Why CEMSTONE™

PERVIOUS CONCRETE

What is pervious concrete -   Pervious concrete is a concrete mixture that contains no fine aggregate (sand), thereby allowing water to pass through the concrete matrix. Pervious concrete and the recharge bed promote filtration of heavy metals, suspended solids, and even petroleum products.

Why use pervious concrete -   1. To capture and treat storm water
2. Create less non-permeable surfaces
3. Promote tree growth
4. Lessen the heat island effect (increase in temperature due to hard dark surfaces)
5. Recharge aquifer
6. Reduce site disturbances, i.e. better land management, no storm water retention ponds

Where should it be used -   Parking areas and very low volume roads. Can be combined with concrete paving and used in strips.

Can it be colored -   Yes, both integrally and stained.

What slump is used -   The slump of pervious is 0" and is batched to a constant water to cementitious materials ratio (w/c) ratio.

Is it freeze/thaw durable -   Yes, Cemstone's mixture has been through extensive testing indicating it is a freeze thaw durable mixture.

What is it's strength -   Pervious concrete strengths should always be referred to as flexural strength since it is a pavement. Typical flexural strengths of 300 – 400 psi can be expected.

What thickness is used -   Typical cross sections are 6". However a structural design should be made to determine he proper thickness.

**What goes below
pervious concrete -**   A layer of clear (one size) aggregate generally 1-1/2" in size. Crushed material should be used as it supports the ready-mix trucks more effectively. The depth of the "recharge bed" will depend upon; soil type, rain fall event and run off from other hard surfaces. The recharge bed should always be designed by a person competent in hydrological design. In addition, a geotextile fabric is also used to separate the subgrade from the recharge bed. This should cover all sides of the recharge bed. The recharge bed should be wet prior to the installation of the pervious. This will assist in the curing process.

How is it installed -   The typical installation method is a spinning roller screed. It is installed in lanes and the ready mix truck should be as close to the installation as possible due to the low slump concrete. Additional

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tools include the cross roller, a joint cutter, hand tools for edging, concrete rakes and shovels.

Who does the Installation - Currently there are numerous Cemstone customers who have installed pervious concrete.

Is there a certification for installation - Yes, the NRMCA offers a training class for installers. It is very similar to the ACI Flat Work Finisher program. It is an 8-hour class followed by an exam.

How is it cured - Due to it's low w/c, pervious concrete must be moist cured a minimum 7 days under plastic sheeting. Additional, wetting of the surface should be done during the 7 days.

Can it be sealed - Yes, using a non-membrane forming sealer. A penetrating sealer could be used.

Can it be salted - It should be avoided.

Can it sanded - Sand should be avoided at all costs. Sand will clog the pore system, which can render the pavement ineffective at draining water.

How is it cleaned - Typical methods include, power washing and or vacuuming. A combination of the two seems to be the most effective at restoring the porosity of the pavement.

Does pervious concrete fit in w/ LEED - Yes, it is recognized as a method of capturing and treating storm water runoff, therefore it can assist in obtaining points.

Where has it been installed - Numerous location throughout the Twin Cities

For more information on Pervious Concrete please contact Cemstone at (651) 688-9292 or email us at jlee@cemstone.com.