DÉCLARATION DE PERFORMANCES N° SIG 13 C

Code identique du produit: SIG13C

Utilisation prévue: Panneaux pour les panneaux de signalisation verticaux à plan d'image rétro-réfléchissant, Classe 3 Diamond Grade.

Fabricant :

Signco BV
Jozef De Blockstraat 74
2830 Willebroek

Le système d'évaluation et de vérification de la conformité des performances:
L'organisme notifié **OCAB-OCBS CE 1148** a exécuté les tâches selon le système 1 et a émis le certificat de constance des performances **1148-CE-20130304**, le certificat de conformité du contrôle de la production en usine et les rapports sur les tests et les calculs.

Les performances indiquées des produits sont repris dans le tableau ci-dessous, selon les spécifications techniques harmonisées de la NBN EN 12899-1:2007.

Caractéristiques essentielles	**Performances**	**Spécifications techniques harmonisées**
Résistance aux charges horizontales		
Éléments de fixation	Conforme	NBN EN 12899-1:2007
Actions du vent	WL4	NBN EN 12899-1:2007
Déformation temporaire : flexion	TDB5	NBN EN 12899-1:2007
Actions suite au déneigement	NPD	NBN EN 12899-1:2007
Charge concentrée	PL2	NBN EN 12899-1:2007
Déformation permanente	Conforme	NBN EN 12899-1:2007
Coefficient partiel de sécurité	PAF 1	NBN EN 12899-1:2007
Caractéristiques visuelles		
Panneaux rétro-réfléchissants		
Coordonnées colorimétriques à la lumière du jour & indice de luminance	Table 1.2 (en annexe)	ETA 18-0405 ETA 17-0490 EAD 120001-01-0106:2016
Coefficient rétro-réfléchissant	Table A.1, A.2, A.3 et Annex 1 (en annexe)	ETA 18-0405 ETA 17-0490 EAD 120001-01-0106:2016
Durabilité		
Résistance à l'altération du matériel du plan de l'image		
Coordonnées colorimétriques à la lumière du jour & indice de luminance	Table 1.3 (en annexe)	ETA 18-0405 ETA 17-0490 EAD 120001-01-0106:2016
Coefficient rétro-réfléchissant après exposition	>80% de Table A.1, A.2, A.3 et Annex 1 (en annexe)	ETA 18-0405 ETA 17-0490 EAD 120001-01-0106:2016

Résistance aux chocs	Conforme	NBN EN 12899-1:2007
Résistance à la corrosion	Aluminium SP2	NBN EN 12899-1:2007
NPD: “no performance declared”		

Les performances du produit mentionné ci-dessus sont conformes aux performances déclarées. Conformément au règlement (UE) n° 305/2011, cette déclaration de performance est faite sous la seule responsabilité du fabricant nommé ci-dessus.

Signé pour et au nom du fabricant par:

Signco BV
Friso Haerens, Direct général
Jozef De Blockstraat 74
2830 Willebroek

À Willebroek, le 16 février 2023

Annexe:

ETA 18-0405:

Colours		Chromaticity Coordinates 1	2	3	4	Luminance Factor ß
White Tolerance Sphere*	x y	0.305 0.315	0.335 0.345	0.325 0.355	0.295 0.325	≥0.40
White Translucent Tolerance Sphere*	x y	0.305 0.315	0.335 0.345	0.325 0.355	0.295 0.325	≥0.27
Yellow Tolerance Sphere*	x y	0.494 0.505	0.470 0.480	0.513 0.437	0.545 0.454	≥0.24
Yellow Translucent Tolerance Sphere*	x y	0.494 0.505	0.470 0.480	0.513 0.437	0.545 0.454	≥0.16
Red Tolerance Sphere*	x y	0.735 0.265	0.700 0.250	0.610 0.340	0.660 0.340	≥0.03
Red on Yellow, Fluorescent Yellow or Fluorescent Yellow Green Tolerance Sphere*	x y	0.735 0.265	0.700 0.250	0.610 0.340	0.660 0.340	≥0.03
Blue Tolerance Sphere*	x y	0.130 0.090	0.160 0.090	0.160 0.140	0.130 0.140	≥0.01
Green Tolerance Sphere*	x y	0.110 0.415	0.170 0.415	0.170 0.500	0.110 0.500	≥0.03
Orange Tolerance Sphere	x y	0.631 0.369	0.560 0.360	0.506 0.404	0.570 0.429	≥0.14
Brown Tolerance Sphere*	x y	0.455 0.397	0.523 0.429	0.479 0.373	0.558 0.394	0.03-0.09
Grey Tolerance Sphere*	x y	0.305 0.315	0.335 0.345	0.325 0.355	0.295 0.325	0.11-0.18
Dark Green Tolerance Sphere	x y	0.313 0.682	0.313 0.453	0.248 0.409	0.127 0.557	0.01-0.07
Fluorescent yellow reference	x y	0.521 0.424	0.557 0.442	0.479 0.520	0.454 0.491	≥0.38
Fluorescent orange reference	x y	0.595 0.351	0.645 0.355	0.570 0.429	0.531 0.414	≥0.25
Fluorescent yellow green reference	x y	0.387 0.610	0.460 0.540	0.570 0.429	0.376 0.568	≥0.70
* Chromaticity Coordinates are similar to EN 12899-1:2007 Class CR2						

