



National Fenestration
Rating Council®

National Fenestration Rating Council Incorporated

NFRC 706-2009 [E0A0]

Requirements for Participating Insulating Glass Certification Programs

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Foreword

The National Fenestration Rating Council, Incorporated ("NFRC") has developed and operates a uniform national rating system for energy performance of fenestration products. The Rating System determines the U-factor, Solar Heat Gain Coefficient (SHGC) and Visible Transmittance (VT) of a product, which are mandatory ratings for labeling NFRC certified products, and are supplemented by procedures for voluntary ratings of products for Air Leakage (AL), and Condensation Resistance (CR). Together, these rating procedures, as set forth in documents published by NFRC, are known as the NFRC Rating System.

The Rating System employs computer simulation and physical testing by NFRC-accredited laboratories to establish energy performance ratings for fenestration product types. The Rating System is reinforced by a certification program under which NFRC-licensed responsible parties claiming NFRC product certification shall label and certify fenestration products to indicate those energy performance ratings, provided the ratings are authorized for certification by an NFRC-licensed certification and inspection agency (IA). The requirements of the rating, certification, and labeling program (the "Certification Program") are set forth in the NFRC PCP Product Certification Program (most recent version), as amended, updated or interpreted from time to time (the "PCP"). Through the Certification Program and its companion laboratory accreditation program (the "Accreditation Program") , set forth in this NFRC LAP Laboratory Accreditation Program, as amended, updated or interpreted from time to time (the "LAP"), and IA licensing program (the "IA Program"), set forth in NFRC CAP-Certification Agency Program (most recent version), as amended, updated or interpreted from time to time (the "CAP") , NFRC intends to ensure the integrity and uniformity of NFRC ratings, certification, and labeling by ensuring that responsible parties, testing and simulation laboratories, and IAs adhere to strict NFRC requirements.

In order to participate in the Certification Program, a licensee shall rate a product to be certified for mandatory NFRC rating procedures. At present, a licensee may elect to rate products for U-factor, Solar Heat Gain Coefficient (SHGC), Visible Transmittance (VT), Air Leakage, Condensation Resistance, or any other procedure adopted by NFRC, and to include those ratings on the NFRC temporary label affixed to its products (or the NFRC Label Certificate). U-factor, SHGC and VT, Air Leakage, and Condensation Resistance rating reports shall be obtained from a laboratory, which has been accredited by NFRC in accordance with the requirements of the LAP. The rating shall then be reviewed by an Independent Inspection and Certification Agency (IA) which has been licensed by NFRC in accordance with the requirements of the CAP. NFRC-licensed IAs also review label format and content, conduct in-plant inspections for quality assurance in accordance with the

requirements of the CAP, and issue a product certification authorization report (CAR), or an NFRC Label Certificate for site-built products and attachment products. The IA is also responsible for the investigation of potential violations (prohibited activities) as set forth in the NFRC Compliance and Monitoring Program.

Products that are labeled with the NFRC Temporary and Permanent Label, in accordance with NFRC requirements, are considered to be NFRC-certified. NFRC maintains a Certified Products Directory, listing product lines and individual products selected by the licensee for which product certification authorization has been granted.

NFRC manages the Rating System and regulates the Product Certification Program (PCP), Laboratory Accreditation Program (LAP) and Certification Agency Program (CAP) in accordance with the PCP, the LAP, and the CAP procedures, and conducts compliance activities under all these programs as well as the Compliance and Monitoring Program. NFRC continues to develop the Rating System and each of the programs.

NFRC owns all rights in and to each of the PCP, LAP, CAP, Compliance and Monitoring Program, and each procedure, which is a component of the Rating System, as well as each of its registration marks, trade names, and other intellectual property.

The structure of the NFRC program and relationships among participants are shown in Figure 1, Figure 2, and Figure 3. For additional information on the roles of the IAs and laboratories and operation of the IA Program and Accreditation Program, see the NFRC 700 (PCP), NFRC 701 (LAP), and NFRC 702 (CAP) respectively.

