



## **AFSL Domestic Testing Program**

**August 1, 2015**

At the request of U.S. members, AFSL is implementing a Domestic Testing Program to test consumer fireworks manufactured or assembled in the United States for compliance with AFSL's voluntary fireworks safety standards. Importers and domestic manufacturers participating in the program may use the test results obtained from AFSL to support certifications that the tested fireworks comply with all rules, bans, standards, or regulations applicable under the Consumer Product Safety Improvement Act of 2008. (CPSIA) All program participants must be AFSL members in good standing and will be audited to ensure accountability and conformity with this program.

All fireworks tested under the domestic program will be tested for compliance with all AFSL standards applicable to the specific product category. Testing procedures and sampling plans will be identical to those employed in the Quality Improvement Program (QIP) in China, and testing will be performed by Technicians that have been certified by AFSL to perform such testing.

Testing under this program generally will fall into one of three categories: (a) Testing of Assortments that are assembled or repackaged in the U.S. from finished products that previously have been certified by AFSL under the QIP in China; (b) testing of finished products that are manufactured in the U.S. from components that previously have been certified by AFSL under the QIP in China; and (c) testing of finished products that are fully manufactured in the U.S. Operating procedures will vary depending on which category of testing is being performed, as described below.

### **I. Definitions:**

1. An "AFSL Security Sticker Log" is a written record of all the actions dealing with special security stickers used to identify shipping cartons of consumer fireworks that have been tested and meet AFSL voluntary fireworks safety standards.
2. A "Controller and Alternates" are persons designated by Participants to maintain control and manage the AFSL Security Stickers in this program.

3. A “Domestic Fireworks Product” is a finished consumer fireworks product that has been manufactured or assembled in the United States.
4. A “Finished Product” is a fireworks device or package that has been assembled and tested to all AFSL voluntary fireworks standards and is in compliance with all applicable CPSC safety rules, standards or bans.
5. A “Fireworks Assortment” is :
  - a) A package containing preapproved items from more than one AFSL Fireworks Category.
  - b) A package containing multiple sizes of any specific preapproved fireworks category.
  - c) A package containing preapproved items with reports and items without reports.
  - d) A package containing more than six (6) different varieties of a preapproved device in one category.
  - e) A package of preapproved reloadable shells packaged with preapproved launch tubes.  
  
 (“Exception twelve (12) different varieties of reloadable shells”)
6. A “Fireworks Component” is a part of a fireworks device that is used along with other components in the manufacturing or assembling process of a finished fireworks device.
7. A “Participant” is an AFSL Member that imports and/or domestically manufacturer’s consumer fireworks that meet AFSL’s voluntary fireworks safety standards.
8. A “Assortment Certification Request Form” is a form used by a Participant requesting permission to assemble fireworks assortments that only contain previously tested product that has been certified by AFSL.
9. A “Testing Application Form” is a form used by a Participant requesting the Testing Provider sample and test domestically manufactured consumer fireworks to AFSL’s voluntary fireworks safety standards.
10. A “Testing Provider” is an independent group under contract with AFSL to test consumer fireworks to AFSL’s voluntary fireworks safety standard.

## **II. Domestic Assortment Testing Program Procedures**

As part of its domestic testing program, AFSL will evaluate and certify Assortments assembled in the U.S. from “bulk” merchandise that previously has been tested and certified under AFSL’s QIP in China. As a condition of participation in the program, the manufacturer/assembler must execute a Domestic Testing Program Agreement with AFSL and must agree to meet the following conditions:

1. Facilities that assemble assortments shall be audited by AFSL prior to implementation of testing at the facility to ensure their ability to comply with the requirement for the Assortments Program.
2. Assortments may only be assembled from product that has been tested and certified previously by AFSL either under the China QIP or the Domestic Testing Program for finished fireworks devices.
3. The participant must obtain from the China Shipper and maintain on file for a period of three years a valid AFSL test report for each bulk component that will be used to assemble the Assortment.
4. Shipping cartons for the previously tested products that have AFSL Security Stickers attached must be disposed of properly by the Participant once the tested product has been removed from the cartons for assembly into Assortments. This process shall be supervised by the Controller or Alternates.
5. Finished Assortments shall not be distributed without re-certification by AFSL under the procedures described in this program.

