

DEF STAN 02-779 (NES779)

Technical Datasheet



Service. Quality. Value.

Cupronickel - Copper Nickel Alloy

Typical Applications

- Architectural panelling & fascias
- Marine hardware
- Heat exchangers
- Cooling plants
- Valves & pumps
- Crankshafts
- Flanges
- Hot water tanks

Product Description

DEF STAN 02-779 (NES779) is a cupronickel alloy (copper nickel) which contains 90% copper and 10% nickel. The chemical structure of the alloy is further enhanced by the introduction of iron and manganese to improve overall strength and corrosion resistance. Corrosion resistance of the alloy is outstanding and DEF STAN 02-779 (NES779) is traditionally used in marine environments due to the low rates of corrosion in seawater. The alloy also offers excellent resistance from crevice and stress corrosion. With excellent durability, it is easy joined, formed and fabricated.

Chemical Composition (weight %)

| | Cu | Ni | Fe | Mn |
|-----|-------|------|------|----|
| Rem | 10.00 | 1.00 | 0.50 | |
| Rem | 11.00 | 2.00 | 1.00 | |

Mechanical Properties

| | Rods | Sheet |
|---------------------|-----------------------|-----------------------|
| Tensile Strength | 300 N/mm ² | 310 N/mm ² |
| 0.2% Proof Strength | 105 N/mm ² | - |
| Elongation | 30% | 30% |

Key features:

- Outstanding corrosion resistance
- Aesthetically pleasing colour
- High ductility
- Easily joined
- Excellent durability
- Oxidation resistant

Related material specifications

- CN102
- C70600
- CW352H
- 90/10 Cupronickel

Corrosion Resistance

Outstanding. Used extensively in marine environments as it resists bio-fouling, low rates of corrosion in seawater and brackish water. DEF STAN 02-779 (NES779) has a high resistance to ammonia stress corrosion cracking and good pitting resistance.

Weldability

Readily weldable.

Availability

Bar, hexagon, sheet and tube.

Technical Assistance

Our knowledgeable staff backed up by our resident team of qualified metallurgists and engineers, will be pleased to assist further on any technical topic.

UK Service Centres:

Smiths Belfast 02895 908 897
Smiths Biggleswade 01767 604 704
Smiths Birmingham 0121 728 4940
Smiths Bristol 0117 971 2800
Smiths Chelmsford 01245 466 664
Smiths Gateshead 0191 469 5428
Smiths Horsham 01403 261 981

Smiths Leeds 0113 307 5167
Smiths Manchester 0161 794 8650
Smiths Norwich 01603 789 878
Smiths Nottingham 0115 925 4801
Smiths Redruth 01209 315 512
Smiths Verwood 01202 824 347
Main Office 0845 527 3331

Quality & Testing:



www.smithmetal.com info@smithmetal.com

All information in our data sheet is based on approximate testing and is stated to the best of our knowledge and belief. It is presented apart from contractual obligations and does not constitute any guarantee of properties or of processing or application possibilities in individual cases. Our warranties and liabilities are stated exclusively in our terms of trading.