



National Fenestration Rating Council Incorporated

FS-1104_[E0A1]

NFRC FenStar Certification Program Evaluation Procedure

© 2018 NATIONAL FENESTRATION RATING COUNCIL, INC.

PREPARED BY:

National Fenestration Rating Council
6305 Ivy Lane, Suite 140
Greenbelt, MD 20770
Voice: (301) 589-1776
Fax: (301) 589-3884
Email: fcg@nfr.org
Website: www.nfr.org

Document Control:

Issue Date: 2019-10-07

Approved by Director, Programs on: 2019-10-07

Printed copies of this document are uncontrolled.

© 2017. National Fenestration Rating Council Incorporated (NFRC). All rights reserved. *NFRC publications and documents are protected by copyright.* Any use of NFRC publications and documents, including reproduction or dissemination, in whole or in part, requires authorization by NFRC pursuant to NFRC's terms of use located at <http://www.nfrc.org/terms-of-use.aspx>.

© 2017. National Fenestration Rating Council Incorporated (NFRC). All rights reserved. *NFRC's FenStar Certified Products Directory is protected by copyright.* Any use of the NFRC FenStar Certified Products Directory, including reproduction or dissemination, in whole or in part, requires authorization by NFRC. pursuant to NFRC's FenStar terms of use located at <http://www.nfrc.org/FenStar-terms-of-use.aspx>.



FOREWORD

The FenStar™ Certification Program is the formal name of the Environmental Protection Agency (EPA)-recognized certification program that performs third-party conformity assessment activities for window, door and skylight products. Products are submitted for ENERGY STAR® certification after ratings have been certified by the NFRC Product Certification Program (PCP). Window, door and skylight products that are evaluated to meet ENERGY STAR requirements are officially certified as ENERGY STAR by the FenStar Certification Program.

The FenStar Certification Program is operated by the National Fenestration Rating Council Incorporated (NFRC). NFRC developed and operates a uniform rating system for energy and energy-related performance of windows, doors, and skylights. The FenStar Certification Program is available only to active licensees in the NFRC Product Certification Program (PCP).

Through the FenStar Certification Program, manufacturers shall demonstrate their products meet all applicable ENERGY STAR performance parameters prior to being labeled as ENERGY STAR certified. Further, the partner shall demonstrate, through verification testing, the product continues to meet the ENERGY STAR requirements to maintain its ENERGY STAR certification through the FenStar Certification Program.

If there are changes that affect the performance of the product with respect to the relevant ENERGY STAR program requirements, the partner shall report these changes to The FenStar Operations Staff.

Manufacturers authorize the FenStar Operations Staff to share the results of any relevant testing or product review with the EPA.

NFRC, specifically the FenStar Certification Program, is ANSI-accredited as a certification body to the ISO/IEC 17065 standard.

The following referenced documents are indispensable for the application of the FenStar Certification Program. The latest edition of the referenced document (including any amendments) applies. These are not auditable standards and are used solely for guidance.

- [NFRC 700: Product Certification Program](#). National Fenestration Rating Council: Greenbelt, MD; 2017. www.nfrc.org
- [ANSI/NFRC 100: Procedure for Determining Fenestration Product U-factors](#). National Fenestration Rating Council: Greenbelt, MD; 2017. www.nfrc.org
- [NFRC 102: Procedure for Measuring the Steady-State Thermal Transmittance of Fenestration Systems](#). National Fenestration Rating Council: Greenbelt, MD; 2017. www.nfrc.org
- [ANSI/NFRC 200: Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence](#). National Fenestration Rating Council: Greenbelt, MD; 2017. www.nfrc.org
- [ANSI/NFRC 400: Procedure for Determining Fenestration Product Air Leakage](#). National Fenestration Rating Council: Greenbelt, MD; 2017. www.nfrc.org
- ASTM E283 – 04(2012): Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen. ASTM International, West Conshohocken, PA, 2006, DOI: 10.1520/E0283-04R12.
- ENERGY STAR Directives:
https://www.energystar.gov/index.cfm?c=third_party_certification.tpc_directives

To participate in the Certification Programs, a Manufacturer/Responsible Party shall rate a product whose energy and energy-related performance characteristics are to be certified in accordance with mandatory NFRC rating procedures. At present, a Manufacturer/Responsible Party may elect to rate products for U-factor, Solar Heat Gain Coefficient (SHGC), Visible Transmittance (VT), Air Leakage (AL), Condensation Resistance, or any other procedure adopted by NFRC, and to include those ratings on the NFRC temporary label affixed to its products or on the NFRC Label Certificate. U-factor, SHGC, VT, AL, and condensation resistance rating reports shall be obtained from a laboratory that has been accredited by NFRC in accordance with the requirements of the NFRC 701.