Figure 1

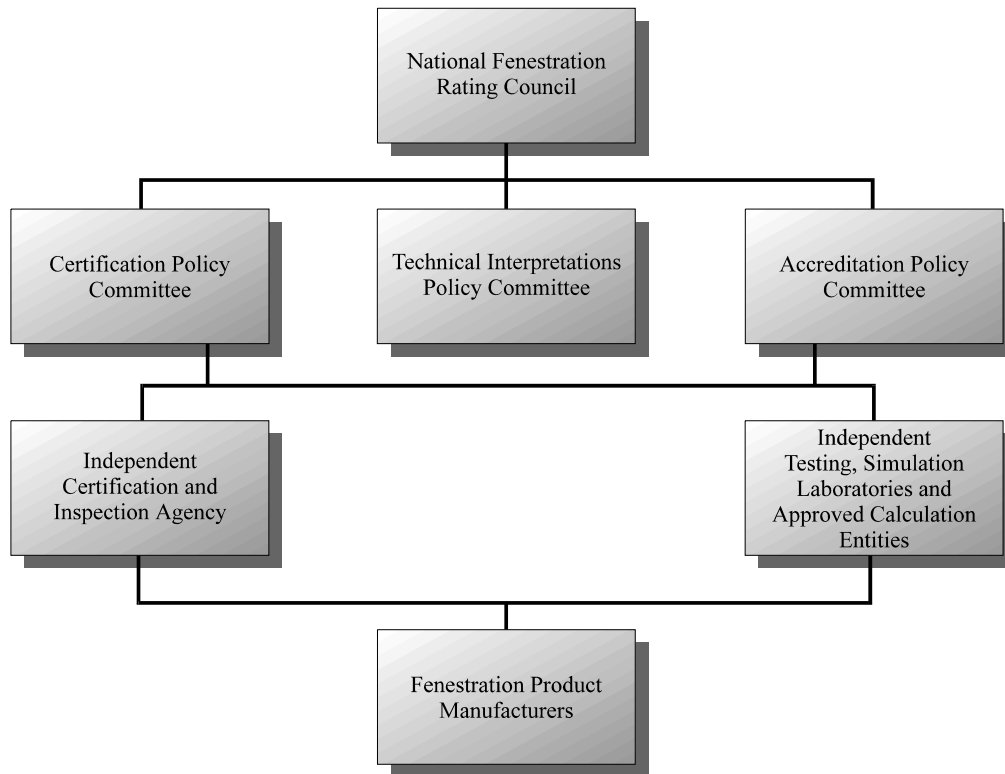


Figure 2

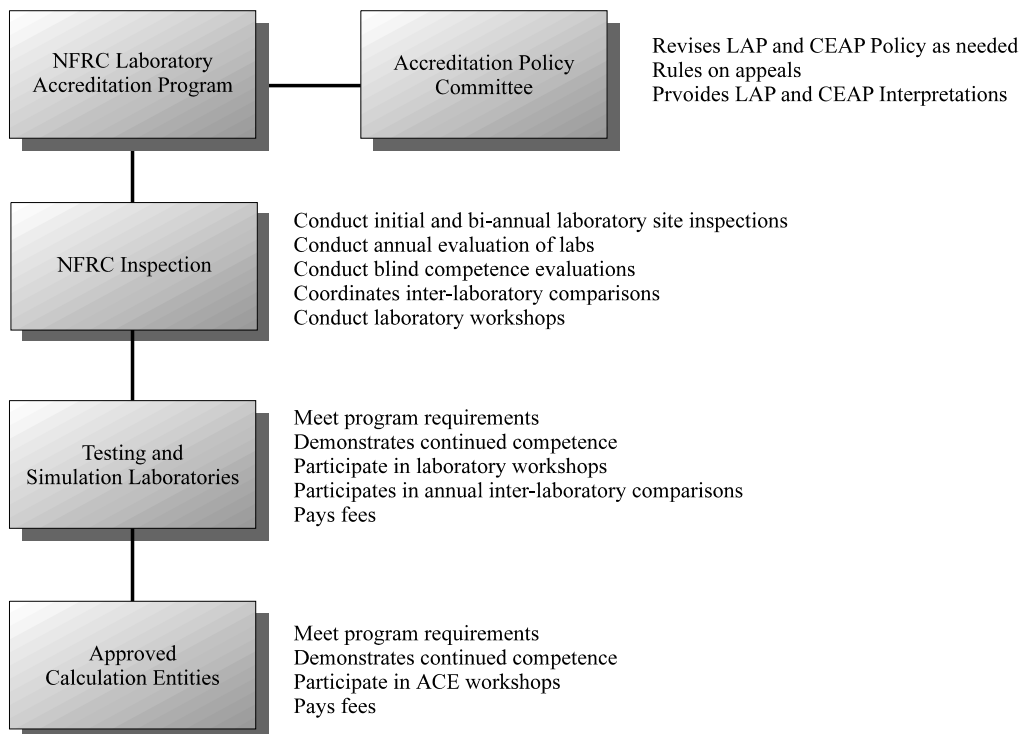
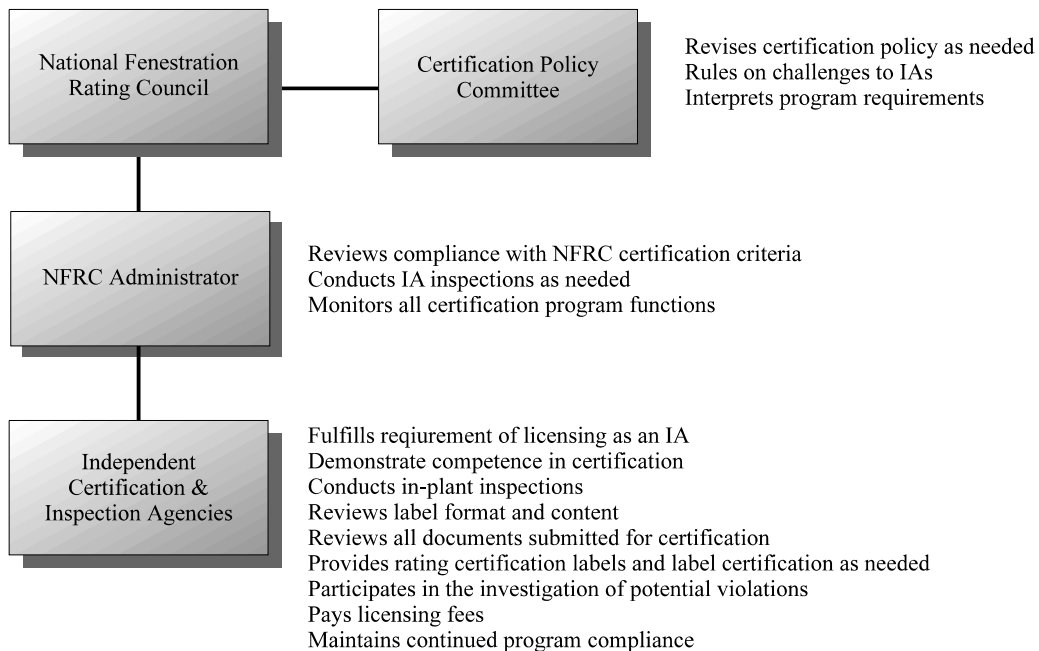