Table 1.2: Manufacturer's specification for initial daylight chromaticity and luminance factor

ETA 17-0490:

Colours		Chromaticity Coordinates 1	2	3	4	Luminance Factor ß
White Tolerance Sphere*	x y	0.305 0.315	0.335 0.345	0.325 0.355	0.295 0.325	≥0.40
Yellow Tolerance Sphere*	x y	0.494 0.505	0.470 0.480	0.513 0.437	0.545 0.454	≥0.24
Red Tolerance Sphere*	x y	0.735 0.265	0.700 0.250	0.610 0.340	0.660 0.340	≥0.03
Red on Yellow Tolerance Sphere*	x y	0.735 0.265	0.700 0.250	0.610 0.340	0.660 0.340	≥0.03
Blue Tolerance Sphere*	x y	0.130 0.090	0.160 0.090	0.160 0.140	0.130 0.140	≥0.01
Green Tolerance Sphere*	x y	0.110 0.415	0.170 0.415	0.170 0.500	0.110 0.500	≥0.03
Orange Tolerance Sphere*	x y	0.631 0.369	0.560 0.360	0.506 0.404	0.570 0.429	≥0.14
Brown Tolerance Sphere*	x y	0.455 0.397	0.523 0.429	0.479 0.373	0.558 0.394	0.03-0.09
Grey Tolerance Sphere*	x y	0.305 0.315	0.335 0.345	0.325 0.355	0.295 0.325	0.11-0.18
Dark Green Tolerance Sphere*	x y	0.313 0.682	0.313 0.453	0.248 0.409	0.127 0.557	0.01-0.07
* Chromaticity Coordinates are similar to EN 12899-1:2007 Class CR2						

Table 1.2: Manufacturer's specification for initial daylight chromaticity and luminance factor

ETA 18-0405:

Colours		Chromaticity Coordinates 1	2	3	4	Luminance Factor ß
*White Tolerance Sphere**	x y	0.355 0.355	0.305 0.305	0.285 0.325	0.335 0.375	*≥0.40*
*White Translucent Tolerance Sphere**	x y	0.355 0.355	0.305 0.305	0.285 0.325	0.335 0.375	*≥0.27*
*Yellow Tolerance Sphere**	x y	0.545 0.454	0.487 0.423	0.427 0.483	0.465 0.534	*≥0.24*
*Yellow Translucent Tolerance Sphere**	x y	0.545 0.454	0.487 0.423	0.427 0.483	0.465 0.534	*≥0.16*
*Red Tolerance Sphere**	x y	0.735 0.265	0.674 0.236	0.569 0.341	0.655 0.345	*≥0.03*
*Red on Yellow, Fluorescent Yellow or Fluorescent Yellow Green Tolerance Sphere**	x y	0.735 0.265	0.674 0.236	0.569 0.341	0.655 0.345	*≥0.03*
*Blue Tolerance Sphere**	x y	0.078 0.171	0.150 0.220	0.210 0.160	0.137 0.038	*≥0.01*
*Green Tolerance Sphere**	x y	0.007 0.703	0.248 0.409	0.177 0.362	0.026 0.399	*≥0.03*
Orange Tolerance Sphere	x y	0.631 0.369	0.560 0.360	0.506 0.404	0.570 0.429	*≥0.14*
*Brown Tolerance Sphere**	x y	0.455 0.397	0.523 0.429	0.479 0.373	0.558 0.394	*0.03-0.09*
*Grey Tolerance Sphere**	x y	0.350 0.360	0.300 0.310	0.285 0.325	0.335 0.375	*0.11-0.18*
*Dark Green Tolerance Sphere**	x y	0.313 0.682	0.313 0.453	0.248 0.409	0.127 0.557	*0.01-0.07*
Fluorescent yellow reference	x y	0.521 0.424	0.557 0.442	0.479 0.520	0.454 0.491	*≥0.38*
Fluorescent orange reference	x y	0.595 0.351	0.645 0.355	0.570 0.429	0.531 0.414	*≥0.25*
Fluorescent yellow green reference	x y	0.387 0.610	0.460 0.540	0.570 0.429	0.376 0.568	*≥0.70*
* Chromaticity Coordinates are similar to EN 12899-1:2007 Class CR1						

