

CERAMIC CARBIDE WEARING COMPOUND

ThistleBond

A Division of E. Wood Ltd., U.K.



ThistleBond 'Ceramic Carbide Wearing Compound' is a high performance multi purpose metal repair compound specifically developed for rebuilding metal components in fluid flow environment damaged by erosion and corrosion. 'Ceramic Carbide Wearing Compound' formulation uses a complex blend of polymer resins and a polyamino-amide curing system reinforced with carbide and ceramic particles to produce coating with a high level of abrasion and erosion resistance combined with optimum physical and mechanical strength along with excellent resistance to corrosive liquids and gases.

ThistleBond 'Ceramic Carbide Wearing Compound' can be applied to any corroded or damaged component in one easy application. It is ideal for rebuilding pump bodies, impellers, propellers, guide vanes, valves, tube sheets, water boxes, rudders, heat exchangers etc to regain original dimensions with required mechanical properties. It bonds effectively to many substrates including wood / concrete. Apart from good mechanical properties, 'Ceramic Carbide Wearing Compound' has an excellent chemical corrosion resistance (Test of SALT FOG passed for 5000 hours) which ensures a full proof repair in any working condition.

SURFACE PREPARATION & APPLICATION PROCEDURE

Remove thick deposits like grease, rust, dust, dirt and make surface rough enough. Clean with ThistleBond 'Cleaner'. Surface should be prepared by mechanical grinding / wire wheel / angle grinder / needle gun or by abrasive blasting to SA 2.5 profile. Cross score surface to improve adhesion especially for fluid flow equipments.

Mix Resin & Hardener in 3:1 ratio by volume and mix thoroughly till single colour consistency appears. Apply by spatula, initially by finger over prepared surface by wetting action to fill up deformities and to remove entrapped air from the surface. Then apply further based on deformity / rebuilding dimension. Once full cure is achieved, sanding, grinding, drilling, tapping and machining can be done on the repaired portion. Ensure at the time of application that substrate temperature is more than 3°C and humidity less than 85%. 'Ceramic Carbide Wearing Compound' can be applied along with reinforcement tape where ever it is required.

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PHYSICAL PROPERTIES

Flexural Strength	700 kg/cm ²
ASTM D790	(10000 psi)
Compressive Strength	1055 kg/cm ²
ASTM D695	(15000 psi)
Tensile Shear Adhesion	175 kg/cm ²
ASTM D1002	(2500 psi)
Heat Distortion	90 °C
ASTM D648	
Abrasion Resistance	0.006 ml loss / 1000 cycles
ASTM D4060	CS17 wheel 1 kg load
Nuclear Decontamination	Excellent
Bs4247 Part 1	
Hardness Rockwell R	100
ASTM D785	
Corrosion Resistance	5000 hours
ASTM B117	unaffected
Dielectric Strength	12 kV/mm
ASTM D149	

PHYSICAL CONSTANTS

Mixing Ratio	Resin	Hardner
By volume	3	1
Appearance	Resin	Hardner
Paste	Grey	Light Grey
Drying Time @ 20°C		
Usable Life	25 Minutes	
Initial Set	1 Hour	
Grinding Time	2 Hours	
Volume Solids	100%	
VOC	Nil	
Operating Temperature	Maximum	Continuous
Dry Heat	200 °C	120 °C
Wet Heat	120 °C	70 °C
Shelf Life	5 years	

CHEMICAL RESISTANCE *

Acetic Acid 0-10%	Good
Hydrochloric Acid 0-20%	Excellent
Hydrobromic Acid Dilute	Excellent
Nitric Acid 0-10%	Excellent
Liquid Petroleum	Excellent
Nitrous Oxide	Excellent
Sulfuric Acid 0-20%	Excellent
Sulphur Dioxide	Excellent
Sea Water	Excellent

SUPPLY INFORMATION

Stock No	:	TR200
Description	:	Ceramic Carbide Wearing Compound
Pack Size	:	2 kg

* for further information see Chemical Resistance Chart

RECOMMENDED APPLICATIONS

- Rebuilding pump bodies, impellers, propellers
- Rebuilding of guide vanes, valves, tube Sheets, volutes
- Repairing the water boxes, rudders, condensers
- Reclaiming the dimensions of pump bodies, collors, flanges
- Repair of pitting, cavities in the pump casings
- Repair of heat exchangers / tubesheet surface
- Rebuilding of damaged ceramic petticoats

Distributor catering to your needs



25/34, New Jagnath Plot,
Rajkot - 360 001 (Gujarat) India.
Phone : +91-281-2460162, 2467521
Fax : +91-281-2465430
E-mail : info@procoat-india.com
Website: www.procoat-india.com