#### **A. Request to Assemble Assortments.**

1. Prior to assembling Assortments, a Participant shall submit to AFSL's Testing Provider a request to produce Assortments. The Request to Assemble shall contain the name and address of the Participant, the item name, description, Participants items number, number of cases of bulk material to be used in the Assortments and the number of finished cases of Assortments to be assembled by the Participant.
2. The Testing Provider shall review the Request to Assemble to ensure that the applicant meets all requirements and has provided all applicable information *and shall assign a Lot Identification Number to the Request.*
3. After the Request to Assemble has been approved by the Testing Provider, the requesting Participant will be notified to commence production of the requested assortments. At that time the Controller or Alternate will assign AFSL Security Sticker numbers to be attached to the assortment shipping cartons from the batch of Security Stickers previously provided to Participant (see section V, below). These AFSL Security Stickers shall be attached by or under the supervision of the Controller or Alternate.
4. If the Request to Assemble is denied, the Testing Provider will notify the requesting Participant and AFSL of such denial, including the reason for the denial.
5. The Testing Provider shall forward a copy of the Request to Assemble to AFSL for review.

#### **B. Certification and Recordkeeping.**

1. Once assembly of the Assortments is completed, it is the Participant's responsibility to assure that the finished Assortments are packaged in approved shipping cartons.

2. The Controller or Alternate shall attach or supervise the attachment of AFSL Security Stickers to each finished Assortment shipping case.
3. The Participant shall enter the numbers listed on the AFSL Security Stickers into their AFSL Security Sticker Log. All requirements for AFSL Security Stickers are listed in Section V, below.
4. All Participants shall maintain all records and documents for three (3) years from date of generation. Participants are also subject to Performance Audits as listed in Section VI.
5. After all requirements have been met, the finished Assortments products may be distributed by the approved Participant.
6. The Participant may now generate a Certificate of Conformity as required by the CPSIA to indicate that the Assortments are in compliance with all applicable CPSC safety rules, standards and bans. The Certificate shall be filed on the AFSL Certificate of Compliance Database located on the AFSL website, which is accessible to CPSC. The Certificate will include the unique Lot Identification Number assigned by the Test Provider to the initial Request to Assemble. The Certificate of Conformity will be based upon testing performed by AFSL for each batch of bulk merchandise used to assemble the Assortments.
7. It is the Participant's responsibility to maintain copies of AFSL Test Reports received from the Shipper for each Lot of bulk merchandise used to assemble the Assortments and to assure that the Certificates of Compliance issued for the Lot of finished Assortments are traceable to the test reports for bulk merchandise upon which the certificate is based.
8. AFSL will audit periodically the Participants operation in accordance with Section VI, below to assure that there all procedures are being carried out in accordance with the program.

### **III. Domestic Testing Procedures for Finished Fireworks Manufactured from Previously Certified Components.**

As part of its Domestic Testing Program, AFSL will test finished fireworks that are manufactured in the U.S. from components that previously have been certified under the AFSL QIP in China. As a condition of participation in the program, the manufacturer must execute a Domestic Testing Program Agreement with AFSL and must agree to meet the following conditions:

1. Domestic Facilities that assemble fireworks components into finished fireworks shall be audited by AFSL prior to production to ensure their ability to comply with this program.
2. Prior to importation into the U.S., Fireworks Components used to manufacture finished fireworks devices shall be tested and certified by AFSL under the China QIP procedures.
3. Once imported into the U.S. the components are assembled by the importer into finished fireworks devices and may not be sold or distributed in commerce in their unfinished state.