Table 1.3: Manufacturer's specification for daylight chromaticity and luminance factor 'in-use'

ETA 17-0490:

Colours		Chromaticity Coordinates 1	2	3	4	Luminance Factor ß
*White Tolerance Sphere**	x y	0.355 0.355	0.305 0.305	0.285 0.325	0.335 0.375	*≥0.40*
*Yellow Tolerance Sphere**	x y	0.545 0.454	0.487 0.423	0.427 0.483	0.465 0.534	*≥0.24*
*Red Tolerance Sphere**	x y	0.735 0.265	0.674 0.236	0.569 0.341	0.655 0.345	*≥0.03*
*Red on Yellow Tolerance Sphere**	x y	0.735 0.265	0.700 0.250	0.610 0.340	0.660 0.340	*≥0.03*
*Blue Tolerance Sphere**	x y	0.078 0.171	0.150 0.220	0.210 0.160	0.137 0.038	*≥0.01*
*Green Tolerance Sphere**	x y	0.007 0.703	0.248 0.409	0.177 0.362	0.026 0.399	*≥0.03*
*Orange Tolerance Sphere**	x y	0.631 0.369	0.560 0.360	0.506 0.404	0.570 0.429	*≥0.14*
*Brown Tolerance Sphere**	x y	0.455 0.397	0.523 0.429	0.479 0.373	0.558 0.394	*0.03-0.09*
*Grey Tolerance Sphere**	x y	0.350 0.360	0.300 0.310	0.285 0.325	0.335 0.375	*0.11-0.18*
*Dark Green Tolerance Sphere**	x y	0.313 0.682	0.313 0.453	0.248 0.409	0.127 0.557	*0.01-0.07*
** Chromaticity Coordinates are similar to EN 12899-1:2007 Class CR1*						

Table 1.3: Manufacturer's specification for daylight chromaticity and luminance factor 'in-use'

ETA 18-0405 :

Geometry of measurement		Colour								
α	β_1 ($\beta_2 = 0$)	White	Yellow	Red	Green	Dark Green ‡	Blue	Brown ‡	Orange	Grey ‡
20'	+5°	300	195	60	30	24	19	9	150	150
	+20°	240	155	48	24	19	16	7.2	120	120
	+30°	165	110	33	17	13	11	5.0	83	82
	+40°	30	20	6	3	2.4	2	#	15	15
1°	+5°	35	23	7	3.5	2.8	2.5	1.1	18	17
	+20°	30	20	6	3	2.4	2	#	15	15
	+30°	20	13	4	2	1.6	1.5	#	10	10
	+40°	3.5	2	1	#	#	#	#	2	1.8
1.5°	+5°	15	10	3	1.5	1.2	1	#	7.5	7.5
	+20°	13	8	2.5	1	1.0	#	#	6.5	6.5
	+30°	9	6	2	#	#	#	#	4.5	4.5
	+40°	1.5	1	#	#	#	#	#	1	#

‡ Indicates additional colours required by UK national legislation

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

NOTE Coloured areas of signs created by digital or screen printing or using overlay film will need to meet 70 % of the values in the table.

Table A.1
Manufacturer's Specification for the Minimum Initial Coefficient of Retro-reflection R_A value
(see UK National Annex to EN 12899-1:2007 Class R3B-UK; DIN 67520:2013-10 Class RA 3B; Önorm V 2050:2006-01-01 Typ 3; TLP VZ Class RA3)

Table NA.1C — Minimum coefficient of retroreflection for high-performance materials (Class R3C-UK) (unit: $cdlx^{-1}m^{-2}$)

Geometry of measurement		Colour								
α	$\beta 1$ ($\beta 2 = 0$)	White	Yellow	Red	Green	Dark Green	Blue	Brown	Fluorescent Yellow	Fluorescent Orange
0.2°	+5°	580	435	87	58	42	26	17	350	175
	+30°	220	165	33	22	16	10	7	130	66
0.33°	+5°	300	250	75	35	29	17	10	180	90
	+30°	140	128	30	18	11	7	5	90	42
0.5°	+5°	420	315	63	42	21	19	13	250	125
	+30°	150	110	23	15	7.5	7	5	90	45
1.0°	+5°	120	90	18	12	6	5	4	72	36
	+30°	45	34	7	5	2	2	1	27	14

NOTE 1 When material is sampled, processed and tested per manufacturer's Declaration of Performance and EAD 120001-00-0106, Section 2.2.3.