Figure 3



Questions on the use of this procedure should be addressed to:

National Fenestration Rating Council
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Disclaimer

NFRC's Participating Insulating Glass Certification Program Directory (the "IGC Directory") lists third party insulating glass ("IG") certification programs (the "IGC Programs") that have represented in writing to NFRC that they meet requirements designated by NFRC (the "Program Requirements") for the operation of an independent program for the certification of performance attributes of IG products.

NFRC does not independently verify that the representations made by IGC Programs meet the Program Requirements and NFRC therefore does not represent or warrant that the IGC Programs included in the IGC Directory do in fact meet the Program Requirements. NFRC also does not certify or represent the accuracy or reliability of any certifications performed by IGC Programs included in the IGC Directory. NFRC's listing of third party IG certification entities on the IGC Directory does not constitute an endorsement or recommendation of any certification programs.

NFRC does not determine, certify, or report the performance attributes of any IG product or component or of any fenestration product or product line or any attribute of a fenestration product or product line.

NFRC does not manufacture, assemble, distribute or sell fenestration products and has no liability of any kind or nature for the performance of any fenestration product, including any IG product whose performance is certified by a third party entity listed by NFRC on the IGC Directory.

NFRC DISCLAIMS ALL LIABILITY THAT ARISES FROM OR RELATES TO SERVICES PROVIDED BY NFRC, ITS AGENTS, EMPLOYEES AND LICENSEES, INCLUDING ANY NFRC LISTED IG CERTIFICATION ENTITY. THE FOREGOING DISCLAIMER INCLUDES BUT IS NOT LIMITED TO DECISIONS AND REPORTS ISSUED OR GRANTED BY NFRC RELATING TO ANY LISTED THIRD PARTY INSULATING GLASS CERTIFICATION PROGRAM, INCLUDING LISTING SUCH PROGRAM ON THE IGC DIRECTORY, OR ANY DESCRIPTION, SPECIFICATION, RATING, TEST AUTHORIZATION, CERTIFICATION, OR LABEL ISSUED BY NFRC OR ITS AGENTS, EMPLOYEES AND LICENSEES AND IN NO EVENT SHALL NFRC BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL OR PUNITIVE DAMAGES, INCLUDING DAMAGES FOR LOST PROFITS OR REVENUES.

