

# EC-TYPE EXAMINATION CERTIFICATE

Application of: Council Directive 96/98/EC of 20 December 1996 on Marine Equipment as amended by directive 2014/93/EU, issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Directorate. This Certificate is issued by DNV GL AS under the authority of the Government of the Kingdom of Norway.

## This is to certify:

**That the Draperies, curtains and other suspended textile materials and films**

with type designation(s)

**Trevira CS/PES Curtains and flamretardant PES/ALU Solar Reflection Fabrics**

Issued to

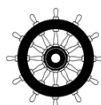
**AB Ludvig Svensson  
KINNA, Sweden**

is found to comply with the requirements in the following Regulations/Standards:

**Annex A.1, item No. A.1/3.19 and Annex B, Module B in the Directive. SOLAS 74 as amended, Regulation II-2/3, II-2/9 & X/3, 2000 HSC Code 7 and IMO 2010 FTP Code**

Further details of the equipment and conditions for certification are given overleaf.

**Høvik, 2015-09-09**  
for **DNV GL AS**



This Certificate is valid until  
**2019-05-06**

Notified Body No.: **0575**

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**Vidar Dolonen**  
**Head of Department**

DNV GL local office:  
**Gothenburg**

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**Synnøve Bolstad Eri**  
**Surveyor**

Job Id: **344.1-003771-7**  
Certificate No: **MEDB000007U**

## **Product description**

Trevira CS/PES Curtains and flamretardant PES/ALU Solar Reflection Fabrics.

Products as given in the appendix to this Certificate.

## **Application/Limitation**

Considered suitable as vertical curtains. Other trade names than above is accepted provided the product is within the limitations given above for composition and density.

Each product is to be supplied with its manual for installation and use.

## **Type Examination documentation**

Test reports: See appendix.

### **Tests carried out**

Tested according to IMO FTPC Part 7 (IMO Res. A. 471(XII), IMO Res. A. 563(14)) and in compliance with IMO 2010 FTP Code Ch. 8, and according to IMO 2010 FTP Code part 7.

## **Marking of product**

The product or packing is to be marked with name of manufacturer and type designation.

## **Mark of Conformity**

The manufacturer is allowed to affix the Mark of Conformity according to Article 11 in the Council Directive 96/98/EC on Marine Equipment and shall issue a Declaration of Conformity, only when the module D or E or F of Annex B in the same directive is fully complied with.

Module D: The quality system for production and testing shall be approved by the Notified Body.

Module E: The quality system for inspection and testing shall be approved by the Notified Body.

Module F: Compliance of the products to type as described in this EC Type-Examination Certificate must be verified by the Notified Body who also shall issue a Certificate of Conformity.

## **USCG Approval**

An U.S. Coast Guard approval number will be assigned to the equipment when the production module has been completed and will appear on the production module certificate (module D, E or F), as allowed by the "Agreement between the United States of America and the EEA EFTA states on the mutual recognition of Certificates of Conformity for Marine Equipment" signed 17 October 2005.

