355	0,295	0,325	$0,11 \leq \beta \leq 0,18$



**Declaration of Performance
No. 5910.001.20220208**



Attachment 2

Symmetry of retroreflection

The ratio of the maximum and minimum specific reflection values when rotating by ε with discrete steps, taking into account a preferred direction, is not greater than 2.5: 1.

Attachment 3

Impact resistance: The requirement for impact resistance depends on DIN EN 12899-1. Outside a circle with a radius of 6 mm from the center of the impact circle, no cracks or delamination from any substrate.

Attachment 4

Table 3: Specific Coefficient of Retroreflection R_A (Unit: $\text{cd} \cdot \text{m}^{-2} \cdot \text{lx}^{-1}$) for traffic signs in after weathering: Class RA2 according to DIN EN 12899-1

Geometry		Colour							
α	β_1 ($\beta_2 = 0$)	White	Yellow	Red	Green	Blue	Brown	Orange	Grey
0,33°	+ 5°	144	96	20	16,8	11,2	6,4	52	72
0,33°	+ 30°	80	56	11,2	9,6	6,4	4	32	40

Table 4: Daylight chromaticity coordinates and luminance factors for traffic signs after weathering: Class CR 1 according to DIN EN 12899-1

Colour	Chromaticity Coordinates								Luminance Factor β
	1		2		3		4		
	x	y	x	y	x	y	x	y	
White	0,355	0,355	0,305	0,305	0,285	0,325	0,335	0,375	> 0,27
Yellow	0,545	0,454	0,487	0,423	0,427	0,483	0,465	0,534	> 0,16
Red	0,735	0,265	0,674	0,236	0,569	0,341	0,655	0,345	> 0,03
Green	0,007	0,703	0,248	0,409	0,177	0,362	0,026	0,399	> 0,03
Blue	0,078	0,171	0,150	0,220	0,210	0,160	0,137	0,038	> 0,01
Brown	0,455	0,397	0,523	0,429	0,479	0,373	0,558	0,394	$0,03 \leq \beta \leq 0,09$
Orange	0,610	0,390	0,535	0,375	0,506	0,404	0,570	0,429	> 0,14
Grey	0,350	0,360	0,300	0,310	0,285	0,325	0,335	0,375	$0,11 \leq \beta \leq 0,18$



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according to:

COMMISSION DELEGATED REGULATION (EU) No 574/2014 of 21 February 2014 amending Annex III to Regulation (EU) No 305/2011 of the European Parliament and of the Council on the model to be used for drawing up a declaration of performance on construction products

1. Unique identification code of the product-type:

ORALITE 6710 Engineer Prismatic Grade (white, yellow, blue, green, orange, brown)

ORALITE 6710 Engineer Prismatic Grade + 5081-070 lettering film (black)

ORALITE 6710 Engineer Prismatic Grade + 5018 Screen printing ink (yellow, red, blue, green, black)

ORALITE 6710 Engineer Prismatic Grade + 5062 transparent film (white)

ORALITE 6710 Engineer Prismatic Grade + 5019 UV digital printing ink (all colours) for use with UV Digital Traffic Sign Printer + 5062 transparent film

ORALITE 6710 Engineer Prismatic Grade + 5019i UV digital printing ink (all colours) for use with UV Digital Traffic Sign Printer + 5062 Transparent Film

2. Intended use/es:

Retroreflective sheeting for use in the manufacture of traffic signs and traffic control equipment

Retroreflective sign face material based on micro prismatic technology for the manufacturing of fixed vertical road traffic signs

3. Manufacturer:

Orafol Europe GmbH
Orafolstrasse 1
16515 Oranienburg

Telephone: +49 3301 864 - 0
E-Mail: info@orafol.de
Internet: www.orafol.dcom

4. Authorised representative – *not relevant*

5. System/s of AVCP: 1

6 a) Harmonised standard: - *not applicable*

Notified body/ies: - *not applicable*



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6 b) European Assessment Document:

Number	Date of issue
EAD 12001-01-0106	September 2016

European Technical Assessment:

Number	Date of issue
ETA-16/0579	11.09.2017
ETA 16/0580	11.09.2017
ETA 16/0581	20.10.2016

Technical Assessment Body:

Technický a skúšobný ústav stavebný, n. o.
Building Testing and Research Institute
Studená 3, 821 04 Bratislava, Slovak Republic

Notified body/ies:

Id. number: **0913**
Name: **StrAus-Zert**; Fleyer Straße 204; 58097 Hagen
Certifikate Nr.:0913 – CPR – 2016 / 011

7. Declared performance/s:

Main features	Description	Performance
Daylight chromaticity and luminance factors	EN12899-1 4.1.1.3 (Table 2)	CR 2 Attachment 1 Table 1
Coefficient of retroreflection	EN12899-1 4.1.1.4 (Table 3)	RA 1 Attachment 1 Table 2
Symmetry of retroreflection	< 2,5 : 1	Attachment 2
Durability		
Impact resistance	EN12899-1 4.1.2.1	Fulfilled Attachment 2
Resistance to weathering (artificial weathering / three years natural weathering)	EN12899-1 4.1.1.5	CR 1 Attachment 3 Table 3 Table 4



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8. Appropriate Technical Documentation and/or
Specific Technical Documentation:

Posted on Webpage:

<https://www.orafol.com>

The performance of the product identified above is in conformity with the set of declared performance/s. This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of the manufacturer by:

i.A. Dipl.-Ing. Jürgen Ewald Global Regulatory Affairs Manager

[name and function]

Oranienburg, 08.02.2022

[date and place of issue]

i.A.

[signature]



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Anlage 1

Table 1: Specific Coefficient of Retroreflection R_A (Unit: $\text{cd} \cdot \text{m}^{-2} \cdot \text{lx}^{-1}$) for traffic signs in new condition: Class RA2 according to DIN EN 12899-1

Geometry		Colour							
α	β_1 ($\beta_2 = 0$)	White	Yellow	Red	Green	Blue	Brown	Orange	Grey
0,2°	+ 5°	70	50	14,5	9	4	1	25	42
	+ 30°	30	22	6	3,5	1,7	0,3 ¹⁾	10	18
	+ 40°	10	7	2	1,5	0,5	#	2,2	6
0,33°	+ 5°	50	35	10	7	2	0,6	20	30
	+ 30°	24	16	4	3	1	0,2 ¹⁾	8	14,4
	+ 40°	9	6	1,8	1,2	#	#	2,2	5,4
2°	+ 5°	5	3	1	0,5	#	#	1,2	3
	+ 30°	2,5	1,5	0,5	0,3 ¹⁾	#	#	0,5	1,5
	+ 40°	1,5	1	0,5	0,2 ¹⁾	#	#	#	0,9

Indicates "Value greater than zero but not significant or applicable"

¹⁾ Values less than 0,5 are not evaluated

Table 2: Daylight chromaticity coordinates and luminance factors for traffic signs in new condition: Class CR 2 according to DIN EN 12899-1

Colour	Chromaticity Coordinates								Luminance Factor β
	1		2		3		4		
	x	y	x	y	x	y	x	y	
White	0,305	0,315	0,335	0,345	0,325	0,355	0,295	0,325	> 0,35
Yellow	0,494	0,505	0,470	0,480	0,513	0,437	0,545	0,454	> 0,27
Red	0,735	0,265	0,700	0,250	0,610	0,340	0,660	0,340	> 0,05
Green	0,110	0,415	0,170	0,415	0,170	0,500	0,110	0,500	> 0,04
Blue	0,130	0,090	0,160	0,090	0,160	0,140	0,130	0,140	> 0,01
Brown	0,455	0,397	0,523	0,429	0,479	0,373	0,558	0,394	$0,03 \leq \beta \leq 0,09$
Orange	0,610	0,390	0,535	0,375	0,506	0,404	0,570	0,429	> 0,17
Grey	0,305	0,315	0,335	0,345	0,325	0,355	0,295	0,325	$0,11 \leq \beta \leq 0,18$



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Attachment 2

Symmetry of retroreflection

The ratio of the maximum and minimum specific reflection values when rotating by ε with discrete steps, considering a preferred direction, is not greater than 2.5: 1.

