

# TYPE APPROVAL CERTIFICATE

**This is to certify:****That the Rope Socketing Compound**with type designation(s)  
**Wirelock®**

Issued to

**Millfield Enterprises (Manufacturing) Limited**  
**Newcastle upon Tyne, United Kingdom**

is found to comply with

**DNV GL class programme DNVGL-CP-0095 – Type approval – Pourable compound for rope socketing**  
**DNV GL offshore standards****Application :****For socketing wire rope terminations.****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**Issued at **Høvik** on **2019-08-23**This Certificate is valid until **2024-08-22**.for **DNV GL**DNV GL local station: **Newcastle-upon-Tyne**Approval Engineer: **Gisle Hersvik**

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**Rikard Törnqvist**  
**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.



## Product description

**Wirelock®**: Unsaturated polyester resin, dissolved in styrene, for socketing wire rope terminations.

The following properties have been verified by Type Testing of cured resin:

| Property                               | Test Method | Results                                                                         |                  |            |
|----------------------------------------|-------------|---------------------------------------------------------------------------------|------------------|------------|
| Compressive Strength                   | ISO 604     | 156                                                                             | MPa              | msv (mean) |
| Compressive Strength                   | ISO 604     | 147                                                                             | MPa              | msmv       |
| Compressive Modulus                    | ISO 604     | 13 766                                                                          | MPa              | msv (mean) |
| Barcol Hardness                        | ISO 75-2    | 42                                                                              | -                | msv (mean) |
| Density                                | ISO 3838    | 1.85                                                                            | g/m <sup>3</sup> | msv (mean) |
| Density                                | ISO 3838    | 1.81                                                                            | g/m <sup>3</sup> | msmv       |
| Curing procedure used for Type Testing |             | Min. 12 hrs at room temperature, followed by<br>2 hrs at 70°C and 1 hr at 120°C |                  |            |

*Legend:*

mean: Mean of Type Test results

msv: Manufacturer's Specified Value (mean of Type Test results)

msmv: Manufacturer's Specified Minimum Value (to be below mean minus 2 standard deviations)

## Application/Limitation

Cold socketing compound for use with wire ropes. For further details, please refer to the Wirelock® Technical Data Manual, latest version: 2-11/17.

Any significant changes in design and / or quality of the material will render the approval invalid.

## Type Approval documentation

### Tests carried out

Type Testing carried out in accordance with **Type Approval documentation**.

### Marking of product

Product/package shall be marked with *manufacturer's name*; **Millfield Enterprises (Manufacturing) Limited, UK** and *type designation*; **Wirelock®**.

The marking is to be carried out in such a way that it is visible, legible and indelible. The marking of product is to enable traceability to the DNV GL Type Approval Certificate.

## Periodical assessment

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

Periodical Assessment to be performed after 2 and 3.5 years (Certificate Retention) and at renewal after 5 years (Certificate Renewal).

The main elements of the Periodical Assessment are to:

- Ensure that **Type Approval documentation** is available.
- Review design, materials, production process, and performance with respect to possible changes, in order to ensure compliance with **Type Approval documentation** and/or referenced material specifications.



Job Id: **262.1-010575-3**  
Certificate No: **TAK00001RN**

- Ensure traceability between manufacturer's product marking and the DNV GL Type Approval Certificate.

END OF CERTIFICATE