

Test Report

Nr. 0010-ECS-13

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Accredited by the Central
Authority of the Federal States for Safety
Technologies (ZLS) ZLS-P-856/09
ZLS-ZE-703/09

Customer**Manufacturer**

Weldas Europe B.V.
Blankenweg 18
**4612 RC BERGEN OP ZOOM
THE NETHERLANDS**

Test report contains	Main part and 2 measurement reports
Number of pages in this test report	8
Product	Transparent welding curtains and screens for arc welding processes
Arrival of samples	Jan 18, 2013
Period of testing	Jan 21 - 29, 2013
Test specifications (Standards)	DIN EN 1598 : 2011

Remarks

The results described in this test report refer to the mentioned test samples, exclusively. A copy of the test report, complete or in extracts, is not allowed without any written permission of the ECS GmbH Aalen.

Aalen, 30 Jan 2013



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Test objects, tests and results

Based on the tables as written in the standards EN 1598, the main part assigns the test samples to the named tests. The test results are documented according to the named standards.

Signs and symbols

The requirements are described in EN1598.

- + meet the requirements
- do not meet the requirements
- / not tested
- n.a. not applicable
- G borderline case
- Ab interruption of the testing sequence

Whenever the dioptric power of the surface is stated, this value was calculated using the formula $F=0,523/r$, where "r" is the radius of the curved surface.

The relative measurement uncertainties of the applied optical metrological instruments correspond to the required one in DIN EN 167.

Unless stated otherwise, the measurements were carried out in the main viewing point of the specimens and, in the case of lenses with corrective power, at the applicable reference point.

Test results

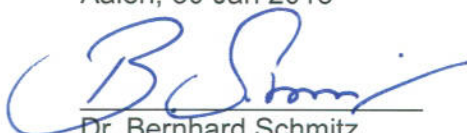
The annexes document the test results of each individual measurement. All results printed in bold and italic type document that the test sample did actually not meet the requirements which are demanded in the specified standards.

Samples and summary of the test results

Type:	WELDAS Transparent welding curtains and screens for arc welding processes. Red Screen CE 0.35 mm, productnumber RSCE0035001					
Test report:	00101-ECS-13					
Number of delivered samples:	1.8 * 1.8 m ²					
Number of test samples:	12					
Test sequence	Requirement	Tests				Samples 13010-1 to -12
		according to				
		EN	Clause	EN	Clause	
1	Marking	1598	5			n.a.
2	Information delivered by the manufacturer / applicant	1598	6			n.a.
3	General requirements, quality of surface and material	1598	4.1	1598	4.1	+
4	Luminous transmittance	1598	4.2	167	6	+
5	Spectral transmittance in UV-range	1598	4.2	167	6	+
6	Hazard level / risk factor	1598	4.2	1598	4.2	+
7	Luminous reflectance	1598	4.3	167	6	+
8	Spectral reflectance in UV-range	1598	4.3	167	6	+
9	UV-stability	1598	4.4	168	6	+
10	Resistance to ignition	1598	4.5	1598	4.5	+
11	Eyelet strength	1598	4.6	1598	4.6	+
See the measurement report for the individual results of each test sample.						

Assessment: The welding curtains Red Screen CE 0.35 mm meet the requirements of the standard referred to.
The marking may consist of: 1598 CE WELDAS + month + year of manufacturing.

Aalen, 30 Jan 2013



Dr. Bernhard Schmitz
ECS-Certification

Samples and summary of the test results

Type:	WELDAS Transparent welding curtains and screens for arc welding processes. Darkgreen Screen CE 0.35 mm, productnumber DSCE0035031					
Test report:	00102-ECS-13					
Number of delivered samples:	1.8 * 1.8 m ²					
Number of test samples:	12					
Test sequence	Requirement	Tests according to				Samples 13010-13 to -24
		EN	Clause	EN	Clause	
1	Marking	1598	5			n.a.
2	Information delivered by the manufacturer / applicant	1598	6			n.a.
3	General requirements, quality of surface and material	1598	4.1	1598	4.1	+
4	Luminous transmittance	1598	4.2	167	6	+
5	Spectral transmittance in UV-range	1598	4.2	167	6	+
6	Hazard level / risk factor	1598	4.2	1598	4.2	+
7	Luminous reflectance	1598	4.3	167	6	+
8	Spectral reflectance in UV-range	1598	4.3	167	6	+
9	UV-stability	1598	4.4	168	6	+
10	Resistance to ignition	1598	4.5	1598	4.5	+
11	Eyelet strength	1598	4.6	1598	4.6	+
See the measurement report for the individual results of each test sample.						

Assessment: The welding curtains Darkgreen Screen CE 0.35 mm meet the requirements of the standard referred to.
The marking may consist of: 1598 CE WELDAS + month + year of manufacturing.