The FenStar Certification Program evaluates products against the ENERGY STAR certification program requirements.

The FenStar Certification Program maintains a FenStar Program Certified Products Directory (FCPD), listing product lines and individual products selected by the Manufacturer/Responsible Party for which ENERGY STAR certification authorization has been granted.

NFRC owns all rights in and to all documents and procedures, which are a component of the FenStar Certification Program, as well as each of its registration marks, trade names, and other intellectual property.

For additional information on the roles of those entities associated with the NFRC PCP (IAs and laboratories, and operation of the IA Program and Accreditation Program), see the NFRC 700: Product Certification Program, NFRC 701: Laboratory Accreditation Program (LAP), and NFRC 702: Certification Agency Program (CAP) documents.

National Fenestration Rating Council

6305 Ivy Lane, Suite 140

Greenbelt, MD 20770

Voice: (301) 589-1776

Fax: (301) 589-3884

Email: fcf@nfr.org

Website: www.nfr.org



DISCLAIMER

The use of the FenStar™ Certification Program as a Certification Body does not constitute a warranty by the NFRC or the FenStar Certification Program regarding the energy performance properties of windows, doors, and skylights. The rating indices are not an endorsement of, or recommendation for, any windows, doors, or skylights. The FenStar Certification Program is not a merchant in the business of selling windows, doors, or skylights, and therefore, cannot warrant products as to their merchantability or fitness for a particular use.

The FenStar Certification Program, therefore, disclaims any and all liability, including but not limited to, damages for personal or other injury, lost profits, lost savings or other consequential or incidental damages that may arise from or in connection with:

- A. services provided by, decisions made by, or reports issued or granted by any ENERGY STAR Partner;
- B. reliance on the FenStar Certification Program product description, specification, rating or test, whether appearing in a report, in a product Certificate of Authorization (CA) or a printed or electronic directory, or on a label; or
- C. the sale or use of the FenStar Certification Program certified windows, doors, or skylights.



National Fenestration
Rating Council®

Table of Contents

Foreword	ii
Disclaimer	v
1. Introduction and Purpose	1
2. Required Information	1
2.1 PRODUCT ENERGY PERFORMANCE RATING REQUIREMENTS	1
2.2 INSTALLATION INSTRUCTION REQUIREMENTS	1
2.3 AIR LEAKAGE REQUIREMENTS	1
2.4 PRODUCT LABELING REQUIREMENTS	2
3. Evaluation Procedure	3
3.1 MANUFACTURER FUNCTIONS	3
3.2 STAFF FUNCTIONS	3

1. INTRODUCTION AND PURPOSE

The FenStar® Certification Program has established rules for evaluation of products to the EPA ENERGY STAR® certification program. This procedure provides the steps for licensees to provide the information to staff for review, the steps staff performs in the review, and the end result of the review.

The EPA provides the product requirements which must be met by the manufacturers participating in the program. FenStar staff reviews the information provided by the manufacturers and compares that to the product requirements to determine if the product meets the ENERGY STAR requirements.

This procedure is for initial product evaluation for certification or evaluation for recertification only. Review of products as a result of a verification test is covered in the FS-1100, *FenStar Certification Program Verification Testing Procedure*. This procedure also assumes the application process is already complete.

2. REQUIRED INFORMATION

The following information is required in order to perform product evaluation for initial certification or recertification.

2.1 Product Energy Performance Rating Requirements

- A. Product requirements shall be taken from the latest version of the EPA ENERGY STAR Windows, Doors, and Skylights specification.
- B. The energy performance ratings for each product shall be taken from the current list of ratings in the NFRC CPD as of the date of the evaluation.

2.2 Installation Instruction Requirements

- A. Installation instructions, as required by ENERGY STAR specifications, shall be submitted to FenStar staff by the manufacturer.
- B. The installation instructions may be provided in hard copy form, electronically, or via link to a website. Links and electronic submissions shall include a way to download the documents for record storage.

