

ODL Comments on Proposed Version 6.0 Product Specification (draft II)

III Program Elements Remained Unchanged

1. Are there compelling reasons to require TDDs to meet a distinct set of criteria from traditional skylights?

Yes, we believe that TDD's warrant their own set of criteria, much the same that doors, windows, and traditional skylights are viewed differently based on their product design and use.

In Version 6.0 the statement is made that TDD manufacturers indicated that they are not concerned about meeting the new criteria level set for skylights using the "new TDD physical test procedure". It is true that there is little concern for meeting current 2010 requirements, utilizing the new physical test procedure, which takes effect in 2012. However, those "testing changes" drove significant product changes as the simulated test and the physical test were not close to producing equal results (the simulations produced numbers much lower than the physical test). TDD manufacturers will be required to launch product changes in 2012 in order to pass the new physical test requirements. Those product changes will not meet the newly proposed U-Value numbers for 2013, which means there would be multiple product changes driven inside of a single year.

The 2012 change from simulated performance to physical testing is resulting in TDD manufacturers increasing the price of the product roughly 10%. The changes proposed in Version 6.0 for 2013 will require further design changes and another round of significant price increases to the marketplace. It is believed that these proposed changes will cause a retail price increase in the neighborhood of \$20-30 or roughly 10-20% cost increase, on top of the 2012 increase. There is little insight as to the quantified benefit for this cost increase. There would also be significant pipeline fill challenges, product obsolescence costs (for a product just launched in 2012 to meet the changes in test procedure), and packaging / display costs to changing the product in 2012 and then again in 2013.

2. Do any manufacturers anticipate not being able to complete the physical test for their products before the NFRC-specified deadline in March 2012?

Completion of physical testing to meet the deadline is not expected to be a problem. Implementation plans are in place to make the necessary design changes. The challenge is to manage the transition of the product pipeline. Changing the product again in a very short time frame to meet 2013 criteria is a significant challenge.

IV. New Additions to Program Requirements

a. Air Leakage

1. How many manufacturers are currently testing for air leakage? For those not already testing, what are the proposed costs associated with adding air leakage testing? Do manufacturers anticipate a product price increase to the consumer? If so, how much?

As a door component manufacturer we cannot answer the question of how many are testing for air leakage. We can address the cost of adding air leakage testing and potential alternatives.

Current fenestration air leakage requirement in the IECC specify that swinging doors shall have an air infiltration rate of ≤ 0.5 cfm per square foot, when tested according to NFRC 400 or AAMA/WDMA/CSA 101/I.S./A440 by an accredited independent laboratory. The test procedure is ASTM E283. Air leakage testing per ASTM E283 costs \$1750 per configuration for testing and reporting.

A440 is a system based standard. This implies that any change in components require an evaluation of the impact of that component on the overall door system performance. This evaluation currently requires multiple system tests but could take the form of component performance verification. Air leakage testing per ASTM E283 cost \$1750 per configuration for testing and reporting. If each pre-hanging shop is required to test each configuration they produce costs could range from \$15,750 to \$31,500 although it easily can be higher. These costs would limit companies from making product improvement changes due to the cost associated with testing.

We propose an alternative approach below to mitigate the impact of incremental testing cost, which ultimately are passed along to the consumer.

2. Approximately what % of your company's products already meets and are labeled according to the above-specified air leakage criteria? What % of your products are tested but not labeled? What is the cost associated with beginning to label these products?

The key components of a door system with respect to air leakage are the doorglass, the sill, the weather stripping around the door, and the seal around the door frame during installation. Each component is designed to minimize air leakage and has 3rd party verification of performance. Proper assembly of components and individual component performance can be verified by an auditor.

We produce a key component in the assembled door system. All models have been tested and their performance exceeds the specified air leakage criteria. This component is not labeled because current labeling procedures are system based. .

An example of component performance verification is the air leakage test setup conducted by a certified 3rd party test lab for the doorglass component. It isolates the doorglass from the other door system components, focusing all the air leakage energy on the doorglass. At 0.035 cfm per square foot, doorglass air leakage performance exceeds the requirements for fixed windows, though swinging doors cannot be rated as such. These air leakage tests imply that when properly installed, the doorglass component will not be the weakest link in different configurations of a door system. Other components can be similarly evaluated. The auditor can assure that the door system is assembled with certified components and that the pre-hanger has assembled the system properly. Additional system based testing is redundant and does not address the root cause of air leakage problems

We propose component based verification to place the burden of testing and labeling on component manufacturers. This eliminates the redundant testing and costs imposed on pre-hangers. The overall impact will be to reduce costs to the consumers

3. Are their concerns about the ability of windows, doors, or skylights to meet the above-specified air leakage criteria?