Aalen, 30 Jan 2013



Dr. Bernhard Schmitz
ECS-Certification

Test mark:	00101-ECS-13
Type:	WELDAS Transparent welding curtains and screens for arc welding processes. Red Screen CE 0.35 mm, productnumber RSCE0035001

Measurement report 1

Description of the type

Design of the test samples:	Flexible transparent curtains / screens Colour red Thickness / mm 0.35 -0.02
A ready-to-use screen (size appr. 1.8 * 1.8 m ²) has been delivered for testing. The screen is equipped with eyelets.	
Screens:	marking: none material: PVC

Quality of material and surface, transmittance, filtering action, spectral reflectance, hazard level

test ↓	sample →	13010					
		-1	-2	-3	-4	-5	-6
quality of material and surface		+	+	+	+	+	+
luminous transmittance rel NA τ	%	5.4	5.3	7.1	5.3	7.1	5.6
spectral transmittance UV range 210 – 313 nm	%	≤2*10 ⁻³	≤2*10 ⁻³	≤2*10 ⁻³	≤2*10 ⁻³	≤2*10 ⁻³	≤2*10 ⁻³
spectral transmittance UV range 313 – 380 nm	%	≤3	≤3	≤3	≤3	≤3	≤3
luminous reflectance	%	6.4	6.2	5.7	6.4	5.8	6.7
spectral reflectance UV range 230 – 400 nm		≤10	≤10	≤10	≤10	≤10	≤10
hazard level		0.66	0.65	0.72	0.65	0.73	0.67
meeting the requirements for transmittance		+	+	+	+	+	+

Test mark: 00101-ECS-13

Type: WELDAS Transparent welding curtains and screens for arc welding processes. Red Screen CE 0.35 mm, productnumber RSCE0035001

Quality of material and surface, transmittance after test to UV-ageing

test ↓ sample →		13010		
		-1	-2	-3
quality of material and surface		no alterations observed after UV-ageing, except that surface becomes sticky		
luminous transmittance rel NA τ	%	5.4	5.3	7.1
relative change	%	0.3	0.6	0.2
hazard level		0.66	0.65	0.72

Resistance to ignition

test ↓ sample →		13010		
		-7	-8	-9
Resistance to ignition		The flame self-extinguishes and the material ceases to glow within ≤ 1.5 sec. The flame does not reach the test mark.		

Eyelet strength

test ↓ sample →		13010		
		-10 one eyelet	-11 two eyelets	-12 no eyelet
Eyelet strength		No tearing of any seam, no tearing of any eyelet, not any removal of any eyelet could be observed, respectively.		

Aalen, 30 Jan 2013



 Dipl.-Ing. (FH) Sonja Forstreuter
 ECS-test engineer

Test mark: 00102-ECS-13

Type: WELDAS Transparent welding curtains and screens for arc welding processes. Darkgreen Screen CE 0.35 mm, productnumber DSCE0035031

Measurement report 2

Description of the type

Design of the test samples:	Flexible transparent curtains / screens
Colour	darkgreen
Thickness / mm	0.35 -0.02
A ready-to-use screen (size appr. 1.8 * 1.8 m ²) has been delivered for testing. The screen is equipped with eyelets.	
Screens:	marking: none
	material: PVC

Quality of material and surface, transmittance, filtering action, spectral reflectance, hazard level

test ↓	sample →	13010					
		-13	-14	-15	-16	-17	-18
quality of material and surface		+	+	+	+	+	+
luminous transmittance rel NA τ	%	0.57	0.50	0.70	0.57	0.54	0.51
spectral transmittance UV range 210 – 313 nm	%	≤2*10 ⁻³	≤2*10 ⁻³	≤2*10 ⁻³	≤2*10 ⁻³	≤2*10 ⁻³	≤2*10 ⁻³
spectral transmittance UV range 313 – 380 nm	%	≤3	≤3	≤3	≤3	≤3	≤3
luminous reflectance	%	0.86	0.63	0.61	0.75	0.66	0.61
spectral reflectance UV range 230 – 400 nm		≤10	≤10	≤10	≤10	≤10	≤10
hazard level		0.33	0.30	0.40	0.33	0.32	0.31
meeting the requirements for transmittance		+	+	+	+	+	+

Test mark: 00102-ECS-13

Type: WELDAS Transparent welding curtains and screens for arc welding processes. Darkgreen Screen CE 0.35 mm, productnumber DSCE0035031

Quality of material and surface, transmittance after test to UV-ageing

test ↓ sample →		13010		
		-13	-14	-15
quality of material and surface		no alterations observed after UV-ageing, except that surface becomes sticky		
luminous transmittance rel NA τ	%	0.54	0.45	0.67
relative change	%	5.3	8.3	3.7
hazard level		0.32	0.28	0.38

Resistance to ignition

test ↓ sample →		13010		
		-19	-20	-21
Resistance to ignition		The flame self-extinguishes and the material ceases to glow within ≤ 1.5 sec. The flame does not reach the test mark.		

Eyelet strength

test ↓ sample →		13010		
		-22 one eyelet	-23 two eyelets	-24 no eyelet
Eyelet strength		No tearing of any seam, no tearing of any eyelet, not any removal of any eyelet could be observed, respectively.		

Aalen, 30 Jan 2013



 Dipl.-Ing. (FH) Sonja Forstreuter
 ECS-test engineer