## APPENDIX to EC Type – Examination Certificate MEDB000007U

### Product description

| Product name | Colour Variation                                                          | Weight (g/m <sup>2</sup> ) | Composition                          |
|--------------|---------------------------------------------------------------------------|----------------------------|--------------------------------------|
| Akemi        |                                                                           | 210                        | 100% Trevira CS                      |
| Ark          | Clover<br>Garden<br>Harvest<br>Karat 150<br>Karat 300<br>Memory<br>Willow | 155                        | 100% Trevira CS                      |
| Belle        |                                                                           | 110                        | 100% Trevira CS                      |
| Blond        |                                                                           | 110                        | 100% Trevira CS                      |
| Cinq         |                                                                           | 135                        | 100% Trevira CS                      |
| Day          | Shibu                                                                     | 108                        | 100% Trevira CS                      |
| Deco         |                                                                           | 150                        | 100% Trevira CS                      |
| Eden         |                                                                           | 124                        | 100% Trevira CS                      |
| Flock        |                                                                           | 170                        | 100% Trevira CS                      |
| Focus        |                                                                           | 145                        | 100% Trevira CS                      |
| Focus Soft   |                                                                           | 135                        | 100% Trevira CS                      |
| Hybrid       |                                                                           | 115                        | 71% Trevira CS, 29% Polyester        |
| Incendo      |                                                                           | 170                        | 100% Trevira CS                      |
| Iris         |                                                                           | 110                        | 100% Trevira CS                      |
| Luna         |                                                                           | 115                        | 71% Trevira CS, 29% Polyester        |
| Market       | Cirrus                                                                    | 110                        | 100% Trevira CS                      |
| Metric       |                                                                           | 125                        | 100% Trevira CS                      |
| Mineral      |                                                                           | 170                        | 100% Trevira CS                      |
| Midnight     |                                                                           | 203                        | 100% Polyester                       |
| Note         |                                                                           | 250                        | 100% Trevira CS                      |
| Nova         | Genoa<br>Wild                                                             | 110                        | 100% Trevira CS                      |
| Nuovi        |                                                                           | 123                        | >99% Polyester, <1% Aluminium        |
| Ohm          |                                                                           | 120                        | 99% PES + 1% Aluminium               |
| Opag         |                                                                           | 124                        | 100% Trevira CS                      |
| Opag Colour  |                                                                           | 124                        | 100% Trevira CS                      |
| Orbit        |                                                                           | 118                        | 100% Trevira CS                      |
| Patch        |                                                                           | 200                        | 100% Trevira CS                      |
| Play         |                                                                           | 175                        | 100% Trevira CS                      |
| Samarkand    |                                                                           | 130                        | 100% Trevira CS                      |
| Sfera        |                                                                           | 118                        | 100% Trevira CS                      |
| Sonic        |                                                                           | 116                        | 60 % Trevira CS polyester + 40 % PES |
| Spin         |                                                                           | 118                        | 100% Trevira CS                      |
| Terra        |                                                                           | 130                        | 99% PES + 1% Aluminium               |
| Topic        | Amara<br>Topic Colour                                                     | 118                        | 100% Trevira CS                      |
| Trinity      |                                                                           | 156                        | 100% Trevira CS                      |
| Trio         |                                                                           | 115                        | 71% Trevira CS, 29% Polyester        |
| Twice        |                                                                           | 800                        | 100% Trevira CS                      |
| Vibe         |                                                                           | 150                        | 100% Trevira CS                      |
| View         |                                                                           | 105                        | 99% PES + 1% Aluminium               |
| Volt         |                                                                           | 122                        | 99% PES + 1% Aluminium               |
| Vista        |                                                                           | 80                         | 100% Trevira CS                      |
| Vivid        |                                                                           | 111                        | 99% PES + 1% Aluminium               |

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| Product name | Colour Variation     | Weight (g/m <sup>2</sup> ) | Composition     |
|--------------|----------------------|----------------------------|-----------------|
| Well         |                      | 290                        | 100% Trevira CS |
| Zip          |                      | 185                        | 100% Trevira CS |
| Årstider     | Ara<br>Mint<br>Tokyo | 90                         | 100% Trevira CS |

## Type Examination documentation

Test reports No.2009-1419-1(**Terra**), No. 2009-1421-1(**Volt**), No. 2009-1424-1(**Ohm**) dated 12 May 2009 from Warrington Brandhaus, Frankfurt, Germany.

Test reports No. 2008-1842 (**Sonic**) dated 10 October 2008 from Warrington Brandhaus, Frankfurt, Germany.

Test reports No. 2008-2034(**Vivid**) dated 19 November, 2008/ 2008-2035 (**View**) dated 19 November 2008 from Warrington Brandhaus, Germany.

Test Report No. 48699-01(amended) (**Hybrid**) dated 8 December 2011, 46698-01(amended) (**Luna**) dated 8 December 2011, and 48700-01 (**Trio**) dated 7 December 2011 from West Yorkshire Materials Testing Service, Leeds, UK.

Test Report No. 2013-1045 (**Midnight**) dated 22 January 2013 from Exova Warringtonfire, Frankfurt, Germany.

