MatCrete Specifications Datasheet

October 2017

MatCrete for external balconies/walkways

1. Ensure that the surface to be coated is free of:
   - Dirt
   - Grease, oil or fat
   - Organic growth
   - Friability
2. Dilute 1 volume CreteBond with 4 volumes clean water and then use this solution to mix **MatCrete** powder to a sloppy plaster consistency. Using a block brush place this material in manageable workloads onto the surface to be waterproofed. Ensure that this overlaps the wall by 100mm where the floor and wall meet.
3. Place CemForce membrane cut to the correct dimensions into this slush making sure that all trapped air or bubbles are properly ironed out.
4. Repeat the process overlapping the CemForce 50mm until the entire area to be waterproofed is properly covered with the **MatCrete** system.
5. At the end of each day allow the completed work to stiffen overnight and pick up from that point the following day.
6. Repeat point 2 to point 4 (Only this time lay the CemForce perpendicular to the first layer).
7. Apply a final coat of **MatCrete** over the entire area so as to ensure that this coat removes the texture of the CemForce membrane properly.
8. Should you need to lay a screed/topping place the mixed material on top of a moist **MatCrete** slush and compact it properly. Alternatively, allow the system to air cure for three days before mist curing and doing any of the following:
   - Applying any form of paint system.
   - Applying a self-leveling compound.
   - Applying tiles.
9. Should a cement based finish be the first choice one can float Cemcrete's Colour Hardener into the screed/topping in accordance with the relevant data sheet, this should then be sealed with Cemcrete's Color Hardener Sealer once properly hydrated.

Special Note

To facilitate ease of work on site I recommend that the CreteBond/water solution be mixed prior to commencement of work on site and stored in 200lt drums. The CemForce to be used for the flashing should also be pre-cut to 200mm prior to commencement of work on site.

MatCrete for plinth area

1. Ensure that the surface is hard, clean and free of:
   - Dirt
   - Grease, oils or fat
   - Organic growth
   - Friability
2. Where the wall area meets the foundation do a flashing overlapping the floor and foundation 100mm using **MatCrete** mixed to a slush and CemForce membrane cut 200mm wide. Dilute 1 volume FlexBond with 5 volumes clean water and then use this solution to mix **MatCrete** powder to a sloppy plaster consistency. Using a block brush place this material in a band overlapping the floor and wall by 100mm.
3. Place CemForce membrane cut to the correct width into this slush making sure that the ends overlap by 50mm. Iron out any trapped air or bubbles.
4. Overcoat this flashing with a second coat of **MatCrete** and allow to set.
5. Using the same mixing ratios described in point 3, paint the **MatCrete** slush approximately in bands 1000mm in width starting at the finished floor level of the plinth area down to the foundation.

6. Run CemForce rolls into this wet slush following the team applying the slush from one end to the other from top of wall to top of wall. Using the same **MatCrete** mixture as described in point 3 ensure that the CemForce is properly saturated and fixed to the surface with a second coat. Air locks and bubbles to be ironed out.
7. Repeat the process overlapping the CemForce 50mm until the entire plinth area is properly covered with the **MatCrete** system.
8. At the end of each day allow the completed work to stiffen overnight and pick up from that point the following day.
9. Repeat point 6 to point 9 (Only this time lay the CemForce perpendicular to the first layer).
10. Apply a final coat of **MatCrete** over the entire area so as to ensure that this coat removes the texture of the CemForce membrane properly.
11. Allow this to set properly and air cure for at least three days before back filling the soil.
12. In order to prevent damage during the back filling process one could place bitumen coated soft board against the waterproofing before filling as an optional extra measure.

Special Note

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MatCrete for plastered wet areas such as showers or bathrooms

1. Ensure that the surface is hard, clean and free of:
   - Dirt
   - Grease, oils or fat
   - Organic growth
   - Friability
2. Dilute 1 volume FlexBond with 4 volumes clean water and then use this solution to mix **MatCrete** powder to a sloppy plaster consistency. Using a block brush place this material in manageable workloads in the corners of the walls overlapping 100mm on each wall. The same applies where the floor meets the walls.
3. Place polypropylene membrane cut to the correct dimensions into this slush making sure that the ironed out membrane is impregnated with the **MatCrete** slurry. (Polypropylene can be supplied pre-cut in strips 10m x 200mm).
4. Embed this saturated membrane into the existing coat of **MatCrete** ensuring that all trapped air or bubbles are properly and allow this to stiffen.
5. Coat the balance of the surfaces requiring waterproofing with **MatCrete** slurry.
6. At the end of each day allow the completed work to stiffen overnight and pick up from that point the following day until the entire shower wall area is coated.
7. Apply a final coat of **MatCrete** over the entire wall area so as to ensure that this coat removes the texture of the CemForce membrane properly.
8. For showers and toilets continue with the same process on to the floor area. Allow this to set and then place your screed.
9. It would be an added bonus if your screed mix could be:
   - 1 volume Cemcrete Water-Repellent Cement
   - 3 volumes clean river sand
   - 0.5 volumes clean plaster sand

