

Technical Bulletin

Sloping Drainage Floors



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

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Background

Sloping floors are commonly used in food production facilities, parking garages and wash bays to allow for the drainage of water. These floors are complex in terms of design and construction requiring the careful selection of a suitable drainage slope percentage, drain layout, construction methodology and materials.

The surface of all concrete floors are wavy in nature, being comprised of both hills and valleys along any line. The amplitude and frequency of these hills and valleys are related to the construction methodology and materials that are employed in the construction process.



Concern:

Constructing floors with too little slope increases the likelihood that the normal waviness of a concrete floor will create a valley (or birdbath) or hump which will inhibit the flow of water between the high point and the drain.

Floors with lower slope percentages generally require the need for specialized construction methods and the need for labour to assist the flow of water to a drain (eg: use of a squeegee).

Recommendation:

The standard recommendation for sloping "drainage" floor surface is to provide a nominal 2% slope from the corner of each drain area in order for water to drain freely with minimal assistance.

Owners should carefully consider the impact of the selected slope on the other uses of the concrete floor as well.

Further References:

- ACI 302 Guide for Concrete Floor and Slab Construction



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