

# Test Report

**Nr. 1025-ECS-15**

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Test lab accredited by DAkkS D-PL-19590-02-00

Notified by the Central Authority of the Federal States for Safety Technologies (ZLS) ZLS-NB-0156

**Customer**

Small Beginnings, Inc.  
17229 Lemon St. Ste. B2  
HESPERIA  
CALIFORNIA 92345  
USA

**Manufacturer**

Test report contains

Main part, 1 measurement report

Number of pages in this test report

7

Product

Optically opaque eye-protectors intended for phototherapy applications on newborn children

Arrival of samples

Feb 12, 2014

Period of testing

Feb 12 - 17, 2014

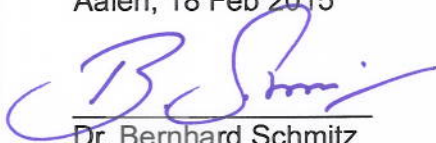
Test specifications (Standards)

DIN EN 166 : 2001

**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, 18 Feb 2015



Dr. Bernhard Schmitz  
ECS manager

### Test objects, tests and results

Based on the tables as written in the standards DIN EN 166 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 DIN EN 166

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

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

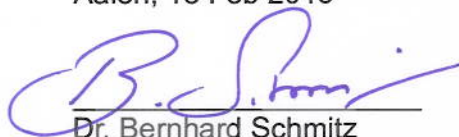
Type:	SMALL BEGINNINGS Phototherapy Eye Protectors Bili-Bonnet® Photo-Therapy Masks 01A Premie 01B Newborn 01C Ultra-Premie					
Test report:	10251-ECS-15					
Number of delivered samples:	30					
Number of test samples:	12					
Test sequence	Requirement	Tests				Samples 15025-1 to -12
		according to				
		EN	Clause	EN	Clause	
1	Marking	166	9.4			n.a.
2	Information delivered by the manufacturer / applicant	166	10			n.a.
3	Quality of surface and material	166	7.1.3	167	5	+
4	Luminous transmittance rel. NA / D65	166	7.1.2	167	6	+
5	Resistance to ageing - temperature	166	7.1.5	168	5	+
6	Resistance to ageing - UV-irradiation	166	7.1.5	168	6	+
7	Resistance to ignition	166	7.1.7	168	7	+
See the measurement report 1 for the individual results of each test sample.						

Assessment: The SMALL BEGINNINGS eye protectors for phototherapy for newborns are optically opaque in the UV, VIS and NIR spectral ranges. The EN 166 has been partially applied for testing.

The SMALL BEGINNINGS eye protectors for phototherapy for newborns satisfy the essential requirements of the Directive for Personal Protective Equipment 89/686/EEC.

Marking: SMALL BEG CE

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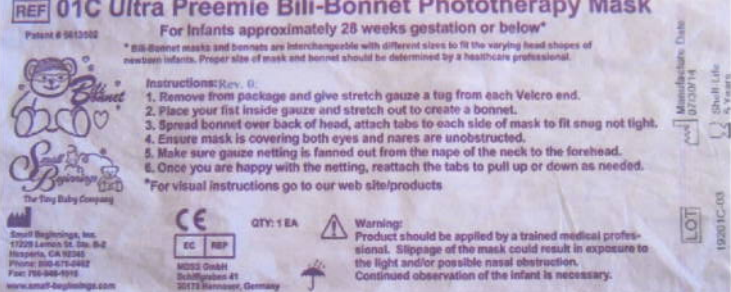


Dr. Bernhard Schmitz  
ECS-Certification

Test mark:	10251-ECS-15
Type:	Phototherapy Eye Protector

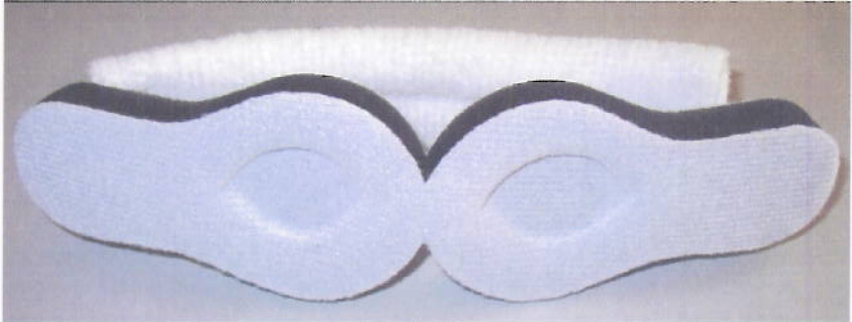


## Measurement Report 1

### Description of the type

Design:	<p>Eye protector for phototherapy for newborns, fabric white, black foam, with Velcro and head band</p> <p>Middle thickness of the lenses (interlayer) / mm:</p> <p>01A Premie: ~0.9 ± 0.05</p> <p>01B Newborn: ~0.9 ± 0.05</p> <p>01C Ultra-Premie: ~0.8 ± 0.05</p>
Material:	<p>fabric</p> <p>outer: white fabric</p> <p>inner: black foam</p> <p>black interlayer</p>
Information from the producer:	User information in each packaging
01A Premie LOT FB0727201201A	
01B Newborn LOT FB0727201201B	
01C Ultra-Premie LOT 19201C-03, 0119201C-01	

Test mark:	10251-ECS-15
Type:	Phototherapy Eye Protector

**Samples assigned to numbers:**

Sample number	Description	Dimensions
15025-1, -4, -7, -10	01A Preemie LOT FB0727201201A	170 x 48 mm <sup>2</sup>
		
15025-2, -5, -8, -11	01B Newborn LOT FB0727201201B	195 x 52 mm <sup>2</sup>
		
15025-3, -6, -9, -12	01C Ultra-Preemie LOT 19201C-03, 0119201C-01	123 x 30 mm <sup>2</sup>
		

Test mark:	10251-ECS-15
Type:	Phototherapy Eye Protector

### Quality of material and surface, transmittance

test ↓                      sample →		15025					
		-1	-2	-3	-4	-5	-6
quality of material and surface		+	+	+	+	+	+
luminous transmittance rel NA τ	%	$4.3 \cdot 10^{-6}$	$4.3 \cdot 10^{-6}$	$7.1 \cdot 10^{-5}$	$1.9 \cdot 10^{-6}$	$2.6 \cdot 10^{-6}$	$2.3 \cdot 10^{-5}$
luminous transmittance rel D65 τ	%	$4.1 \cdot 10^{-6}$	$4.0 \cdot 10^{-6}$	$6.9 \cdot 10^{-5}$	$1.7 \cdot 10^{-6}$	$2.4 \cdot 10^{-6}$	$2.3 \cdot 10^{-5}$

**Remark:** The eye protectors for phototherapy for newborns are optically opaque in the UV, VIS and NIR spectral ranges.

### Quality of material and surface after test to thermal ageing

test ↓                      sample →		15025		
		-1	-2	-3
quality of material and surface		No visible surface modification after thermal ageing, +		

### Quality of material and surface after test to UV ageing

test ↓                      sample →		15025		
		-4	-5	-6
quality of material and surface		No visible depletion, no visible coloring or darkening after UV ageing, +		

Test mark:	10251-ECS-15
Type:	Phototherapy Eye Protector

**Resistance to ignition**

test ↓	sample →	15025					
		-7	-8	-9	-10	-11	-12
flammability		temperature > 650 °C strong smoke, no ignition, no further glowing					

Aalen, 18 Feb. 15




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ECS Test Engineer