1. INTRODUCTION

1.1 Requirements for Participating Insulating Glass Certification Programs

NFRC has adopted “Requirements for Participating Insulating Glass Certification Programs” (the “Program Requirements”) that stipulate certain criteria for the operation of independent, third party IG certification programs (“IGC Program(s)”) that wish to certify and report performance attributes of certified IG products. IGC Entities that wish to have their IGC Program included on the IGC Directory must attest in writing to NFRC that their programs meet all of the Program Requirements and that those programs continuously comply with all of the Program Requirements. NFRC will maintain and publish a directory of IGC Programs (the “IGC Directory”) operated by IGC Entities that have attested to NFRC in writing that their programs comply with the Program Requirements. IGC Programs that are listed in the IGC Directory are referred to as “Participating IGC Programs”.

1.2 Duties of the Participating IGC Entities

- A. A Participating IGC Program must provide independent certification and reporting of certain performance attributes of IG products incorporated in fenestration products that are NFRC labeled and certified.
- B. A Participating IGC Program must meet all the Program Requirements, as those requirements may be revised by NFRC from time to time. A Participating IGC Entity shall promptly notify NFRC in writing if at any time its’ Participating IGC Program fails to meet the Program Requirements. In support of any application submitted to NFRC, a Participating IGC Entity shall, from time to time, provide information requested by NFRC relating to or supporting that application. Failure to comply with the Program Requirements may result in the removal of the Participating IGC Program from the IGC Directory.
- C. A Participating IGC Entity shall pay such application and other fees as may be established from time to time by NFRC’s Board of Directors.
- D. The Program Requirements shall be administered by the Certification Policy Committee (“CPC”), subject to oversight and direction by NFRC’s Board of Directors.
- E. A Participating IGC Entity shall not be entitled to use or reproduce any registered or common law trademark or certification mark of NFRC and shall not advertise or state that it or its’ Participating IGC Program has

been licensed, endorsed, certified or approved by NFRC. A Participating IGC Entity shall not make statements that indicate or suggest that the entity or its Participating IGC Program has been approved by NFRC or that NFRC has endorsed or certified its performance. A Participating IGC Entity may state that its' Participating IGC Program is included in the IGC Directory.

2. GLOSSARY OF TERMS

Refer to NFRC 600 Glossary and Terminology.

3. APPLICATION PROCEDURES AND PROGRAM REQUIREMENTS

3.1 Applications for Approval

- A. An IG Entity seeking to have its' IGC certification program become a Participating IGC Program shall complete, sign and submit an initial written application to NFRC, along with any accompanying application fee. A copy of the current application form is attached as Appendix A of this document and may be revised by NFRC from time to time.
- B. NFRC staff shall review the application to confirm that the applicant has represented that its' IGC certification program meets all of the Program Requirements. NFRC may request additional information if the application is incomplete or to clarify information provided in the application. NFRC staff shall advise the CPC whether or not the applicant's IGC certification program is eligible for listing in the IGC Directory based on the information provided in its application and any supplemental information provided by the applicant.
- C. The CPC shall review the application, NFRC staff's recommendations and any other available information determined to be relevant to the CPC's review. The NFRC shall advise the applicant in writing whether or not the applicant's IGC certification program has been accepted as a Participating IGC Program and, if not, the basis for that denial.
- D. The applicant shall direct any questions or concerns about the action on its application to the NFRC Executive Director.

3.2 Performance Criteria Included in the Program Requirements.

- A. The following are included in the Program Requirements and these requirements may be revised from time to time in writing by NFRC.
- (i) The IGC Entity shall be accredited as operating in compliance with ISO Guide 65, “*General Requirements for Bodies Operating Product Certification Programs*” or all elements of ISO 9000: Quality Management System.
 - (ii) The IGC Program shall require mandatory IG testing by its program participants at least once every 2 years utilizing independent testing laboratories that are accredited to ISO 17025 for the applicable IG testing procedures.
 - (iii) The IGC Entity shall perform at least two (2) audits of its’ certification program participant’s IG fabrication facilities per year.
- B. Minimum Requirements for Certified IG Products. The IGC Program shall require IG Products submitted for certification to meet the following requirements
- (i) Comply with the requirements of ASTM E2190 or CGSB 12.8.

