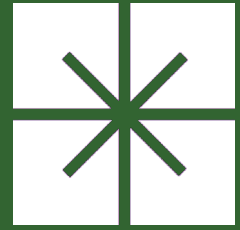


# Technical Bulletin

## Sawcut Contraction Joints



The Concrete Floor Contractors Association of Ontario was founded in 1971 to represent the concrete finishing industry.

Technical Bulletins are designed to provide state of the art information to owners, specifiers and contractors to both improve quality and reduce problems.

We hope that this information will assist you in this goal.

If you have any questions, or comments, please feel free to contact us at 905-582-9825 or by e-mail at [info@concretefloors.ca](mailto:info@concretefloors.ca)

***The Best Floors Start  
With Our Finish !***



### Sawcut Contraction Joints

Cracking in slabs on grade is commonly related to the drying shrinkage potential of the concrete mixture being used compounded by stresses which may develop through the restraint of the concrete as it shrinks (eg: under-slab friction).

Sawcut contraction joints are installed into freshly placed concrete floors to reduce these shrinkage stresses in an effort to minimize shrinkage cracking. The joint layout for each project should be discussed and finalized at the pre-construction meeting.

#### Concern:

Sawcut contraction joints which are installed too late, which are not deep enough or are spaced too far apart can lead to the development of random drying shrinkage cracks.

#### Recommendations:

- Sawcuts may be installed using specialized "Soffcut" dry process cutting or by using conventional wet-cutting saws.
- Soffcut sawing should commence immediately following final troweling to the depth recommended by the equipment manufacturer.
- Wet cutting should commence within 12 to 24 hours of slab casting depending upon ambient conditions (earlier in higher temperatures) to a depth of 1/3 the slab thickness.
- Sawcut contraction joints must be spaced in relation to the slab thickness from approximately 2.5m on centre each way (o/c e.w.) for 100mm slabs to no more than 4.5m o/c e.w. for a 175 mm or thicker slabs.
- Sawcuts should be reinforced against differential vertical movement using smooth dowel bars or slab reinforcing (eg: wire mesh/steel fibres).

#### Further References:

- CSA A23.1 Concrete Materials and Methods of Concrete Construction
- ACI 302 Guide for Concrete Floor and Slab Construction

[www.concretefloors.ca](http://www.concretefloors.ca)

August 28, 2008