WEAR SEAL – CBC™

CBC™ mortar series of compounds are trowel lay onto an anchoring expended mesh. CBC™ is a mortar bonded product range; contains extremely hard sintered compounds like Alumina and Silicon Carbide as fillers in CBC™ Linings. CBC™ contains micro and nano-components to ensure high degree of densification by close the pores of the mortar element.

CBC™ is a range of extremely high strength compounds providing superior protection against moderate to severe wear conditions - available as both low and high temperature products, catering for process temperatures up to 100°C and 900°C respectively.

The high hardness fillers of sintered compounds incorporated in the CBC™ matrix offer extremely good sliding wear resistance. CBC™ has a hard sintered Alumina/Bauxite/Silicon Carbide base. CBC™ compounds are available with a variety of bonding agents, depending on the application.

CBC™ has an advantage for all the grades about flexibility of use. CBC™ can be employed to install new linings with difficult profiles and on the roofs too using few simple lining tools. Recommended CBC™ lining thickness depends on the job requirements and application conditions. The thickness of the lining can be recommended after technical evaluation of BMW at the lining site. Curing time of CBC™ series of compounds is 48 hours.

Application areas of plant equipment and system components lined with CBC™:

- Drag Chin Conveyors;
- Pneumatic Conveying systems for Coal, Cement and Slag ;
- Dust Extraction Equipment; Hydro Cyclones, Cyclones;
- Grinding Mill internal lining for Classifier, mill body and difficult shapes.
- Static and Dynamic Separators; Chutes etc.

CBC™ provides excellent protection against high erosive wear at temperatures up to 100°C to 900 Deg C depending on the composition of mortar and filler compounds.

Quantity Requirement:

2.6 – 2.8 Kg weight of CBC™ Lining per sq m/mm thickness depending on the grade of CBC™.

Standard Lining requirements:

- Install Mesh.
- Mix Dry Compound (consisting of mortar, metallic/poly fibre & Sintered Alumina granules/added with Silicon Carbide granules).
- Add water & BMW- S.Chem and mix.
- Trowel Mix onto Mesh.
- Spray BMW- cure on the CBC lining(after 10 hours of laying)

A planetary mixer is used for mixing the ready mix powder added with S.Chem and water. A significant change in consistency of the dry CBC^{TM} material (from dry to plastic) must be observed within few minutes from addition of CBCTM chemical added with water. The CBC^{TM} has to be laid on the Expandable Wire mesh already fitted on the surface of application.

CBC^{TM} 100 Wear Resistant Linings:

CBC^{TM} 100 provides moderate wear protection against high erosive wear at temperatures up to 110°C.

Chemical Composition:

- Al2O3%: 10 max
- CaO%: 20 max.
- SiO2%: 80max

PROPERTIES of CBC^{TM} 100:

- Density 2.6 gm/cc
- Compressive strength: 1400 Kg/cm2
- Flexural strength: 600 kg/cm2
- Casting shrinkage: 0.2%
- Max. Service Temperature: 100°C
- Deep Abrasion Resistance: 0.16 gm.
- Jet Erosion Test: 0.07 gm

CBC^{TM} 500 Wear Resistant Linings:

They provide excellent protection against high erosive wear at temperatures up to 400°C.

Chemical Composition:

- Al2O3%: 60 max
- CaO%: 10 max
- SiO2%: 30 max

PROPERTIES of CBC^{TM} 500:

- Density 2.65 gm/cc
- Compressive Strength: 1600 Kg/cm2
- Flexural strength: 700 kg/cm2
- Casting shrinkage:0.22%
- Max. Service Temperature: 400°C
- Deep Abrasion Resistance: 0.14 gm
- Jet Erosion Test: 0.06 gm

CBC^{TM} 900 Wear Resistant Linings:

They are employed to provide excellent protection against high erosive wear at temperatures up to 1000°C.

Chemical Composition:

- Al2O3%: 50 max
- SiC%: 20 max
- CaO%: 10 max
- SiO2%: 30max

PROPERTIES CBC^{TM} 900:

- Density 2.70 gm/cc
- Compressive strength 2000 Kg/cm2
- Flexural strength 900 kg/cm2
- Casting shrinkage:0.20%
- Max. service temperature 1000°C
- Abrasion resistance: 0.13 gms
- Jet Erosion Test: 0.05 gms

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WEAR SEAL – DIAMOND™

TECHNICAL DATA

1.	ALUMINA CONTENT	:	Min 90%
2.	BULK DENSITY	:	2.8 – 3.0 GM / CC
3.	WATER ABSORPTION (POROSITY)	:	1-2% (MAX)
4.	TEMPERATURE RESISTANCE	:	200 DEGREE CELSIUS
5.	COLOUR	:	WHITE
6.	THICKNESS PER COAT	:	05-30 mm
7.	% SOLID BY VOLUME	:	100
8.	POT LIFE AT 25 DEGREE C	:	45 MINS
9.	PACKAGE SIZE	:	5 Kg - 40 Kg

DESCRIPTION:

Smooth, non-rusting ceramic epoxy based putty used to repair, recondition and rebuild ceramic lined equipments, cast basalt lined equipments or any other component which is subjected to wear and erosion.

RECOMMENDED APPLICATIONS

1. Repairs in tight spots where a fine flowing putty is required.
2. As ceramic filler in 1-5 mm gaps.
3. Fixing wear resistant equipments.
4. Protection of metal from corrosion.
5. Joining tile-tile or pipe-pipe liners.
6. Lining pumps and wear faces
7. Prevents wear on metal surfaces that are exposed to abrasion and erosion such as bends, pipes, MPOs, MDVs, valves and pumps.
8. Protecting flanges and elbows
9. Ideal for repairing ceramic lined elbows, worn out tiles and gaps.

LIFE AND STORAGE:

A shelf life of 1 year from date of manufacture can be expected when stored at room temperature (22 Deg C) in their original containers.

SURFACE PREPARATION:

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

- All surfaces must be dry, clean and rough.
- If surface is oily or greasy use Cleaner Spray to degrease the surface.
- Remove all paint, rust and grime from the surface by abrasive blasting or other mechanical techniques.
- Aluminum repairs: Oxidation of aluminum surfaces will reduce the adhesion of an epoxy to a surface. This film must be removed before repairing the surface, by mechanical means such as grit-blasting or chemical means.
- Provide a “profile” on the metal surface by roughening the surface. This should be done ideally by grit blasting (8-40 mesh grit), or by grinding with a coarse wheel or abrasive disc pad. Do not 'feather edge' epoxy materials.
- Remove all traces of sandblasting, grit, oil, grease, dust or other foreign substances.
- Under cold working conditions, heating the repair area to 38 Deg C - 43 Deg C immediately before applying WEAR SEAL is recommended. This procedure dries off any moisture, contamination or solvents and assists the epoxy in achieving maximum adhesion to the substrate.
- Always try to make the repair as soon as possible after cleaning the substrate, to avoid oxidation or flash rusting.

MIXING:

WEARSEAL is formulated to be a dense mix that can be applied easily to overhead and vertical surfaces without running or sagging. Add the hardener to the resin and mix thoroughly on a mixing board using a spatula. Do not mix in the containers.

APPLICATION:

Spread the compound over prepared surface with a putty knife or similar tool. Press material firmly into all cracks and voids to ensure maximum surface contact and avoid trapping air.

CURE:

A 10 mm thick section of WEAR SEAL will harden at 21 Deg C ideally in about 4hours. The material will be fully cured in 16 hours. The actual cure time of epoxy is determined by the mass used and the temperature at the time of repair.

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