



FLEXICRETE® ARTICULATED CONCRETE BLOCK MAT

FLEXICRETE® is a system of solid square concrete blocks connected together to form continuous inter-connected areas which can be used for a variety of purposes. The current standard connection between the blocks is a galvanized mesh reinforcement; 8x8 6/6 gauge.

FLEXICRETE® can be used for:

1. Embankment Protection to prevent erosion
2. Open Storm Drain Lining
3. Aqueduct Lining
4. Shore and Beach Protection
5. Breakwaters
6. Boat Launch Ramps
7. Spillweirs
8. Pond lining support
9. Paving
10. Roads
11. Military Roads
12. Expressway Road Shoulders
14. Protection of Buried Utilities including Utilities placed under water
15. Stormwater run-off from a FLEXICRETE® surface is greatly reduced compared to an asphalt surface

FLEXICRETE® SPECIFICATIONS

The concrete strength used is 30 MPa or higher in accordance with Canadian Standard CSA23.

The galvanized mesh reinforcement wires are 203mm centre to centre (nominally 8"X8") and 4.88mm diameter (= 6/6 gauge). The cross sectional area of steel in longitudinal and transverse directions is 91mm²/metre for the 6/6 gauge.

The standard size is 400mm x 400mm x 80mm in panels, 3.6 metres long x 2.4 metres wide. A standard block weighs 27 kg. Panel weight is 168 kg per square metre. A standard 3.6 metre x 2.4 metre panel, weighs 1.45 Tonnes.

FLEXICRETE is easily installed. The 3.6m X 2.4m panels weigh approximately 1.45 tonnes. Each panel is provided with 4 lifting loops embedded in the 4 corner blocks. Panels can be lifted with a short spreader bar from either of the 2.4m ends (lifting loops are 2.00m c to c). Terrafix can rent out a lifting frame with which the panels can be lifted at all four corners.

With the lifting frame the panels can be handled by various types of equipment such as fork lifts, loaders, back hoes, boom trucks and many types of cranes. Access to a site would be a factor in deciding what type of equipment would be most suitable.

Normal installation procedure is to prepare the formation of the ground on which the panels are to be placed. Depending on the ground conditions and the purpose of the installation this may require: shaping, consolidation, laying a base course of granular materials (e.g. for a FLEXICRETE road base or for a boat launch ramp) followed by a Terrafix filter cloth.

We recommend that the end blocks at the bottom of a sloping installation should be embedded in a trench to avoid undermining we recommend that the end blocks at the top of a sloping installation should be “tucked in” to the ground formation to provide anchorage and to prevent undermining.

WHY USE FLEXICRETE®

The main advantage in using FLEXICRETE® flexible precast concrete panels is the speed and ease with which they are placed.

Saving of time is important on any project. For example - constructing a concrete storm drain or aqueduct by traditional methods of forming and pouring in situ concrete is a messy and slow process. In one day, with one backhoe, 400 square metres of FLEXICRETE® panels were placed on the Angus Glen spillweir. FLEXICRETE® easily conforms to the shape of the formation on which it is placed.

FLEXICRETE® flexible concrete mattresses are ideal for the prevention of erosion of river embankments, open storm drains, aqueducts and breakwaters.

FLEXICRETE® can also be used for: paving, road bases, temporary roads, pedestrian paths, driveways, boat launching ramps, retaining walls etc.

ADVANTAGES

Per F ormance	Flexibility of the system ensures continuity of the surface resisting erosion
Qua L ity	Precasting in accordance with Canadian Standards in a factory controlled environment ensures excellent concrete quality control and concrete with a durable finish
V E rsatility	The mesh can easily be cut to allow room for trees, manhole covers etc.
Fle X ibility	FLEXICRETE® easily conforms to the contours and shape of the formation on which it is placed
Dra I nage	FLEXICRETE® allows free passage of water thus preventing build up of pressure on the landward side of an embankment
Cra C kfree	Movements due to erosion, frost heave etc. are accommodated by the flexibility of the jointing system
Cor R osion free	The reinforcement is galvanized wire mesh.
Spe E d	Since the units are precast, the time spent at a site is kept to a minimum
Con T inuity	The 400mm X 400mm X 80mm blocks in 3.6m X 2.4m panels are all interconnected providing continuity over the total construction area. No need for expansion joints
Conv E nience	FLEXICRETE® can be placed under water eliminating the need to construct river diversions or to dewater a site

FAQ'S

Q. *What are the roughness factors for channel flow calculations?*

A. Bazin----"N"=0.23 to 0.30. Manning--"n"=.0139 to 0.015

NOTE: These are estimated figures for surfaces ranging from a polished exposed natural river gravel lightly etched to normal limestone aggregate with a heavy etch.

Q. *What is the size of the individual blocks?*

A. The standard size is 400mm x 400mm x 80mm in panels 3.6 metres long x 2.4 metres wide. A standard block weighs 27 kg. Panel weight is 168 kg per square metre. A standard 3.6 metre x 2.4 metre panel, weighs 1.45 Tonnes.

Q. *Can FLEXICRETE® support wheeled traffic?*

A. Yes, with proper compaction of road base. The prepared surface shall provide a firm and unyielding foundation for the mats with no sharp or abrupt breaks in the grade.

Q. *Can trees be planted?*

A. Individual blocks can be cut out to allow for tree or bush planting. Sufficient earth should be removed to ensure tree roots are well under the surface and to allow for back-filling around the trunk with gravel and rocks of an appropriate size.

Q. *Can blocks be placed individually?*

A. Where access by small crane or boom truck is restricted individual blocks can be laid. Note that the individual blocks would be interconnected to provide a continuous mattress of FLEXICRETE®.

WAIVER

While we guarantee the quality of the materials and workmanship used in the manufacture of FLEXICRETE® we cannot guarantee that it will be suitable for all the uses that customers may expect it to perform. Each Client must take responsibility for the intended use and be completely satisfied that FLEXICRETE® is suitable for such use.