

# DATASHEET QUARITE-NR

## PRODUCT OVERVIEW

Quarite NR and Quarite NR+ have the highest corrosion resistance of the Topclad laser clad layer portfolio. This is due to the high percentage of molybdenum in this nickel-based superalloy. These two layers only differ in hardness and wear resistance. Quarite NR+ scores significantly higher on both since it has been cold reinforced. This layer can be used for new components as well as repairs. The layer thickness may vary between a minimum of 225µm and a maximum well above 5000µm.

## TYPICAL APPLICATIONS

Quarite NR is highly suitable for situations where an extreme high corrosion resistance is required but with moderate demands on wear resistance. It is often being applied in seawater splash zones or completely submerged. Typical applications are hydraulic cylinders in an offshore or marine environment (e.g. wireline tensioners, overflows, cranes, excavators), components for bridges and locks and subsea equipment.

## TECHNICAL SPECIFICATIONS

Corrosion resistance (ISO 10289)	> 4200hrs, grade 10
Pitting resistance (PREN)	69
Wear resistance (ASTM65 volume loss)	84mm <sup>3</sup>
Impact resistance (# impacts@20 Joule)	> 5.000
Ductility	Very high
Micro hardness	345HV
Thermal shock resistance	Very high
Operating temperature to maintain properties	< 875 °C
Roughness	0,15 < Ra> 1,6 µm
Bonding strength	∞ (infinite; intermetallic bonding)
Porosity	0%
Heat affected zone	< 0,2mm
Topclad length measurement system	Optional