2.3 Air Leakage Requirements

- A. Air leakage ratings, as required by ENERGY STAR specifications, shall be submitted to FenStar staff by the manufacturer.
- B. Evidence of compliance to the air leakage requirements may be provided in hard copy form or electronically. Electronic submissions shall include a way to download the documents for record storage.

-
- C. Specific forms of evidence of air leakage compliance shall be determined by FenStar staff based on the current ENERGY STAR specification.

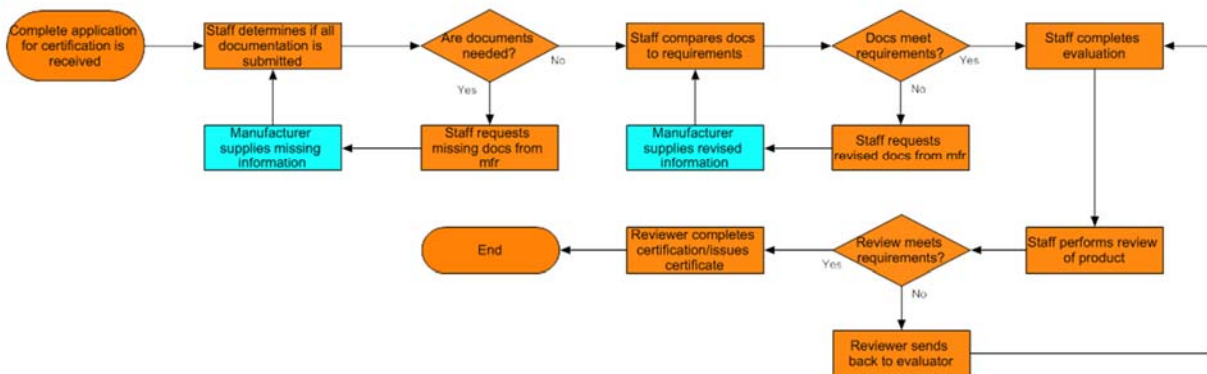
2.4 Product Labeling Requirements

- A. Product labels, as required by ENERGY STAR specifications, shall be submitted to FenStar staff by the manufacturer.
- B. Product labels may be provided in hard copy form or electronically. Electronic submissions shall include a way to download the documents for record storage. Photographs of labels are acceptable.
- C. One set of product labels per product line is required. The submitted labels shall provide evidence of meeting all required product performance ratings as specified in the current ENERGY STAR specification.

3. EVALUATION PROCEDURE

Product evaluation for initial certification and recertification shall follow the below procedure.

Product Evaluation Procedure Flowchart



3.1 Manufacturer Functions

- A. The manufacturer is responsible for completing the application for certification per FS-1103, Application for Product Certification Procedure.
- B. The manufacturer is responsible for providing information to staff as required in Section 2.
- C. The manufacturer is responsible for providing additional or revised documentation upon request of staff during the evaluation process.

3.2 Staff Functions

- D. Staff begins the evaluation process by determining if all of the required information per Section 2 of this document is present. If additional documents are needed, staff shall request them from the manufacturer.
- E. Staff shall review the documents provided by the manufacturer to ensure the product meets the product requirements including energy performance and air leakage. Installation instructions are compared to the listed requirements in the ENERGY STAR specification. Labels are reviewed to ensure they are accurate for the option specified and to ensure they indicate air leakage certification per the ENERGY STAR specification.
- F. If any document or evidence of compliance does not meet the requirements, staff shall notify the manufacturer of the deficiency. Once

the revised documents are received by staff, the evaluation shall continue.

- G. The evaluation is complete when staff determines all required information is present and indicates compliance with the requirements.
- H. Upon completion of the product evaluation, a second staff member shall perform a review of the evaluation. This review is done to ensure the evaluation was performed correctly and the manufacturer meets all the requirements for certification.
- I. If the review results in any deficiencies in the evaluation, the reviewer shall notify the original evaluator and the evaluation shall be revisited to correct the discrepancy. Any information required from the manufacturer will be requested.
- J. Once the review is complete and approved, a certificate shall be generated and signed by the reviewing staff member or other such authorized staff member that was not involved in the evaluation.
- K. The certificate shall be sent to the manufacturer.

4. RECORDS

- 4.1 Records of the evaluation, review, and decision processes shall be maintained in the FenStar application.
- 4.2 Documents, and certificates shall be maintained on the SharePoint document management site.