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## ADA COMPLIANCE OF BOMANITE/BOMACRON IMPRINTED CONCRETE

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These selected excerpts are from the ADA and ABA Accessibility Guidelines for Buildings and Facilities. They outline the basic requirements for floor and ground surfaces in terms of slip resistance and change of elevation and are provided to you for informational purposes only. The Bomanite Company does not warrant any particular product for any particular purpose or intended use. For complete information on the requirements for specific situations such as water parks, the complete document can be viewed online at <http://www.access-board.gov/ada-aba/final.htm#Surfaces>.

The majority of Bomacron and Bomanite Tools meet the requirements set by the American Disabilities Act provided they are installed correctly. Irregularities in elevation within the tools themselves rarely exceed 1/4" (fig. 303.2), and in the cases of some tools that do, the transition falls within the beveled edge criteria (fig. 303.3).

The static coefficient of friction (SCOF) of imprinted concrete or Bomanite Thin-Set far exceeds the standard 0.6 minimum in an unsealed state. The application of a sealer or coating will change the SCOF dependant upon the type of product that is applied and the thickness of build of the product. A thin application of a water-based acrylic will have less detrimental effects on the SCOF than a high-build epoxy coating. One common means of maintaining an adequate SCOF is the use of glass beads or other slip-resistant additives in products themselves.

In all cases where ADA compliance is required, it is the responsibility of the architect to determine whether the products they have specified are acceptable for a particular project and for its intended use. It is highly recommended that a Bomanite Licensed Contractor make a sample for a specific project to aid the architect in selecting a compliant surface or finish. Independent testing can be performed on the sample or mock-up if required or the installer themselves can assess the product with easily purchased testing equipment. Due to the thousands of combinations of Bomanite/Bomacron Tools, material being imprinted and the range of sealers and coatings, the Bomanite Company can not determine the acceptability of any given product combination nor give "best guess" product combination recommendations, nor does it warrant a particular product for a particular use or intended purpose.

*NOTE: The following is taken from the ADA and ABA Accessibility Guideline for Buildings and Facilities.*

### 302 Floor or Ground Surfaces

302.1 General. Floor and ground surfaces shall be stable, firm, and slip resistant and shall comply with 302.

EXCEPTIONS: 1. Within animal containment areas, floor and ground surfaces shall not be required to be stable, firm, and slip resistant.

2. Areas of sport activity shall not be required to comply with 302.

Advisory 302.1 General. A stable surface is one that remains unchanged by contaminants or applied force, so that when the contaminant or force is removed, the surface returns to its original condition. A firm surface resists deformation by either indentations or particles moving on its surface. A slip-resistant surface provides sufficient frictional counterforce to the forces exerted in walking to permit safe ambulation.

### 303 Changes in Level

303.1 General. Where changes in level are permitted in floor or ground surfaces, they shall comply with 303.

EXCEPTIONS: 1. Animal containment areas shall not be required to comply with 303.

2. Areas of sport activity shall not be required to comply with 303.

303.2 Vertical. Changes in level of 1/4 inch (6.4 mm) high maximum shall be permitted to be vertical.



Figure 303.2 Vertical Change in Level

303.3 Beveled. Changes in level between 1/4 inch (6.4 mm) high minimum and 1/2 inch (13 mm) high maximum shall be beveled with a slope not steeper than 1:2.

Advisory 303.3 Beveled. A change in level of 1/2 inch (13 mm) is permitted to be 1/4 inch (6.4 mm) vertical plus 1/4 inch (6.4 mm) beveled. However, in no case may the combined change in level exceed 1/2 inch (13 mm). Changes in level exceeding 1/2 inch (13 mm) must comply with 405 (Ramps) or 406 (Curb Ramps).

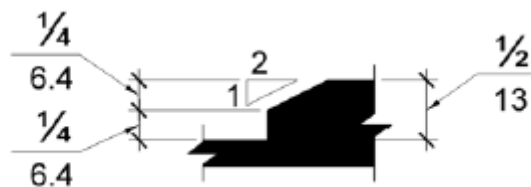


Figure 303.3 Beveled Change in Level

A4.5.1 General. People who have difficulty walking or maintaining balance or who use crutches, canes, or walkers, and those with restricted gaits are particularly sensitive to slipping and tripping hazards. For such people, a stable and regular surface is necessary for safe walking, particularly on stairs. Wheelchairs can be propelled most easily on surfaces that are hard, stable, and regular. Soft loose surfaces such as shag carpet, loose sand or gravel, wet clay, and irregular surfaces such as cobblestones can significantly impede wheelchair movement.

Slip resistance is based on the frictional force necessary to keep a shoe heel or crutch tip from slipping on a walking surface under conditions likely to be found on the surface. While the *dynamic* coefficient of friction during walking varies in a complex and non-uniform way, the *static* coefficient of friction, which can be measured in several ways, provides a close approximation of the slip resistance of a surface. Contrary to popular belief, some slippage is *necessary* to walking, especially for persons with restricted gaits; a truly "non-slip" surface could not be negotiated.

The Occupational Safety and Health Administration recommends that walking surfaces have a static coefficient of friction of 0.5. A research project sponsored by the Architectural and Transportation Barriers Compliance Board (Access Board) conducted tests with persons with disabilities and concluded that a higher coefficient of friction was needed by such persons. A static coefficient of friction of 0.6 is recommended for accessible routes and 0.8 for ramps.

It is recognized that the coefficient of friction varies considerably due to the presence of contaminants, water, floor finishes, and other factors not under the control of the designer or builder and not subject to design and construction guidelines and that compliance would be difficult to measure on the building site. Nevertheless, many common building materials suitable for flooring are now labeled with information on the static coefficient of friction. While it may not be possible to compare one product directly with another, or to guarantee a constant measure, builders and designers are encouraged to specify materials with appropriate values. As more products include information on slip resistance, improved uniformity in measurement and specification is likely. The Access Board's advisory guidelines on Slip Resistant Surfaces provides additional information on this subject.

Cross slopes on walks and ground or floor surfaces can cause considerable difficulty in propelling a wheelchair in a straight line.