Air leakage is highly dependent on installation practices, independent of door system performance. In the door industry the issue is not on the air leakage performance of the assembled system. The root cause of air leakage issues are due to how the product is installed. Imposing incremental testing and administrative costs to assure system performance misses addressing the root cause of most air leakage problems in doors.

4. Should air leakage results be available to the public via the CPD?

Our basic concern is that the current format of the CPD was established for the window industry and that it is missing key door system information and descriptors that make it viable for door pre-hanger, building inspector, and consumer use. A working group is proposing changes to the CPD to make it usable for the door industry. With these changes in place adding the air leakage performance of critical components would be a viable consideration.

5. What is a reasonable timeline for implementation of this requirement?

We recommend that two changes be put in place prior to implementation of this requirement for doors. The first is to change the CPD format to accommodate the needs of the door industry. The second change is to include component air leakage performance in the NFRC CPD. This will simplify certification and reduce redundant testing and costs. The verification protocol needs to be developed by the NFRC.

b. Installation Instructions

1. What basic elements would be most valuable in installation instructions? What are potential obstacles to requiring these items?

It is accepted in the industry that air leakage problems with today's products are attributable to how the product is installed rather than its design. To mitigate air leakage problems, the installer must assure that there is a proper seal around the door frame and that the door opens and closes properly, which entails adjusting the sill and squaring the assembly as needed.

Between 60 and 70% of the window and door market consists of remodeling and replacement. Approximately 43% of doors purchased by consumers for repair or replacement are installed by professional contractors, and training programs are already available for those installers. However, the other 57% of consumer repair/replace doors are installed by non-professionals. Clear step-by-step visual instructions and video demos are proven ways to deliver information to both consumers and professionals. The challenge is building consumer awareness of the importance of proper installation practices. Awareness can be increased through in-store

campaigns, product labels, and on-line information. However, it will be difficult to develop installation instructions that will be universal enough for all house constructions and all DIY levels of expertise.

2. What is the best way that partners have found to share installation info with customers? Should EPA consider any alternative or supplementary methods for educating consumers on proper installation of fenestration products?

The best way to reach customers with installation information is by including it with the product and making it available on line. An awareness building campaign is needed to reinforce the importance of proper installation practices. This campaign could involve in store signage, web messaging, and visual icons on the product.

V. Proposed Revisions to Product Criteria

b. Doors

2. Does the proposed SHGC maximum raise any concerns?

At the 0.25 level there are cosmetic issues and simulation issues that will unduly drive up incremental costs to the consumer.

At the ≤ 0.25 level full lite (22x64) triple pane decorative glass units will be forced to utilize Low-E glass, which in turn will change the aesthetics of the decorative coming and bevels. In order to maintain a consistent appearance all sizes within a decorative family will be forced to use Low-E, causing consumers to pay \$15-40 more for an unnecessary feature (e.g. Low-E is not required on half lite sizes but those units would have to have it in order to maintain a consistent appearance).

Another concern is the fact that simulations for decorative glass SHGC are based off of one generic design. However, there are many decorative glass styles that are quite opaque, and can be expected to provide lower SHGC values than the generic simulated SHGC value. The variations in design are not taken into consideration and therefore all deco panels will have to utilize Low-E glass, putting undue burden / price on marketplace.

We propose revising the simulation method for determining the SHGC for doors with - decorative glass. This will allow consumers to select their desired combination of style, privacy, - price, and energy efficiency. Some decorative styles today will meet the proposed criteria while - others will not without adding the cost of Low-E glass. -

3. Does the proposed SHGC maximum affect any doors disproportionately?

While the lower SHGC in the Proposed Version 6.0 claims to only affect 10% of all doors in the CPD, it will artificially trap all decorative glass into adding Low- E, which will force unnecessary expense on the market. In addition, the long lead times associated with decorative glass make

it impossible to transition channel pipeline inventories in time for the proposed changes to take effect (all inventories transitioned to Low-e) in the fall of 2013. The combination of broad style offering, low turnover rate, and high unit value makes decorative glass doors a unique fenestration category.

We propose that decorative glass be exempt from the SHGC requirement due to its variation in design (simulations not accurate and put false burden with the "one size fits all" approach), the effect on design aesthetic and integrity, and the undue expense that it places on the market. If this exemption cannot be granted we suggest that the SHGC for doors be left unchanged or by reduced from the current 0.30 to 0.28. This will avoid the imposition of undue costs on the consumer.