4. Shipping cartons containing Fireworks Components that have been tested by AFSL prior to importation into the U.S. shall be marked with a special AFSL Security Sticker displaying a number beginning with the letter C. Such lots must be separated and secured lots from other merchandise. Participants must exercise due care to ensure unfinished components do not become introduced into the stream of commerce.
5. Testing of products assembled from certified components will be conducted on five categories of fireworks: Mine and shell devices; reloadable shells for assembly into reloadable tube aerial shell devices; reloadable tubes for assembly into reloadable tube aerial shell devices; Missiles assembled from previously certified motor tubes, and Sparklers imported in bulk and re-packaged in the US. Duplicate testing on the previously certified components will not be performed and any requirements applicable to the finished product that have not been tested for in China will be tested for in the US prior to certification of the finished product.
6. Finished fireworks products manufactured from previously certified components shall not be distributed without re-certification by AFSL under the procedures described in this program.
7. The following tests will be performed for each of those product categories.

**a. Mine and Shell Devices.** Mine and Shell devices assembled from previously certified components will be tested for the following requirements:

- i. Fuse burn time
- ii. Fuse side ignition
- iii. Base attachment
- iv. Base to height ratio
- v. Stability
- vi. Fuse attachment
- vii. Fuse location
- viii. Burnout/blowout
- ix. 2" Foam dynamic stability test
- x. Break charge
- xi. Sequential firing
- xii. Aerial effects
- xiii. Function of effects
- xiv. Flight trajectory
- xv. Time between effects
- xvi. 4 meter radius of effects

**b. Reloadable Aerial Shell Devices Assembled from Certified Shells.\*** Reloadable Tube aerial shell devices assembled from previously certified shells will be subject to the following tests when combined with uncertified launch tubes:

- i. Base to height ratio

- ii. Stability (18 degrees)
- iii. Base Attachment
- iv. Fuse Location
  - v. Burnout/Blowout
- vi. Reloadable Tube Integrity Test
- vii. Reloadable Tube Abuse Test
- viii. Devices with more than 200 grams of chemical composition
- ix. Cautionary Labeling on tube and package.

**c. Reloadable Aerial Shell Devices Assembled from Previously Certified Tubes.\***

Reloadable Tube Aerial Shell Devices assembled from reloadable tubes that previously were certified by AFSL under the QIP in China shall be tested for the following requirements:

- i. Base to Height Ratio.
- ii. Stability
- iii. Base Attachment.
- iv. Burnout/Blowout.
- v. Reloadable Tube Integrity Test.
- vi. Reloadable Tube Abuse Test.
- vii. Aerial Effects.
- viii. Function of Effects.
- ix. Flight Trajectory.
- x. Time between Effects.
- xi. Cautionary Labeling.

**d. Missiles.** Missiles assembled from previously certified inserts shall be tested for the following requirements where applicable:

- i. Fuse Attachment
- ii. Base-to-Height Ratio
- iii. Stability
- iv. Wing/Fin Attachment
- v. Fuse Location
- vi. Fuse Side Ignition
- vii. Fuse Burn Time
- viii. Burnout/Blowout
- ix. Break Charge
- x. Aerial Effect
- xi. Function Effect
- xii. Flight Trajectory
- xiii. Cautionary Labeling

**e. Sparklers Re-packaged in the U.S.** Sparklers import in bulk and re-packaged in the U.S. shall be tested for the following requirements:

- i. Packaging
- ii. Cautionary labeling
- iii. Pyrotechnic leakage

\*NOTE: Finished fireworks devices that are assembled from previously certified components only and that require no additional manufacturing steps (other than re-packaging) to achieved a finished fireworks device will be re-certified and charged for billing purposes under the Assortments program. This would include re-packaged sparkler components and reloadable tube aerial shell devices assembled from previously certified shells and previously certified tubes.

