DÉCLARATION DE PERFORMANCES N° SIG 13 F

Code identique du produit: SIG13F

Utilisation prévue: Construction complète de panneaux de signalisation verticaux fixes 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 **PROCERTUS CE 0965** a exécuté les tâches selon le système 1 et a émis le certificat de constance des performances **0965-CPR-12899/2935**, 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 temporaire poteaux de support : flexion	Conforme (TDB5)			NBN EN 12899-1:2007		
Déformation temporaire poteaux de support : torsion	Conforme (TDB3)			NBN EN 12899-1:2007		
Déformation permanente	Conforme			NBN EN 12899-1:2007		
Coefficient partiel de sécurité	PAF 1			NBN EN 12899-1:2007		
Matériau: tuyau en acier S235J2H	Dia 51 2,6 mm	Dia76 2,9 mm	Dia 89 3,2 mm	Dia 114 3,6 mm	Dia 133 4mm	40x40 2mm
Comportement en cas de collision par un véhicule EN 12899-6.3 conforme EN 12767:2019	100-NE-C-S, X, R-SE-MD-1	100-NE-C-S, X, R-SE-MD-1	100-NE-C-S, X, R-SE-MD-1	Classe 0	Classe 0	Classe 0

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 1 mai 2024

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*