

# TYPE APPROVAL CERTIFICATE

This is to certify that the undernoted product(s) has/have been tested in accordance with the relevant requirements of the DNV GL Type Approval System.

Certificate No.	<b>11 474 - 14 HH</b>
Company	<b>Helkama Bica Oy</b> <b>Lakimiehenkatu 4</b> <b>20780 Kaarina, FINLAND</b>
Product Description	<b>Halogen Free, flame retardant and highly flexible, control and communication cable for flexible use and fixed installations</b>
Type	<b>H-FLEX INS PUR</b> <b>H-FLEX INS C-PUR</b>
Environmental Category	<b>None</b>
Technical Data / Range of Application	<b>Rated voltage: 150 / 250 V</b> <b>Max. operating conductor temperature: 90°C</b> <b>Conductor: Stranded plain (optional tinned) annealed copper class 5</b> <b>Core insulation: HF XLPE</b> <b>Screen / braid: Plain copper wires (optional tinned). Filling factor &gt;0,6 (only H-FLEX INS C-PUR)</b> <b>Outer sheath: TPU</b>
	<b>Number of cores twisted together:</b>
	<b>Cross-sectional areas:</b>
	<b>1 x 2 to 37 x 2</b> <b>0,5 mm<sup>2</sup> to 1,5 mm<sup>2</sup></b>
	<b>1 x 3</b> <b>0,5 mm<sup>2</sup> to 1,5 mm<sup>2</sup></b>
	<b>Additional places of production: Helkama Bica Oy, Hanko FINLAND</b> <b>Helkama Bica (Shanghai) Co.,Ltd,</b> <b>Shanghai China</b>
Test Standard	<b>IEC 60092-350:2008; 60092-360:2014; 60092-376:2003; EN 50363-10-2:2006; IEC 60754-1/2:2011; 60684-2:2011; 60332-1-2:2004; EN 50396:2005 part 6.2</b>
Documents	<b>Helkama Specification HBKQ 9.Spec. 149/150, dated 23.06.2014/Mas</b> <b>Test Report: HELKAMA dated 21.08.2014/11.09.2013; CT14-4152; CT14-1342Y; SGS No.17990, 14.02.2014 + No.270113-1,13.12.2012; Exova 15.10.2012</b> <b>SP No. PX17266, 2012-01-26, PX17266-2/-4, 30.01/03.02.2012</b> <b>Butterworth No.1209-0210, 10.10.2012</b>
Remarks	<b>This certificate is issued on the basis of GL Guidelines for the Performance of Type Approvals, Chapter 1 - Procedure (VI-7-1), Edition 2007 and the GL Type Approval Procedure for Shipboard Cables.</b>

Valid until **2019-10-02**

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File No. **I.N.01**

**Hamburg, 2014-10-02**

Type Approval Symbol

