



DESCO INDUSTRIES INC

ONE COLGATE WAY, CANTON, MA 02021 • PHONE (781) 821-8370 • [StatguardFlooring.com](http://StatguardFlooring.com)

## STATIC LOAD AND ROLLING LOADS ON FREESTYLE 8400™ INTERLOCKING FLOORING SYSTEM

### PRODUCT DESCRIPTION

**FreeStyle 8400™ Interlocking Flooring System** is an adhesive-free, interlocking modular floor tile system. Each 18.5" x 18.5" tile is comprised of an injection molded, flexible vinyl base, that provides a "built-in underlayment" and a hidden interlock system; and a 2mm thick finish layer. FreeStyle's overall thickness is 0.313". Each tile weighs 5.5 lbs (2.3 lbs/sq. ft.)

FreeStyle's design provides high performance in manufacturing environments. Its flexible but beefy construction and unusually high weight/sq.ft of the tile allow it to be installed, adhesive free, over existing floors, with little or no floor preparation; and to perform under rolling loads from fork truck, pallet jacks, scissor lifts rolling rack systems that are typically used in manufacturing.

### STATIC LOAD

Under ASTM F970 a specified load is applied to the sample over a 1.125 inch diameter indenter foot for 24 hours. After removal of the load, the sample is allowed to recover for 24 hours. The sample is regauged using the .250-inch diameter presser foot. The difference between the two measurements is reported as the residual compression.

This test method was developed to measure the indent characteristics of glued-down floor sheet and tile products, typically 2mm-3mm (1/8") in thickness on cement or wood underlayments. The Static Load limit of the wear-layer on FreeStyle 8400™ Interlocking Flooring System is 1400 lbs. FreeStyle's thick resilient underlayment, designed to ride over challenging subfloors and interlock without adhesive, results in lower indent numbers, however, these numbers are not necessarily germane to determining the performance of FreeStyle in manufacturing under rolling loads in manufacturing environments.

### ROLLING LOAD CAPACITY

ASTM has developed a standard practice to "Evaluate the Effect of Dynamic Rolling Load over Resilient Floor Covering System" (ASTM F2753-10). However, this test is not particularly helpful in determining the rolling load capacity of a free-lay product like FreeStyle. FreeStyle's rolling load capacity is determined principally by its hardness (durometer) and density (specific gravity). FreeStyle 8400™ Interlocking Flooring System tiles are manufactured with a semi-rigid vinyl (46D±3, Shore D hardness -ASTM D2240) with a specific gravity of 1.37±2 (ASTM D792).

Since FreeStyle 8400™ Interlocking Flooring System is not glued down rolling load "failure" is understood to be the point at which a point load is great enough to compress and sufficiently distort the tile(s) so that they are displaced, and the seams come apart. Statguard Flooring has tested FreeStyle 8400™ Interlocking Flooring System under a range of wheeled traffic and weights. Nominal "maximum load" weights are as shown below.

### Nominal Rolling Load Capacity of FreeStyle 8400™ Interlocking Flooring System

	Fork-Lift/Scissor Lift	Pallet Jack
<b>FS4</b>	12,000 LB	2,200 LB

*\*the weights stated above are total weights (device plus load). They have been verified in actual use but are for guidance purposes only and do not constitute a guarantee or warranty of performance. As stated below, there are several factors that can affect the actual performance.*

Actual performance will be determined by the weight of the rolling load, (eg, fork truck, pallet jack, lift, rolling racks) and the size, type and composition of wheels/tires as well as the type of subfloor, ambient room temperature and floor temperature.

**For these reasons Statguard Flooring highly recommends and supports field testing FreeStyle 8400™ Interlocking Flooring System when the anticipated use is near the stated load capacities.**



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### **INCREASING EFFECTIVE ROLLING LOAD CAPACITY**

While FreeStyle is intended for use as a free-lay system, rolling load capacity can be enhanced with the selective use of releasable adhesive or specialized, 2-sided flooring tape. If heavy loads that do not otherwise effect the floor are regularly moved over specified pathways, and the tiles are being torqued out of place along these pathways, the adhesive or tape can be selectively applied to increase the load capacity along these lanes.

### **WHEELED TRAFFIC MOUNTING FREESTYLE**

Heavy loads being wheeled on and off FreeStyle without proper transition from subfloor to the top surface of FreeStyle can cause damage to the tile edge (crushing) or tile separation. Statguard Flooring furnishes a number of transition options, including a "Peel & Stick" 2" transition, a 4" wide butted wedge transition (available in Yellow) a 2.25" "butted" reducer and a commercially available 12" transition. (See, FreeStyle 8400™ Interlocking Flooring System Technical Bulletin - [TB-5034](#)).

### **MOVING VERY HEAVY EQUIPMENT**

Heavy loads or equipment that exceed load capacity can be moved over FreeStyle with the aid of 4x8 sheets of plywood or metal plate to protect FreeStyle and spread the load over a larger area. Several sheets may be moved and leap-frogged along the required path as the equipment is moved to the required destination.