

REPAIRING EXPANSION JOINTS REPAIRING CRACKS



Expansion joints are integral parts of concrete surfaces: In fact, they are planned, directed cracks of concrete surfaces. They are primarily used to decrease the impacts of concrete volume variation. Secondly, they help to avoid cracking and breaking caused by occasional or continuous surface loads. It is indispensable to fill in well-constructed expansion joints. Concrete edges may be damaged, and these damages will escalate with time. Dirt will be accumulated in the cracks, which may lead to hygienic problems. In outdoor areas, water may infiltrate the cracks, which, due to the tensioning effect of the frost, may lead to further cracks and cause detached parts. When expansion joints are neglected, these damages may become so serious in a few years that their repair may necessitate significant financial investments.

In the case of cracks other than expansion joints, the situation is the same; thus, all cracks shall be repaired, independently from their root cause.

Currently, the best solution for filling an expansion joint is a 2-component flexible polyurea having a very high viscosity during application. Thanks to this characteristic, it is able to cover and adhere to uneven surfaces perfectly. After a drying time of 30 minutes, you only have to cut the surplus using a blade. It is important to mention that the 2-component flexible polyurea can already be used 1 hour after application (at an ambient temperature of 20 °C). It can be used in extremely cold (-28 °C) and extremely hot (54 °C) conditions as well.



Using this material, cracks in cold storage rooms and freezer chambers can be repaired without interrupting the operation. Thus, compared to a previous execution time of 4-6 days, repairs can be performed in a few hours. As the cracks are filled more efficiently by the liquid filler material than by traditional 1-component filler materials, the result is an exceptionally durable solution. It is worth to mention that clean surface is a prerequisite of durable and high quality repairs. When it comes to any kind of repairs, the side walls of cracks shall always be cleaned before filling, and the filler material may only be applied after cleaning.



Z-MILAN '92 Kft. has been using liquid polyurea since 2015, and its quality has been perfect on all jobsites ever since.

Z-MILAN '92 Kft.

H-3527 Miskolc, Fonoda u. 3/c

ZVOLENSZKI István, executive director: +36-30/9674-704 and z.istvan@z-milan.hu

www.betoncsiszolas.com www.z-milan.hu

REPAIRING EXPANSION JOINTS REPAIRING CRACKS

Repairing expansion joints or cracks is easy to perform in the case of new expansion joints. Crack repair is rather easy too if the crack's edges are not broken or detached. You will only need a V-shaped grooved cut, and the expansion joint or crack can be filled with a 2-component liquid polyurea.



Cracks in the concrete

V-shaped grooved cut

Filling with polyurea

Unfortunately, in most cases, repairs are not performed until the edges become broken and detached. At this point, the repair consists of multiple steps. Firstly, broken edges shall be removed by vertical cutting, down to a depth of a couple of cm. After this, the missing concrete shall be substituted by a rapid-set 2-component repair mortar, ensuring the shortest possible interruption of operation. After a few hours of drying, the repaired surface is polished flat, and the expansion joint is reconstructed. The next step is the easiest: The newly cut slots shall be filled with a 2-component polyurea. The performed repair perfectly matches the level of the existing concrete. Heavy duty, long-term solution.



Repair mortar + polyurea = PERFECT SOLUTION

Z-MILAN '92 Kft.

H-3527 Miskolc, Fonoda u. 3/c

ZVOLENSZKI István, executive director: +36-30/9674-704 and z.istvan@z-milan.hu

www.betoncsiszolas.com www.z-milan.hu