NOTE 2 The requirements of Class R3C-UK are based on ASTM Type XI.

Table A.2
Manufacturer's Specification for the Minimum Initial Coefficient of Retro-reflection R_A value
(see UK National Annex to EN 12899-1:2007 Class R3C-UK; Coloured areas of signs created by digital or screen printing will need to meet 70% of the values in the table)

Geometry of measurements		Colour						
α	β_1 (β_2 = 0)	White	Yellow	Red	Blue	Green	Fluorescent orange	Fluorescent Yellow Green
0.1°	+5°	850	550	170	55	85		
	+20°	600	390	120	40	60		
	+30°	425	275	85	28	40		
	+40°	200	140	40	10	20		
0.2°	+5°	625	400	125	40	60	200	375
	+15°	350	270	90	20	35	175	
	+20°	450	290	90	30	45		
	+30°	325	210	65	20	30	120	200
	+40°	160	112	32	8	16	80	36
0.33°	+5°	425	275	85	28	40	150	270
	+15°	250	200	65	15	25	130	
	+20°	300	195	60	20	30		
	+30°	225	145	45	15	20	90	140
	+40°	110	77	22	5.5	11	60	24
1.0°	+5°	80	65	20	5	10	7.5	70
	+15°	60	45	16	3.5	7	5	
	+30°	50	40	13	2.5	5	2.5	43
	+40°	15	13	4	1	2	2.5	9

Table A.3
Manufacturer's Specification for the Minimum Initial Coefficient of Retro-reflection R_A value
(see Belgium PTV Nr. 662: Class PTV-3A; PTV-3B; PTV-3C)

ETA 17-0409:

Annex 1

3M™ Diamond Grade™ DG³ Prismatic Digital Sheeting 4090DS + 3M™ Piezo Inkjet Ink + 3M™ Protective Overlay Film 1170

Daylight Chromaticity and Luminance Factor, initial and after accelerated artificial weathering

1.1 Daylight Chromaticity and Luminance Factor, initial

Colours		Chromaticity Coordinates 1	2	3	4	Luminance Factor ß
White Tolerance Sphere	***x***	***0.305***	***0.335***	***0.325***	***0.295***	***≥0.40***
	y	***0.315***	***0.345***	***0.355***	***0.325***	
White Sample 1	x	0.310				0.42
	y	0.327				
White Sample 2	x	0.311				0.42
	y	0.328				
White Sample 3	x	0.311				0.42
	y	0.327				
Yellow Tolerance Sphere	***x***	***0.494***	***0.470***	***0.513***	***0.545***	***≥0.24***
	y	***0.505***	***0.480***	***0.437***	***0.454***	
Yellow Sample 1	x	0.478				0.28
	y	0.477				
Yellow Sample 2	x	0,475				0,25
	y	0,475				
Yellow Sample 3	x	0,477				0,27
	y	0,479				
Red Tolerance Sphere	***x***	***0.735***	***0.700***	***0.610***	***0.660***	***≥0.03***
	y	***0.265***	***0.250***	***0.340***	***0.340***	
Red Sample 1	x	0.634				0.07
	y	0.331				
Red Sample 2	x	0.634				0.07
	y	0.332				
Red Sample 3	x	0.637				0.07
	y	0.332				
Blue Tolerance Sphere	***x***	***0.130***	***0.160***	***0.160***	***0.130***	***≥0.01***
	y	***0.090***	***0.090***	***0.140***	***0.140***	
Blue Sample 1	x	0.141				0.04
	y	0.125				
Blue Sample 2	x	0.145				0.06
	y	0.137				
Blue Sample 3	x	0.142				0.05
	y	0.128				
Green Tolerance Sphere	***x***	***0.110***	***0.170***	***0.170***	***0.110***	***≥0.03***
	y	***0.415***	***0.415***	***0.500***	***0.500***	
Green Sample 1	x	0.160				0.06
	y	0.442				
Green Sample 2	x	0.158				0.05
	y	0.481				
Green Sample 3	x	0.159				0.06
	y	0.449				
Orange Tolerance Sphere	***x***	***0.631***	***0.560***	***0.506***	***0.570***	***≥0.14***
	y	***0.369***	***0.360***	***0.404***	***0.429***	
Orange Sample 1	x	0.550				0.15
	y	0.407				
Orange Sample 2	x	0.546				0.14
	y	0.411				
Orange Sample 3	x	0.536				0.14
	y	0.402				