Attachment 3

Impact resistance: The requirement for impact resistance depends on DIN EN 12899-1. Outside a circle with a radius of 6 mm from the center of the impact circle, no cracks or delamination from any substrate.

Attachment 4

Table 3: Specific Coefficient of Retroreflection R_A (Unit: $\text{cd} \cdot \text{m}^{-2} \cdot \text{lx}^{-1}$) for traffic signs in after weathering: Class RA2 according to DIN EN 12899-1

Geometry		Colour							
α	β_1 ($\beta_2 = 0$)	White	Yellow	Red	Green	Blue	Brown	Orange	Grey
0,33°	+ 5°	40	28	8	5,6	1,6	0,48	16	24
0,33°	+ 30°	19,2	12,8	3,2	2,4	0,8	0,16	6,4	11,5

Indicates "Value greater than zero but not significant or applicable"

Table 4: Daylight chromaticity coordinates and luminance factors for traffic signs after weathering: Class CR 1 according to DIN EN 12899-1

Colour	Chromaticity Coordinates								Luminance Factor β
	1		2		3		4		
	x	y	x	y	x	y	x	y	
White	0,355	0,355	0,305	0,305	0,285	0,325	0,335	0,375	> 0,35
Yellow	0,545	0,454	0,487	0,423	0,427	0,483	0,465	0,534	> 0,27
Red	0,735	0,265	0,674	0,236	0,569	0,341	0,655	0,345	> 0,05
Green	0,007	0,703	0,248	0,409	0,177	0,362	0,026	0,399	> 0,04
Blue	0,078	0,171	0,150	0,220	0,210	0,160	0,137	0,038	> 0,01
Brown	0,455	0,397	0,523	0,429	0,479	0,373	0,558	0,394	$0,03 \leq \beta \leq 0,09$
Orange	0,610	0,390	0,535	0,375	0,506	0,404	0,570	0,429	> 0,17
Grey	0,350	0,360	0,300	0,310	0,285	0,325	0,335	0,375	$0,11 \leq \beta \leq 0,18$

SRL "TEAM ART CONSTRUCT"

mun. Chişinău, com. Băcioi, str. Cîmpiilor 1, Republica Moldova, tel. 069348877

DECLARAȚIE DE PERFORMANȚĂ

Nr. ____ data _____ 20____

Cod unic de identificare al produsului-tip:
Indicatoare pentru semnalizare rutieră verticală

2. Tipul, lotul sau numărul de serie:
Indicator de tipul _____

3. Fabricant:

SRL "TEAM ART CONSTRUCT"
mun. Chişinău, str. Otovasca, 19

4. Utilizarea sau utilizările preconizate ale produsului:
pentru instalare pe străzi și drumuri pentru informarea participanților la circulația rutieră despre condițiile și regimurile din trafic.

5. Standard armonizat:

SM EN 12899-1:2010

6. Sistemul sau sistemele de evaluare și verificare a constanței performanței produsului pentru construcții:

Sistemul 4

7. În cazul declarației de performanță privind un produs pentru construcții acoperit de un standard armonizat:

Evaluarea tehnică nr. 02/07-022:2022

8. Performanța declarată

Parametru/Caracteristică	Performanță declarată
Material	Tablă plană cu grosimea de 1 mm din oțel
Marginile structurii panoului	E(1-2)
Fața panoului	Clasa P(1-2)
Rezistența la încărcături orizontale	
Elemente de fixare	satisfăcător
Ațiuni datorate vântului	Clasa WL (1-3)
Încărcare dinamică datorată zăpezii	Clasa DSL (1-3)
Deformație permanentă	satisfăcător
Performanțe în cazul impactului cu un vehicul	NPD
Substanțe periculoase	Nu conține

9. Performanța produsului identificat la punctele 1 și 2 este în conformitate cu performanța declarată de la punctul 8.

Această declarație de performanță este emisă pe răspunderea exclusivă a fabricantului identificat la punctul 3.

Semnată pentru și în numele fabricantului de către:

Director Andrieș Andrei
(Numele, Funcția)