

TOPCLAD® TARDISPHERE



UNPRECEDENTED HIGH-TECH LASER SURFACE
TREATMENT FOR HIGH DEMANDING INDUSTRIES

TOPCLAD®
topclad.com

2020 – REV8

Application and Composition

Application	<ul style="list-style-type: none"> • In chemical corrosive environments • Excellent characteristics under high dynamic loads • Highly corrosive seawater environments • Alloy with exceptional resistance to wear and erosion
Example	<ul style="list-style-type: none"> • Rods for hydraulic cylinders, rollers • Shafts, trunnions, axles, conveyor screw components • Slurry pump components
Structure	<ul style="list-style-type: none"> • Reinforced Nickel Chromium Tungsten carbide matrix
Layer thickness	<ul style="list-style-type: none"> • 225 µm optimum

Technical Specifications

Bonding strength	∞ (Infinite; intermetallic bonding)
Hardness	70 HRC
Max. operating temperature	< 485 °C
Surface roughness (Ra)	≤ 0,2 µm
Wear rate	Depending on application
Porosity	0%
Corrosion resistancy	Class RA 9 - RP 10; ISO 10289 - 1000 hr
Dilution	< 1%
According to	ISO 5817, DNV-C1 & C2, DNV-M1, M2 & M3
Advice	<ul style="list-style-type: none"> • For applications in which high hardness and slurry erosion resistance is needed • For applications in which an EXTREME high wear resistance is required • For highly corrosive offshore and dredging environments
Sealing ¹ depending on type of oil & temperature	<ul style="list-style-type: none"> • Turcon® M-12 or equivalent (PTFE; Mineral fibers and Additives filled / ≤ 260 °C) • Turcon® T-40 / T-29 or equivalent (PTFE; Carbon fibers / ≤ 260 °C) _ Turcon® MF4 for FDA approved appl. • Zurcon® Z-80 or equivalent (UHMWPE; Ultra High Molecular Weight Polyethylene / ≤ 80 °C _ FDA appr. • Orkot® C380 or equivalent (Composite Polyester resin, polyester fabric; PTFE / ≤ 120 °C)
Guides ¹	

¹ The information regarding sealing is based on the technical advise of "Trelleborg Sealing Solutions".

However, unknown parameters and conditions may restrict general statements during usage. It is vital that you satisfy yourself as to the suitability of individual products through adequate engineering/testing. For this reason, and due to the wide range of applications, Topclad B.V. can accept no liability as to the suitability or correctness of the recommendations in individual cases. For specific operating conditions please consult your sealing solutions technical representative.



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