

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB000007U
Revision No:
2

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:

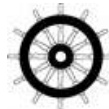
Annex A.1, item No. A.1/3.19 and Annex B, Module B in the Directive. SOLAS 74 as amended, Regulation II-2/3, II-2/9 & X/3, 2000 HSC Code 7 and IMO 2010 FTP Code

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

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

Issued at **Høvik** on **2016-02-01**

DNV GL local station:
Gothenburg



for **DNV GL AS**

Approval Engineer:
Tessa Biever

Notified Body
No.: **0575**

Vidar Dolonen
Head of Notified Body


A 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.

The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Council Directive 96/98/EC, as amended.

This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV GL AS of any changes to the approved equipment.

Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.





Job Id: **344.1-003771-8**
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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.

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APPENDIX
to EC Type – Examination Certificate MEDB000007U

Product description

Product name	Colour Variation	Weight (g/m ²)	Composition
Aki		90	100% Trevira CS
Akemi		210	100% Trevira CS
Ark	Clover Garden Harvest Karat 150 Karat 300 Memory 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
Kiri		90	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 Wild	110	100% Trevira CS
Nuovi		123	>99% Polyester, <1% Aluminium
Ohm		120	99% PES + 1% Aluminium
Ombre	Beige/ white	220	100% Trevira CS
Opaq		124	100% Trevira CS
Opaq 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 Topic Colour	118	100% Trevira CS
Trinity		156	100% Trevira CS

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Product name	Colour Variation	Weight (g/m ²)	Composition
Trio		115	71% Trevira CS, 29% Polyester
Twice		800	100% Trevira CS
Twin	Beige/black	280	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
Well		290	100% Trevira CS
Zip		185	100% Trevira CS
Årstider	Ara Mint Tokyo	90	100% Trevira CS

Type Examination documentation

Basis of approval:

- 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**),
- Test report Nos. 27/03101F/04/14 (**Cing**), 27/03101G/04/14 (**Day**), 27/03101E/04/14 (**Eden**), 27/03101D/04/14 (**Opag /Opag Colour**), 27/03101A/04/14 (**Orbit**), 27/03101B/04/14 (**Sfera**), 27/03101C/04/14 (**Spin**), 27/03101K/04/14 (**Trinity**), 27/03101I/04/14 (**Zip**) and 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.

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- 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.
- Test report No. 71393 (**Twin**) dated 14 August 2015 from West Yorkshire Materials Testing Service, Leeds, UK.
- Test report No. 72626-01 (**Ombre**) dated 18 November 2015 from West Yorkshire Materials Testing Service, Leeds, UK.
- Test report No. 27/03101H/04/14 (**Aki= Årstider**) dated 01 May 2014 from British Textile Technology Group (BTTG), UK.
- Test report No. 27/03101H/04/14 (**Kiri= Årstider**) dated 01 May 2014 from British Textile Technology Group (BTTG), UK.

Place and date
Høvik, 2016-01-11

Tessa Bieber
Surveyor