**A. Request for Testing.**

1. Once a Participant has assembled a completed fireworks product, the Participant shall submit a Testing Application Form to the Testing Provider to test the Finished Domestic Fireworks Product.
2. The Testing Provider will then dispatch a sample team to obtain sufficient random fireworks sample of the finished fireworks. Samples will be collected by a Sample Collection firm under contract to the Testing Provider within 3 to 5 days from the Participant's initial request. These controlled samples will then be sealed and shipped to the Testing Provider for testing. Upon sample pick-up by the designated carrier the Participant is responsible to complete the Sample Shipment Tracking Form and forward it via e-mail or fax to the Testing Provider Contact noted on the form, no later than 24 hour after sample pick-up. The participant is responsible for providing suitable boxes for transporting samples to the Testing Provider.
3. Testing of the fireworks samples will then be performed by the Testing Provider to AFSL's Voluntary Standards. Testing will be conducted by technicians that have been certified by AFSL to perform such testing. Testing will be completed and results provided to the Participant within a targeted 5 working days.

**B. Reporting Test Results.**

1. An AFSL Test Report will be completed by the Technician and reviewed by a Senior Certified Technician. The Test Report will be identified by a unique lot identification number beginning with the letter "US" to indicate domestic testing.
2. Once testing is complete, AFSL and Participant will be notified of the testing results within 48 hours days after receipt of the samples by the Testing Provider. A copy of each test report will be provided to the Participant Testing Provider and will be entered into the AFSL Testing Database for purposes of tracking all shipments tested in the United States.

3. After all requirements have been met, the finished product may be distributed.
4. If a test yields a result indicating that a Domestic Product has not met all applicable standards, the Testing Provider shall notify the Participant and AFSL.

### **C. Certification and Recordkeeping**

1. The Controller or Alternate will assign AFSL Security Stickers to be attached to each shipping cartons within the Lot of the finished product. The Controller or Alternate will enter the numbers listed on the Security Stickers into their AFSL Security Stickers Log. The AFSL Security Stickers shall be attached by or under the supervision of the Controller or Alternate. All requirements for AFSL Security Stickers are listed in Section V, below.
2. All Participants must maintain all records and documents for three (3) years from date of generation. Participants are also subject to Performance Audits as listed in Section VI.
3. After all requirements have been met, the finished Assortments products may be distributed by the approved Participant.
4. The Participant may now generate a Certificate of Conformity as required by the CPSIA to indicate that the products are in compliance with all applicable CPSC safety rules, standards and bans. The Certificate shall be filed on the AFSL Certificate of Compliance Database located on the AFSL website, which is accessible to CPSC. The Certificate will include the unique Lot Identification Number assigned by the Test Provider to the initial Request to Test. The Certificate of Compliance will be based upon the test report completed by the Test Provider for the tested Lot. It is the Participant's responsibility to assure that this Test Report can be traced to the test report provided to Participant for the certified components used to assemble the finished product.
5. It is the Participant's responsibility to maintain copies of AFSL Test Reports received from the Shipper for each Lot of bulk merchandise used to assemble the Assortments and to assure that the Certificates of Compliance issued for the Lot of finished Assortments are traceable to the test reports for bulk merchandise upon which the certificate is based.

## **IV. Testing Program Procedures for Domestically Manufactured Fireworks:**

All fireworks manufactured domestically without the use of previously certified components shall be tested to the same Standards and Testing Procedures as those currently used in the China Fireworks Quality Improvement Program (QIP). Certification of products that are fully manufactured domestically will be accomplished following the procedures described in the domestic components program described in paragraph III, above, with the following exceptions:

1. Certification testing of the fireworks samples will then be performed by the Testing Provider to all applicable AFSL Standards for the product category being tested.

2. Once the testing is complete AFSL and the Domestic Manufacturer will be notified of the testing results within 48 hours after receipt of the samples by the Testing Provider.
3. The Testing Provider will dispatch a team to apply AFSL Security Stickers to the finished products in accordance with established AFSL procedures.
4. If a test yields a result indicating that a Domestic Fireworks Product has not met all applicable standards, the Testing Provider shall notify the Domestic Manufacturer and AFSL and the manufacturer shall not distribute the tested products in accordance with the terms of the manufacturer's agreement with AFSL.

