

## SPECIFICATIONS

Commercial NES835 DEF STAN 835

A Copper/Nickel Alloy with very high strength and very high corrosion resistance especially in sewer and marine environments. Also very good resistance to galling. Mainly used in Naval Engineering, Aerospace and Defence Applications.

## CHEMICAL COMPOSITION

| DEFSTAN 02-835/2(2011)<br>Rod and Forgings |             |
|--------------------------------------------|-------------|
| Element                                    | % Present   |
| Nickel (Ni)                                | 13.5 - 16.5 |
| Manganese (Mn)                             | 3.5 - 5.5   |
| Aluminium (Al)                             | 1 - 2       |
| Iron (Fe)                                  | 0.7 - 1.2   |
| Chromium (Cr)                              | 0.5 max     |
| Zinc (Zn)                                  | 0.2 max     |
| Silicon (Si)                               | 0.15 max    |
| Sulphur (S)                                | 0.15 max    |
| Tin (Sn)                                   | 0.1 max     |
| Carbon (C)                                 | 0.05 max    |
| Magnesium (Mg)                             | 0.05 max    |
| Lead (Pb)                                  | 0.02 max    |
| Phosphorous (P)                            | 0.01 max    |
| Copper (Cu)                                | Balance     |

## ALLOY DESIGNATIONS

DEF STAN 02-835  
NES835  
NES 835  
DEF STAN 835

## TEMPER TYPES

FORGED AND HEAT TREATED

## SUPPLIED FORMS

Bar Grades 1 and 2  
Forgings Class 1, 2, 3

- Bar
- Rod
- Forgings

## MECHANICAL PROPERTIES

| DEFSTAN 02-835/2(2011)<br>Rod<br>Up to 125mm |             |
|----------------------------------------------|-------------|
| Property                                     | Value       |
| Proof Stress                                 | 430 Min MPa |
| Tensile Strength                             | 725 Min MPa |
| Elongation A50 mm                            | 18 Min %    |

| DEFSTAN 02-835/2(<br>Forgings<br>Up to 125mm |             |
|----------------------------------------------|-------------|
| Property                                     | Value       |
| Proof Stress                                 | 400 Min MPa |
| Tensile Strength                             | 725 Min MPa |
| Elongation A50 mm                            | 18 Min %    |

## CONTACT

|          |                             |
|----------|-----------------------------|
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## REVISION HISTORY

|                   |                  |
|-------------------|------------------|
| Datasheet Updated | 13 November 2018 |
|-------------------|------------------|

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