Note: The CGSB 12.8 standard will be acceptable until the ASTM E2189 “Standard Test Method for Testing Resistance to Fogging in Insulating Glass Units” requirements meet or exceed the requirements in the CGSB 12.8 standard.
 - (ii) Establish proof of gas content to an average minimum initial 90% insulating gas fill content and an average minimum of 80% insulating gas fill content following completion of respective IG durability testing. Demonstration of gas content for argon shall qualify other gases provided the same gas filling method is used.
- C. Minimum Requirements for Quality Assurance. The IGC Entity shall implement and maintain the following quality assurance requirements for its’ certification participants;
- (i) on a regular basis, verify the quality and effectiveness of the various components of the products and confirm that the IG fabricators’ records identify its’ component, verification method, success \ failure, and the frequency of it’s inspections;
 - (ii) on regular basis, conduct inspections of final products, indicate frequency of rejection and inspection of products;

- (iii) on regular basis, verify and calibrate, and document frequency of verification and calibration;
- (iv) maintain method of controlling non-conforming product components and fabricated products; and
- (v) create, retain, and maintain training records.

4. ONGOING REQUIREMENTS FOR PARTICIPATION

4.1 Retain Approval

Participating IGC Programs shall continuously comply with all of the Program Requirements. To confirm continued compliance, Participating IGC Entities shall submit renewal applications to NFRC attesting to the compliance by their Participating IGC Programs compliance with the Program Requirements on an annual basis or at such other intervals as may be required by NFRC.

APPENDIX A APPLICATION FORM

REQUIREMENTS FOR PARTICIPATING INSULATING GLASS CERTIFICATION PROGRAMS



Application for Listing in NFRC's Participating Insulating Glass Certification Program Directory

The National Fenestration Rating Council (NFRC) sponsors a Participating Insulating Glass Certification Program Directory (the "IGC Directory") which lists third party insulating glass ("IG") certification programs (the "IGC Programs") that have represented in writing to NFRC that they meet requirements designated by NFRC (the "Program Requirements") for the operation of an independent program for the certification of performance attributes of IG products.

This application is for those IGC Programs that seek to be listed on the IGC Directory to provide third party insulating glass certification services in accordance with *NFRC 706-2009: Requirements for Participating Insulating Glass Certification Program*.

To ensure that an IGC Program's application can be fully evaluated, all requested information must be provided. If additional space is needed, attach additional pages. Incomplete applications will be returned with information deficiencies cited. Application processing takes approximately three weeks after receipt by NFRC.

Please include the application filing fee, payable to NFRC, of \$500.00 with your application.

Please return all required information with completed application and application fee to:

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

Organizational Information

Name of Organization: _____

Program Representative: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Phone: _____ Fax: _____

Email address: _____

Principal Business Activity
of Organization: _____

Name of Certification Program(s) seeking listing:

1. _____

2. _____

3. _____

Terms and Conditions

The undersigned officer or other duly authorized representative of the applicant organization accepts on behalf of the applicant the following terms and conditions:

(1) The applicant hereby acknowledges receipt of a copy of *NFRC 706-2008*. The applicant hereby covenants and agrees that it shall comply with all of the terms and conditions of *NFRC 706-2008*, as that document may be amended or interpreted from time to time.

(2) The applicant represents and warrants the following [*check applicable boxes*]:

The applicant is accredited as operating in compliance with ISO Guide 65, "*General Requirements for Bodies Operating Product Certification Programs* or all elements of ISO 9000: Quality Management System.

The applicant complies with all of the Program Requirements listed in Section 3.2.C.

The applicant's IG certification program requires mandatory IG testing by its program participants at least once every 2 years utilizing

independent testing laboratories that are accredited to ISO 17025 for the applicable IG testing procedures.

- The applicant performs at least two (2) audits of its program participants' IG fabrication facilities per year.
- IG Products certified under the applicant's IG certification program comply with the requirements of ASTM E2190 or CGSB 12.8.
- IG Products certified under the applicant's IG certification program have proof of gas content to an average minimum initial 90% insulating gas fill content and an average minimum of 80% insulating gas fill content following completion of respective IG durability testing. Demonstration of gas content for argon shall qualify other gases provided the same gas filling method is used.

The applicant hereby represents, warrants, and attests to NFRC that all of the information supplied above is accurate, correct, and complete and the applicant further agrees that it shall notify NFRC promptly of any change in any of the information supplied pursuant to this application.

The applicant acknowledges that any false statement in this application is a ground for immediate removal as a Participating IGC Entity and removal from the IGC Directory.

Organization: _____

By: (signature) _____

Print name: _____

Title: _____

Date: _____

NFRC

Date of Approval: _____

By: (signature) _____