CERAMETAL 1
TechnicalData: DIFFCOR/CR/06-18

Product Description: CERAMETAL 1 is the finest poly-ceramic rebuilding compound for metals damaged by erosion / corrosion. A two component, trowel able, non-sagging synthetic metal compound specially designed to rebuild all types of fluid flow equipment which have been eroded / corroded.

Application:
Repair and rebuilding of pumps
Tube sheets, water boxes, diffusers, Pipe elbows .heat exchangers, valves, impellers / propellers, tanks, blow thrusters, piping etc.

Cerametal 1 contains ceramic fillers, giving this trowelable putty excellent wear and abrasion resistance with a smooth, low friction finish. It is ideal for filling pits and other irregularities in metal surfaces. Temperature range 20 °C to 150 °C.

Technology	Epoxy
Chemical Type	Epoxy /polyamine
Appearance(Base)	Black
Appearance(Activator)	White
Appearance(Mixed)	Grey
Components	Two component-requires mixing
Mix Ratio, by volume Resin: Hardener	3:1
Mix Ratio, by weight Resin: Hardener	2.3:1
Cure	Room temperature cure
Application	Abrasion resistance

TYPICAL PROPERTIES OF UNCURED MATERIAL

Base:
Viscosity: Paste
Weight per liter: 1.8 kg/liter
Hardener:
Viscosity: Paste
Weight per liter: 1.65 kg/liter
Mixed:
Viscosity Paste
Coverage 0.475 m² @ 1mm thick/1kg

TYPICAL CURING PERFORMANCE

Curing Properties
Gel Time @ Ambient temp minutes 20 to 25

Curing time vs. Temperature

Ambient temp	**20°C**	**25°C**	**30°C**
Pot life	**50min**	**30min**	**20min**
Full cure	**18hrs**	**14hrs**	**12 hrs.**

Typical cured properties of material

Compressive strength(ASTM D642)	14500-15000 Psi
Flexural strength (ASTM 790)	9000-9500 Psi
Hardness shore D (ASTM D2240)	85-90
Tensile strength (ASTM D882)	5500-5800 Psi
Yield	550 Psi
Elongation At break %(ASTM D882)	1.2
Shear strength (ASTM D1002) On grit blasted MS surface	2550 Psi
Abrasion resistance H-18 wheels 1000 cycles (ASTM D 4060)	122mg
Cure shrinkage	0.0007
Coefficient of thermal expansion	45×10^{-6} in/in/^{o}F

PROCEDURE: A clean dry surface free of loose rust or scale is necessary. Abrasive blasting to "near white" is preferred for general use. For severe Immersion conditions or temperature exposure, blast to "white metal".
DIFFPRIME can be used as priming material for excellent adhesion.

Mixing:
Mix "base and activator" in specified ration which is supplied in contrasting colors, on clean flat surface. Mix with spatula until a uniform blend free of streaks is obtained