   Alternatively, one can use:
   - 1 volume Cemcrete Water-Repellant Cement
   - 4 volumes crusher run

Special Note

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MatCrete for use on concrete roofs

1. Ensure that the surface is hard, clean and free of:
   - Dirt
   - Grease, oils or fat
   - Organic growth
   - Friability
2. Where the wall area meets the floor area do a flashing overlapping the floor and wall 100mm using **MatCrete** mixed to a slush and CemForce membrane cut 200mm wide. Dilute 1 volume CreteBond with 5 volumes clean water and then use this solution to mix **MatCrete** powder to a sloppy plaster consistency. Using a block brush place this material in a band overlapping the floor and wall by 100mm.
3. Place CemForce membrane cut to the correct width into this slush making sure that the ends overlap by 50mm. Iron out any trapped air or bubbles.
4. Overcoat this flashing with a second coat of **MatCrete** and allow to set.
5. Using the same mixing ratios described in point 3, paint the **MatCrete** slush approximately in bands 1000mm in width starting at the top of the parapet one end of the roof to the opposite side of the roof, up the wall ending on the opposite parapet .
6. Run CemForce rolls into this wet slush following the team applying the slush from one end to the other from top of wall to top of wall. Using the same **MatCrete** mixture as described in point 3 ensure that the CemForce is properly saturated and fixed to the surface with a second coat. Air locks and bubbles to be ironed out.
7. Repeat the process overlapping the CemForce 50mm until the entire roof area is properly covered with the **MatCrete** system.
8. At the end of each day allow the completed work to stiffen overnight and pick up from that point the following day
9. Repeat point 6 to point 9 (Only this time lay the CemForce perpendicular to the first layer).
10. Apply a final coat of **MatCrete** over the entire area so as to ensure that this coat removes the texture of the CemForce membrane properly.
11. The areas exposed to light traffic should then be covered with Cemcrete's SuperScreed placed at a thickness of 5mm to 10mm, asphalt or AstroTurf for roof gardens etc. Cemcrete Thermoplastic Coating or Roofseal (two coats) with polypropylene fibre 6mm incorporated into it should be used for cantilevers, parapets and areas not exposed to traffic so as to retard deterioration.
12. Areas coated with Thermoplastic Coating should be recoated every five to ten years as part of an ongoing maintenance program.

Special Note

To facilitate ease of work on site I recommend that the FlexBond/water solution be mixed prior to commencement of work on site and stored in 200lt drums. The CemForce to be used for the flashing should also be pre-cut to 200mm prior to commencement of work on site. I attach herewith the data sheets for: FlexBond, **MatCrete** and CemForce.

MatCrete for flat roofs previously coated, constructed out of rib and block/where a floating system is required

Storage of stock received

Keep **MatCrete** bags off the floor preferably on pallets in a dry cool place. Both the CreteBond and **MatCrete** should be shed protected from freezing.

Surface preparation

The surface of the roof should be stripped of all existing tiles and should be at the required levels and falls prior to waterproofing. All sharp edges and protrusions should be removed. This can be achieved with stone discs or rubbing bricks.

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Once the surface is true in plane and free of dirt and protrusions the surface area where the floor or roof meets with the parapet walls should be rounded off in the following manner:

- Using a 1 volume CreteBond 4 volumes water solution mix up a screed mix.
- Having achieved a " putty " consistency, this screed mix is to be used to round off the areas where the floor area meets the wall area approximately 100mm up the wall and 100mm onto the floor.
- Allow this to set before commencing further.

MatCrete system

1. Lay out CemLam, plastic side facing down towards substrate and woven side facing upwards. Butt join the edges of the CemLam and where the CemLam has woven overlaps, these must be lifted to overlap the adjoining CemLam. These strips of CemLam should be fixed to the horizontal surface of the parapet walls using Hilti plugs and washers. This should then run from one elevation to the opposite elevation flat to the substrate up to the opposite parapet where it is once again fixed to the horizontal surface of that parapet wall (i.e. East to West or South to North).
2. Dilute 1 volume CreteBond with four volumes clean water and use this solution to mix **MatCrete** to a sloppy plaster consistency.
3. Apply this **MatCrete** slush over the woven material overlapping the joints approximately 100mm on either side.
4. Work CemForce strips cut 200mm in width into the wet **MatCrete** and then coat this CemForce joining strip with the **MatCrete** slush again ensuring that trapped air is worked out leaving no bubbles.
5. Allow this to set overnight.
6. Apply **MatCrete** slush over the entire roof area.
7. Lay out the CemForce membrane perpendicular to the CemLam into the wet **MatCrete** slush (i.e. Should CemLam be laid East to West then the CemForce should be laid North to South ensuring 50mm overlaps). This should also overlap the CemLam on the parapet by 50mm.
8. Apply a second coat of **MatCrete** slush having allowed the first coat to stiffen.
9. Allow to set overnight before applying the final coat of **MatCrete** slush ensuring that the membrane texture is no longer visible.
10. Allow this to air cure for 3 days and then mist spray with clean water.
11. The aesthetic value can be improved using one of a number of choices:
    - Coat the entire area with Cemcrete's Thermoplastic Coating which has passed the SABS 2000 hour weather test.
    - Spread loose stone over the entire roof area so as to leave the polystyrene unexposed.
    - Cover the entire roof area with artificial grass.

Maintenance

Open flat roofs exposed to the elements and finished with Thermoplastic Coating should be re-coated periodically (approximately every 5-10 years).

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Insulation of flat rooftops as part of waterproofing system

1. With the concrete base/screed in place one must now secure the polystyrene to this base and begin the seaming process. This should at least be done where the floor meets the wall (overlapping each surface by at least 50mm to 100mm) as well as where the polystyrene is butt jointed (at least 50mm either side of the joint).
2. Using a solution of 1 volume of CreteBond and 2 volumes of water mix Cemcrete's **MatCrete** to a slurry and apply this to the joints and the area overlapping the wall and polystyrene.
3. Whilst this slush is still wet embed polypropylene membrane into the slush and then place this over the slushed areas at the joints and where the floor meets the wall ensuring that there are no air bubbles and that the membrane is saturated. Wait for 20-30 minutes and then apply another generous coat of the slush to this area and allow it to set.
4. Once the **MatCrete** has been allowed to set (±3 days) mist spray the surface with clean water and allow this to dry.
5. The aesthetic value can be improved using one of a number of choices:
   - Coat the entire area with Cemcrete's Thermoplastic coating which has passed the SABS 2000 hour weather test.
   - Spread loose stone over the entire roof area so as to leave the polystyrene unexposed.
   - Cover the entire roof area with artificial grass.

Waterproofing of double skin (cavity) parapet walls

1. Cut Cemcrete's CemLam to the required length and width of the parapet and place it with the plastic side facing the bottom. CemLam may be butt jointed to make up the required length of the wall to be waterproofed. To prevent the CemLam moving during the application and in event of air movement one will need to 'pin' this down in strategic areas in one of two methods:
   - By brushing on CreteBond to the plastic side of the CemLam before placing it onto the substrate. This acts as a glue.
   - By screwing in Hilti plugs at several intervals. Place a washer coated with Crete on the underside over the drilled hole and secure the CemLam with the screws and washers.
2. Using a solution of 1 volume of CreteBond and 2 volumes of water mix Cemcrete's **MatCrete** to a slurry and apply this to the top of the parapet walls ensuring that the CemLam is generously coated. Both sides of the wall adjoining the top area of the wall should also be coated with this by at least 50mm.
3. Double skin walls constructed with a standard size brick is normally 230mm in width so using Cemcrete's pre-cut 10m x 300mm polypropylene membrane strips cut to size and dipped into the **MatCrete** slush, place this over the top of the wall ensuring that it overlaps equally on both sides of the wall.
4. Iron out all bubbles and air locks using a paint brush dipped in the **MatCrete** Slurry and then allow to set properly until the next morning.
5. The day following the initial coat of **MatCrete** mix up another batch of the **MatCrete** and apply this so as to ensure that the CemLam is properly underpinned and that the texture is consistent over the entire area.
6. Allow this to cure for three days and then mist spray coated surface so that it cures properly.
7. This can now be left as a feature or coated with Thermoplastic Coating to blend in with the rest of the wall.

Special Note

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