Colours		Chromaticity Coordinates				Luminance Factor ß
		1	2	3	4	
Brown	***x***	***0.455***	***0.523***	***0.479***	***0.558***	***0.03-0.09***
Tolerance Sphere	***y***	***0.397***	***0.429***	***0.373***	***0.394***	
Brown Sample 1	x	0.521				0.05
	y	0.405				
Brown Sample 2	x	0.525				0,05
	y	0.399				
Brown Sample 3	x	0,527				0,04
	y	0.397				
Grey	***x***	***0.305***	***0.335***	***0.325***	***0.295***	***0.11-0.18***
Tolerance Sphere	***y***	***0.315***	***0.345***	***0.355***	***0.325***	
Grey Sample 1	x	0.318				0.15
	y	0.333				
Grey Sample 2	x	0.318				0.14
	y	0.333				
Grey Sample 3	x	0.317				0.13
	y	0.331				
Dark Green	***x***	***0.313***	***0.313***	***0.248***	***0.127***	***0.01-0.07***
Tolerance Sphere	***y***	***0.682***	***0.453***	***0.409***	***0.557***	
Dark Green Sample 1	x	0.227				0.06
	y	0.513				
Dark Green Sample 2	x	0.205				0.06
	y	0.562				
Dark Green Sample 3	x	0.226				0.08
	y	0.560				

1.2 Daylight Chromaticity and Luminance Factor, after accelerated artificial weathering

Colours		Chromaticity Coordinates 1	2	3	4	Luminance Factor ß
White Tolerance Sphere	x y	**0.355** **0.355**	**0.305** **0.305**	**0.285** **0.325**	**0.335** **0.375**	***≥0.40***
White Sample 1	x y	0.310 0.327				*0.43*
White Sample 2	x y	0.310 0.326				*0.45*
White Sample 3	x y	0.312 0.328				*0.43*
Yellow Tolerance Sphere	x y	**0.545** **0.454**	**0.487** **0.423**	**0.427** **0.483**	**0.465** **0.534**	***≥0.24***
Yellow Sample 1	x y	0.469 0.479				*0.30*
Yellow Sample 2	x y	0.472 0.476				*0.28*
Yellow Sample 3	x y	0.472 0.482				*0.28*
Red Tolerance Sphere	x y	**0.735** **0.265**	**0.674** **0.236**	**0.569** **0.341**	**0.655** **0.345**	***≥0.03***
Red Sample 1	x y	0.622 0.335				*0.08*
Red Sample 2	x y	0.618 0.334				*0.07*
Red Sample 3	x y	0.624 0.337				*0.07*
Blue Tolerance Sphere	x y	**0.078** **0.171**	**0.150** **0.220**	**0.210** **0.160**	**0.137** **0.038**	***≥0.01***
Blue Sample 1	x y	0.143 0.143				*0.04*
Blue Sample 2	x y	0.147 0.142				*0.06*
Blue Sample 3	x y	0.144 0.134				*0.05*
Green Tolerance Sphere		**0.007** **0.703**	**0.248** **0.409**	**0.177** **0.362**	**0.026** **0.399**	***≥0.03***
Green Sample 1	x y	0.177 0.422				*0.08*
Green Sample 2	x y	0.162 0.471				*0.05*
Green Sample 3	x y	0.156 0.436				*0.06*
Orange Tolerance Sphere	x y	**0.631** **0.369**	**0.560** **0.360**	**0.506** **0.404**	**0.570** **0.429**	***≥0.14***
Orange Sample 1	x y	0.538 0.411				*0.17*
Orange Sample 2	x y	0.547 0.411				*0.15*
Orange Sample 3	x y	0.528 0.408				*0.17*
Brown Tolerance Sphere	x y	***0.455*** ***0.397***	***0.523*** ***0.429***	***0.479*** ***0.373***	***0.558*** ***0.394***	***0.03-0.09***
Brown Sample 1	x y	0.512 0.407				*0.06*
Brown Sample 2	x y	0.518 0.400				*0.05*
Brown Sample 3	x y	0.523 0.405				*0.05*
Grey Tolerance Sphere	x y	**0.350** **0.360**	**0.300** **0.310**	**0.285** **0.325**	**0.335** **0.375**	***0.11-0.18***
Grey Sample 1	x y	0.318 0.333				*0.15*
Grey Sample 2	x y	0.318 0.332				*0.13*
Grey Sample 3	x y	0.319 0.333				*0.14*