

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Cable Ties**

with type designation(s)
Littleflex Cable Ties RB, LS, Cable Bands BS

Issued to
Beng Hui Marine Electrical Pte Ltd
Singapore, Singapore

is found to comply with
DNV GL rules for classification – Ships, offshore units, and high speed and light craft

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Material	Metallic or Composite
Suitable for open deck	yes

Issued at **Hamburg** on **2019-05-07**

This Certificate is valid until **2024-05-06**.

DNV GL local station: **Singapore**

for **DNV GL**

Approval Engineer: **Carsten Hunsalz**

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Arne Schaarmann
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.



Name and place of manufacturer

Fengfan Fasteners (Shaoxing) Co., Ltd.
No. 1 Fengfan Road, Yasha Ave, Shangyu District, Shaoxing City, Zhejiang Province, China

Product description

Cable Ties and Bands of stainless steel 304 / 316 with or without Epoxy or PVC coating.

Type	Tie / Band	Material	Dimension(mm)			Declared Tensile(N)	Max & Min Operating Temperature
			T	W	L		
RB1	Tie	SS	0.26	4.6	100 - 800	1000	-60 to 150 °C
RB2	Tie	SS	0.26	8	100 - 800	2220	-60 to 150 °C
RB3	Tie	SS	0.35	12	100 - 800	3115	-60 to 150 °C
RB4	Tie	SS	0.35	15	100 - 800	4100	-60 to 150 °C
LS3	Tie	SS	0.35	12	100 - 800	3115	-60 to 150 °C
LS4	Tie	SS	0.35	15	100 - 800	4100	-60 to 150 °C
RB1-C	Tie	SS+Epoxy	0.35	4.6	100 - 800	710	-40 to 85 °C
RB2-C	Tie	SS+Epoxy	0.35	8	100 - 800	1112	-40 to 85 °C
RB3-C	Tie	SS+Epoxy	0.45	12	100 - 800	2000	-40 to 85 °C
RB4-C	Tie	SS+Epoxy	0.45	15	100 - 800	3000	-40 to 85 °C
LS3-C	Tie	SS+Epoxy	0.45	12	100 - 800	3115	-40 to 85 °C
LS4-C	Tie	SS+Epoxy	0.45	15	100 - 800	4100	-40 to 85 °C
RB2-P	Tie	SS+PVC	1	9	100 - 800	445	-40 to 85 °C
RB4-P	Tie	SS+PVC	1.2	16	100 - 800	890	-40 to 85 °C
LS2-P	Tie	SS+PVC	1	9	100 - 800	2000	-40 to 85 °C
LS3-P	Tie	SS+PVC	1.2	12	100 - 800	3000	-40 to 85 °C
LS4-P	Tie	SS+PVC	1.2	16	100 - 800	3500	-40 to 85 °C
BS	Band	SS	0.26 - 0.35	8 - 15	25000	2200 - 5000	-60 to 150 °C
BS-C	Band	SS+Epoxy	0.35 - 0.45	8 - 15	25000	2200 - 5000	-40 to 85 °C
BS-P	Band	SS+PVC	1.0 - 1.1	9 - 16	25000	2000 - 3500	-40 to 85 °C

SS: Stainless steel

Stainless Steel Buckle type: BB-9, BB-12, BB-16 suitable for BS, BS-C and BS-P.

Application/Limitation

For fixing of cables, outdoor and indoor, onboard ships and mobile offshore units.

To be installed according with the manufacturer's instructions and DNV GL rules.

Type Approval documentation

Tests carried out

Loop Tensile Strength, UV resistance and corrosion tests in accordance with IEC 62275.

Marking of product

The smallest package is to be marked with the following:

- Manufacturer's name / trade mark & catalog type designation
- Manufacturer's rated load (tensile strength) as per catalogue

Job Id: **262.1-031003-1**
Certificate No: **TAE00003HU**

- Dimensions
- Type of product
- Maximum bundle diameter
- Temperature conditions

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval are complied with and that no alterations are made to the product design or choice of materials.

The main elements of the assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Routine Tests (RT) checked (if not available tests according to RT to be carried out)
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and Type Approval Certificate.

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE