Concrete Weavers LLC

it's a concrete miracle

INSTALLATION USER GUIDE:
REMEDIATION

PRESENTATION

Concrete Weavers is a new and revolutionary construction material called concrete rollsor concrete cloth. Essentially it is concrete on a roll.

The finished product is a combination of two geotextiles with a dry concrete mix inbetween. The product initially is flexible and can be put in any shape desired. Once water is applied to it, it starts to set and becomes hard. No need for plant or mixing equipment on site, just add water.

The bottom layer is a woven geotextile and the top layer is a non-woven geotextile.

Between the top and the bottom layer, there is a special Concrete Weavers dry mix,

Basically, it very well may be portrayed as 'concrete on a roll' and is utilized for a wide assortment of utilizations including the quick coating of water channels, giving incline insurance, weed concealment, course fix and general solid remediation.

SCOPE / EXTENSION

- This report or document gives direction methods for installation of Concrete Weavers as remediation in a way that boosts safety, productivity, and the physical honesty of the material and channel.
- This report or document gives helpful data to installers, clients and specifiers of Concrete Weavers & provide an overview of installation method for the lining of channels.
- The adaptable idea of Concrete Weavers means that this report or document isn't exhaustive & is proposed for direction or guidance purposes only.
- Exceptions to this rule may be required to address site-specific & additionally item specific conditions.
- The performance of Concrete Weavers is dependent on the nature of the installation. It is the installer's duty to adhere to these rules where applicable & to the project detail and drawings.

PARTICULAR & DETERMINATION & INSTALLATION ESSENTIALS

Determining or Specifying the right Concrete Weavers Thickness

Concrete Weavers is available in two thicknesses, CW Civil 8 (8mm) and CW Military 18 (18mm).

Concrete Weavers Civil can be used to line channels with a strong substrate, for example, while relining a current concrete channel or laying over a hard substrate, for example, rock. Concrete Weavers Civil may also be used for brief or temporary works. Concrete Weavers Civil is the standard thickness determined for channel lining and is recommended except either of the conditions above or below apply. Concrete Weavers Civil should be considered as where a channel is to be trafficked, is exposed to high level of trash, where water flow rates are above 8.6m/s or where the ground is especially steep or insecure.

Product	Nominal Thickness (mm)	Batch Roll Size (m2)	Bulk Roll Size (m2)	Roll Width (m)
CW CIVIL	8	10	100	1
CW MILITARY	18	N/A	100	1

Determining or Specifying The Right Concrete Weavers Roll Format

Concrete Weavers is available in Bulk or Mass Rolls or as littler or smaller Batched Rolls.

Bulk or Mass Rolls offer the speediest installation however must be deployed using heavy lifting equipment & a spreader bar or beam. Bulk or Mass Rolls are commonly more efficient to use than Batched Rolls, as far as material use and transportation.

For sites where this isn't suitable or appropriate, man portable Batched Rolls can be installed without the requirement for plant & are appropriate to littler scale works in limited access areas or regions.

Concrete Weavers is presently also available in Wide Rolls of up to multiple times the standard move width. Contact Concrete Weavers for further information.

Determining / Specifying the right Concrete Weavers Fixing / Setup

When installing over a smooth, inflexible substrate, for example, poured/pre-cast concrete or asphalt, Concrete Weavers must be firmly anchored to the substrate to mitigate the potential impacts of drying shrinkage. The most secure technique for fixing the finish of a length of Concrete Weavers is with a poured concrete anchor trench. Where this is not practical, proper concrete fixings, for example, fired concrete 'Hilti' nails, wedge anchors or masonry bolts can be used (See image 1).

The following standards should be followed to decide the area of fixings:

Fixings are required at the 'free-ends' of all lengths of Concrete Weavers.

Intermediate fixings are required at a 'concave profile change' when the separation from the profile change to the following fixing is greater than 5m. The fixings should be located approximately 100mm from the profile change (see models below)

Fixing Specification

- Concrete Weavers should always be fixed with a poured concrete anchor trench or as per the following.
- The fixings must have a shank Ø>3mm, washer Ø>16mm.
- The minimum number of fixings required for a given thickness of Concrete Weavers is shown table 2.
- More fixings may be required as an adequate number of fixings must be used to withstand a complete shear force (VREC/m) per 1m width of Concrete Weavers, as shown in the table 2 below. See fixing makers specification for VREC per fixing in a given strength of concrete.
- The fixings should be 100mm from the end of the Concrete Weavers or the apex of the concave profile change.

Jointing Specification:

- Adjacent layers of Concrete Weavers should be overlapped by a minimum of 100mm in the direction of water flow & Concrete Weavers can be jointed in the length or width direction along the overlap using masonry fixings, adhesive sealant, or thermal bonding. Generally an adhesive sealant, or thermally bonded joint is used for remediation applications. Please follow the Concrete Weavers User Guide: Jointing & Fixing for the full range of jointing technique available.

Technique or Methodology:

Equipment:

- Falling concrete must be neat & cleaned & mortar applied to large cracks or breaks (generally anything larger than 50mm in any direction) to eliminate voids under the Concrete Weavers.
- Any loose or free sols, rocks, concrete debris or trash, & vegetation should be removed.

Laying Concrete Weavers:

- Unroll the Concrete Weavers onto the surface to be remediated, with the firbrous surface facing up & PVC membrane in contact with the ground.
- Tuck the Concrete Weavers into any corners, ensuring there is intimate contact with the substrate – once in position cut the material to length.

Positioning & Fixings

- When positioning subsequent Concrete Weavers rolls, ensure that there is minimum a 100mm overlap between layers.
- Apply fixings as per the guidance above.

Jointing:

- Most generally used technique is adhesive sealant or thermal bonding of jointing for remediation projects. For detailed guidance & alternative jointing methods or technique, Please follow Concrete Weavers User Guide: Jointing & Fixing.
- Concrete Weavers should be hydrated below the overlaps before jointing, whenever possible. This is important to ensuring the joint reaches its specified strength & is especially important in dry conditions.

Hydration:

- ➤ Spray or shower the Concrete Weavers with water to hydrate, after fixing & jointing.
- ➤ Prior to hydration brushing the surface of Concrete Weavers with a stiff brush will help to improve the appearance when set by removing surface dust, footprints & prevent staining.
- ➤ Splash or spray the fiber surface on multiple occasions until the Concrete Weavers is completely soaked. The wet Concrete Weavers will initially darken and afterward turned out to be lighter as it absorbs the water.
- ➤ Don't use high pressure water spray directly on the Concrete Weavers as this may wash a channel in the material.
- ➤ Concrete Weavers can be hydrated using salt water or fresh water & will hydrate & set underwater.
- ➤ Concrete Weavers is not possible to over hydrate.
- ➤ Minimum 50% of the material weight water is required. For example Concrete Weavers Civil required 6 liters of water per square meter.
- ➤ To know proper hydration, the Concrete Weavers should feel wet to the touch several minutes after hydration.
- ➤ Please not rely on rainfall to provide hydration.
- ➤ To know whether the Concrete Weavers has been properly hydrates simply press your finger into the Concrete Weavers & release. If water is present in the depression in the Concrete Weavers, it has been properly hydrated. If no water is feel, then more water must be applied.
- ➤ Please refer Concrete Weavers User Guide: Hydration, for information on hydration & for temperature installations.

Configuration / Adjustment / Setting

- ➤ After hydration, working time is 1-2 hour.
- ➤ Refill anchor trench to create perfect termination & encourage surface water runoff to flow over the anchor trench & in to the Concrete Weavers channel.
- ➤ Concrete Weavers harden to 75% strength in 24 hours and is then prepared for use.
- ➤ Refill anchor trench to make a neat end or termination & ensure surface water overflow to flow over the anchor trench & in to the Concrete Weavers channel.
- ➤ Solid or harden Concrete Weavers to 75% strength in 24 hours and is then ready for use.
- ➤ Please refer Concrete Weavers User Guide: Equipment List for information. Dust hazard, wear proper PPE.

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