## **V. Security Sticker Control and Attachment**

These requirements describe the procedures for obtaining, securing, storage and applying AFSL Security Stickers to approved shipping cartons.

### **A. Security Labels for Certified Assortments and Product Assembled from Certified Components.**

1. Each Participant shall apply annually to AFSL, for AFSL Security Stickers to be used in the Domestic Certification Testing Program. The number of Stickers issued will be based on the volume of product packaged by the Participant in the previous year. Participants may apply for additional Stickers at any time during the year by sending a letter of justification to AFSL requesting such Stickers. The Participant shall provide sufficient information in the request letter to enable AFSL to evaluate and decide the request.
2. Each Participant shall designate a Controller and an Alternate to maintain the security of AFSL Security Stickers that have been assigned to it. The names and contact information for these persons must be provided to AFSL before AFSL will provide any Stickers to the Participant. AFSL shall be notified in writing with-in forty-eight (48) hours of any change in this information. Such notification shall include the reason for the change.
3. The Controller and the Alternate shall be responsible for (I) securing AFSL Security Stickers, (II) maintaining an AFSL Stickers Log of the AFSL Security Stickers used and stored , (III) ensuring that the AFSL Security Stickers are properly administered.
4. AFSL Security Stickers shall be stored in a location approved by AFSL and accessible only to the Controller and Alternate. AFSL must be notified in writing with-in twenty-four (24) hours of any loss of or damage to AFSL Security Stickers in the Participant's possession. A detailed written explanation of the loss of or damage to the Stickers along with a description of any corrective actions taken by the Participant must be received by AFSL within five (5) working days after the loss or damage occurs.
5. Controllers and Alternates shall attach or supervise the attachment of AFSL Security Stickers to shipping cartons of tested Finished Product.

6. Each Participant shall maintain the following records at its principal domestic office: (I) the AFSL Security Stickers Log, (II) copies of the Assortment Certification Request Forms and/or the Testing Application Forms, (III) records of the number of bulk cartons of each item converted into assortments, and (IV) copies of all AFSL test reports for components certified in China for use in the domestic manufacture of finished fireworks. These records must be available in English, shall be maintained for three (3) years after their generation, and shall be made available for performance audit purposes during normal business hours at the request of AFSL.

## **B. Attachment of AFSL Security Stickers to Approved Shipping Cartons of Domestic Manufactured Fireworks Product:**

1. Once product has been tested and certified AFSL/Testing Provider shall dispatch personal needed to attach AFSL Security Stickers to shipping cartons of certified product.

## **VI. Performance Audits**

1. Participants in the Domestic Certification Testing Program must agree to reasonable unannounced performance audits by AFSL during normal business hours.
2. Participants must maintain copies in English of all forms submitted to the Testing Provider, all Security Stickers Logs, and any forms AFSL requires to ensure the integrity and compliance of this program for a period of three (3) years from the date of their generation. These records must demonstrate compliance with the requirements listed in this program.
3. Any failure by a Participant to comply with these requirements or with any AFSL Test Procedure or Standard may result in sanctions or suspension from this program.
4. AFSL shall notify the Participant of any failures to comply with the program requirements.

## **VII. Program Costs.**

- A.** Certification of Assortments Assembled for Previously Certified Bulk Cases.
  1. BV Cost -- US\$0.05 per case
  2. AFSL Cost -- US\$0.02 per case for sticker
- B.** Testing and Certification of Finished Fireworks Manufactured from Previously Certified Components.
  1. BV Cost -- US\$0.40 per case
  2. AFSL Cost -- US\$0.02 per case for sticker
- C.** Testing and Certification of Finished Fireworks Devices (fully manufactured, not from previously certified components).

1. BV Cost -- U.S.\$800.00 per man-day plus travel cost
2. AFSL Cost -- US\$0.02 per case for sticker