Test reports, all dated 1 May 2014 from BTTG Fire Technology Services, Leeds, UK: No. 27/03101J/04/14 (**Ark**), No. 27/03101F/04/14 (**Cing**), No. 27/03101G/04/14 (**Day**), No. 27/03101E/04/14 (**Eden**), No. 27/03101D/04/14 (**Opag** /**Opag Colour**), No. 27/03101A/04/14 (**Orbit**), No. 27/03101B/04/14 (**Sfera**), No. 27/03101C/04/14 (**Spin**), No. 27/03101K/04/14 (**Trinity**), No. 27/03101I/04/14 (**Zip**) and No. 27/03101H/04/14 (**Årstider**).

Test report No. 2014-1389 (**Nuovi**) dated 09 April 2014 from Exova Warringtonfire, Frankfurt, Germany.

Test report No. 27/03196/06/14 (**Iris**) dated 14 July 2014 from BTTG Fire Technology Services, Leeds, UK

Test report No. 27/03148/05/14 (**Incendo**) dated 29 May 2014 from BTTG Fire Technology Services, Leeds, UK

Test report No. 69845 (amended) (**Akemi**) dated 10 May 2015 from West Yorkshire Materials Testing Service, Leeds, UK.

Test report No. 27/03125/04/14 (**Belle**) dated 20 May 2014 from British Textile Technology Group (BTTG), UK.

Test report No. 27/03326B/10/14 (**Blond**) dated 18 November 2014 from British Textile Technology Group (BTTG), UK.

Test report No. 69851 (**Deco**) dated 11 May 2015 from West Yorkshire Materials Testing Service, Leeds, UK.

Test report No. 67671-01 (**Flock**) dated 21 November 2014 from West Yorkshire Materials Testing Service, Leeds, UK.

Test report No. 69865 (**Focus**) dated 11 May 2015 from West Yorkshire Materials Testing Service, Leeds, UK.

Test report No. 69866 (**Focus Soft**) dated 11 May 2015 from West Yorkshire Materials Testing Service, Leeds, UK.

Test report No. 27/03148/05/14 (**Incendo**) dated 29 May 2015 from British Textile Technology Group (BTTG), UK.

Test report No. 27/03326A/10/14 (**Market**) dated 18 November 2015 from British Textile Technology Group (BTTG), UK.

Test report No. 69868 (amended) (**Metric**) dated 10 May 2015 from West Yorkshire Materials Testing Service, Leeds, UK.

Test report No. 27/03384/12/14 (**Mineral**) dated 22 January 2015 from British Textile Technology Group (BTTG), UK.

Test report No. 69855 (**Note**) dated 11 May 2015 from West Yorkshire Materials Testing Service, Leeds, UK.

Test report No. 27/03428/02/15 (**Nova**) dated 24 February 2015 from British Textile Technology Group (BTTG), UK.

Test report No. 69856 (**Patch**) dated 11 May 2015 from West Yorkshire Materials Testing Service, Leeds, UK.

Test report No. 69858 (amended) (**Play**) dated 10 May 2015 from West Yorkshire Materials Testing Service, Leeds, UK.

Test report No. 69869 (amended) (**Samarkand**) dated 10 May 2015 from West Yorkshire Materials Testing Service, Leeds, UK.

Test report No. 69870 (**Topic**) dated 11 May 2015 from West Yorkshire Materials Testing Service, Leeds, UK.

Test report No. 2702497A/03/12 (**Twice**) dated 4 April 2012 from British Textile Technology Group (BTTG), UK.

Test report No. 69871 (amended) (**Vibe**) dated 10 May 2015 from West Yorkshire Materials Testing Service, Leeds, UK.

Test report No. 69872 (amended) (**Vista**) dated 10 May 2015 from West Yorkshire Materials Testing Service, Leeds, UK.

Test report No. 69860 (**Well**) dated 11 May 2015 from West Yorkshire Materials Testing Service, Leeds, UK.

Place and date  
Høvik, 2015-08-27

Synnøve Bolstad Eri  
Surveyor