COMBO WEAR FC PRODUCT BULLETIN

Product Description

An epoxy - based high performance wearing compound that combines the abrasion resistance of high alumina ceramic beads with silicon carbide.

Features and benefits

- Bonds to a damp surface
- Excellent adhesion to metal, ceramic and concrete
- Dry temperature resistance to 150°C
- Fast curing, back in service in 90 minutes

Recommended Applications

- Protects pipe elbows, exhauster fans and housings
- Repairs leaks in coal fuel lines
- Repairs chippers, bins and hoppers

Typical Physical Properties: 7 days cured @ 24°C

Colour	Grey
Mixed Consistency	Non sag putty
% solids by volume	100
Mixing ratio (resin to hardener)	2:1 weight or volume
Cured Density ASTM D792	22 gm / cc
Work time @ 24°C	10 minutes
Compressive Strength ASTM D695	75 MPa
Adhesive Tensile Shear ASTM D1002	16.4 MPa
Cured Hardness Shore D ASTM D 2240	87D
Coverage	745cm2/kg @ 6mm
Temperature Resistance	Wet 60°C Dry 150°C

Chemical Resistance: 7 days room temperature cure (30 days immersion @ 24ºC)

Kerosene	VG	Toluene	VG
10% Sulfuric Acid	VG	Ammonia	VG
10% Hydrochloric Acid	VG	10% Sodium Hydroxide	VG
Chlorinated Solvent	VG	Methanol	VG

KEY: VG = Very Good F = Fair U = Unsatisfactory

Epoxies are very good in water, saturated salt solution, leaded gasoline, mineral spirits, ASTM#3 oil and propylene glycol. Epoxies are generally not recommended for long-term exposure to concentrated acids and organic solvents.

PLEASE CONSULT TECHNICAL SERVICE FOR OTHER CHEMICALS

Surface Preparation

Proper surface preparation is essential to a successful application. The following procedures should be considered:

- First degrease the surface by using Cleaner Blend 300 (Part No 19515). All oil, grease and dirt must be removed before applying any epoxy material.
- All surfaces must be roughened, ideally by grit blasting (8 - 40 mesh grit), or by grinding with a coarse wheel or abrasive disc pad. An abrasive disc may be used provided white metal is revealed. A 75 - 125 micron profile is desired for an application. Do not "feather" epoxy material.
- Metal that has been handling sea water or other salt solutions should be grit blasted and high pressure water blasted, then left overnight to allow any salts in the metal to "sweat" to the surface. Repeat blasting to "sweat out" all the soluble salts. A test for chloride contamination should be performed prior to epoxy application. The maximum soluble salts left on the substrate should be no more than 40 p.p.m (parts per million).
- All abrasive preparation should be followed by chemical cleaning with Cleaner Blend 300, or a similar solvent. This will help to remove all traces of sandblasting grit, oil, grease, dust or other foreign substances.
- Under cold working conditions, heating the repair area to 38 – 43°C immediately before applying Combo Wear FC is recommended. This procedure dries off any moisture, contamination or solvents and assists the epoxy in achieving maximum adhesion to the substrate.
- All prepared surfaces should be lined as soon as possible, to eliminate any rusting of the prepared surface.
- For equipment that will be exposed to extreme vibration or impact, it is highly recommended that expanded metal be tack welded to the substrate and Comb Wear FC trowelled in and over the expanded metal. Care should be taken to make sure there are no voids or air pockets.

Mixing: Mix Ratio - Weight/Volume: 2 parts Resin to 1 part Hardener

Comb Wear FC is formulated to be a dense mix that can be applied easily to vertical and overhead surfaces without running or sagging. Add hardener to resin and mix thoroughly for about 2 minutes or until a uniform consistency is achieved, being careful to mix material form bottom and sides of container. When mixing large quantities of resin and hardener, use a T shaped mixing paddle with a slow speed high torque drill.

Priming

On areas where grit blasting is not practical, and expandable metal cannot be tack welded to the surface it is recommended to use Brushable Ceramic as a primer coat to the metal surface. Apply a thin coat (280 - 450 microns) of Brushable Ceramic to the metal surface and allow to set up for a few hours. Them immediately apply Comb Wear FC to the surface before the prime coat is fully cured. This prime coat will promote greater adhesion to a smooth surface.

Application

For best results, product should be kept and applied at room temperature. Combo Wear FC can be applied when temperatures are between 4°C and 32°C. When temperatures are below 21 °C, cure and work time will be longer, and above room temperature, cure and work time will be shorter. Using a putty knife or trowel, a very light coat should be applied to "wet out" the surface, allowing for 100% contact and further thickness buildup. Then continue to build up to desired thickness. Combo Wear FC can be trowelled to a smooth finish with a few drops of water or by warming the trowel gently with a torch and lightly trowelling over the uncured wear system.

Cure

Combo Wear FC functional cure is 90 minutes at 24°C at 12mm thick. The cure may be increased by applying external heat to 65°C for 30 minutes. This can be done with a hot box, heat lamps or other heat sources. Never use a direct flame on epoxies. Complete cure is 8 hours at 24°C.

PRECAUTION

For complete safety and handling information, please refer to the appropriate Material Safety Data Sheet prior to using this product.

Warranty: Devcon will replace any material found to be defective. Because the storage, handling and application of this material is beyond our control, we can accept no liability for the results obtained.

ORDERING INFORMATION

Stock No.	Unit Size
11450	4 kg

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