

1.0 PURPOSE

This document establishes the Mine Safety and Health Administration's (MSHA) Standard Application Procedure (SAP) for the Approval of Flame-Resistant Brattice Cloth and Ventilation Tubing under 30 CFR, Part 7, Subparts A & B. Use of this document use is voluntary.

2.0 SCOPE

These procedures apply to all applications for Approval of Flame-Resistant Brattice Cloth and Ventilation Tubing according to the Code of Federal Regulations, Title 30, Part 7, Subparts A & B.

3.0 REFERENCES

- 3.1. Approval and Certification Center (A&CC) Cancellation Policy (APOL 1009).
- 3.2. Code of Federal Regulations (30 CFR) Part 7, Subparts A & B.

4.0 DEFINITIONS

- 4.1. Brattice Cloth Family - a cloth material used as a curtain to direct air, or made into a tube to form a type of flexible ventilation tubing. It meets requirements of 30 CFR 7.27.
- 4.2. Preauthorization - an agreement in the application, that confirms and agrees to MSHA's general cost estimate to evaluate the application.
- 4.3. Ventilation Tubing Family - a rigid material that is formed into a tube to direct air, and may be corrugated to be made semi-flexible. It meets requirements of 30 CFR 7.28.

5.0 APPLICATION PROCEDURE

- 5.1. MSHA recommends that applicants contact the Quality Assurance & Materials Safety Division at 304-547-0400 to discuss approval and testing requirements prior to submitting an application.
- 5.2. Send applications for new approval or modification to an existing approval to:

MSHA, Approval and Certification Center
Attention: IPSO
765 Technology Drive
Triadelphia, West Virginia 26059

a. FAX to: 304-547-2084

b. Email Submittals:

Send application letters, specifications, drawings, and other supporting documentation to zzMSHA-IPSO@DOL.gov

c. FTP Submittals:

Applicants can place application letters and supporting documentation on the MSHA FTP server, mfgr.msha.gov. Please call the Information Processing Services Office (IPSO) at 304-547-0400 to establish your user account.

5.3. Applicants must conduct their own flame test or have it conducted by a Part 7B Flame Test Laboratory. THE APPLICANT SHOULD SCHEDULE FLAME TESTS AFTER MSHA RECEIVES THE APPLICATION AND ASSIGNS A TRACKING (PAR) NUMBER. MSHA does not conduct approval testing for brattice cloth and ventilation tubing. **MSHA reserves the right to witness the flame tests at the expense of the applicant** (see Section 5.7.1). A list of participating Part 7 testing laboratories is available on Attachment 1. MSHA does not certify or endorse these laboratories, but lists them for the convenience for the applicant. To ensure uniformity, MSHA prefers that video of the testing be submitted along with the written test report for unwitnessed testing.

5.4. Brattice Cloth Applications

5.4.1. Provide your company Employer Identification Number (EIN) and Tax Identification Number (TIN).

5.4.2. Each application for approval of a product must be in the English Language and include the following information: See the attached application forms (Attachment 2A, Item 1).

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- a. Company name
 - b. Address
 - c. Telephone number & email address of company representative
 - d. Company representative's name
- 5.4.3. A 6 digit alphanumeric code (Application Code) assigned by the applicant (Attachment 2A, Item 2).
- 5.4.4. The place and date of flame testing and details on the specific samples that will be tested (Attachment 2A, Item 3).
- 5.4.5. The applicant must submit a flame test report from a Part 7B flame test laboratory as a part of the application process. The flame test report must include all information listed on Attachment 4 (Attachment 2A, Item 4). MSHA prefers that video of the testing be submitted along with the test report.
- 5.4.6. A 12 inch by 12 inch (approximate size) sample of each brattice cloth should be provided with the application (Attachment 2A, Item 5).
- 5.4.7. Certification Statements
- 5.4.7.1. Signed Certification Statements relating to the Technical requirements specified in 30 CFR, Subpart 7B, Section 7.24 (Attachment 2A, Item 6a).
- 5.4.7.2. Signed Certification Statements relating to the Quality Assurance requirements specified in 30 CFR, Subpart 7A, Section 7.7 (Attachment 2A, Item 6b).
- 5.4.7.3. Signed Certification Statement certifying that the product meets the performance portion of the technical requirements as specified in 30 CFR, Subpart B, Section 7.24 (Attachment 2A, Item 6c).
- 5.4.8. A complete description of the product including: trade name, product designations, color, type, weight, film, scrim, adhesive, suppliers, supplier's ID numbers, thickness, weight, percentage of finished product by weight for the film, scrim, and adhesive (Attachment 2B).

5.5. Ventilation Tubing Applications

- 5.5.1. Provide your company Employer Identification Number (EIN) and Tax Identification Number (TIN).
- 5.5.2. Each application for approval of a product must be in the English Language and include the following information: See the attached application forms (Attachment 3A, Item 1).
 - a. Company name
 - b. Address
 - c. Telephone & email address of company representative
 - d. Company representative's name
- 5.5.3. A 6 digit alphanumeric code (Application Code) assigned by the applicant (Attachment 3A, Item 2).
- 5.5.4. The location, date and time for flame testing and the details relative to the samples to be tested (Attachment 3A, Item 3)
- 5.5.5. The applicant must provide a copy of the laboratory's flame test report (Attachment 3A, Item 4).
- 5.5.6. Certification Statements
 - 5.5.6.1. Signed Certification Statements relating to the Technical requirements specified in 30 CFR, Subpart 7B, Section 7.24 (Attachment 3A, Item 5a).
 - 5.5.6.2. Signed Certification Statements relating to the Quality Assurance requirements specified in 30 CFR, Subpart 7A, Section 7.7 (Attachment 3A, Item 5b).
 - 5.5.6.3. Signed Certification Statement certifying that the product meets the performance portion of the Technical requirements as specified in 30 CFR, Subpart B, Section 7.24 (Attachment 3A, Item 5c).
- 5.5.7. A complete description of the tubing to include trade name, product designations, color, type, inside diameter, wall thickness, suspension

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system, base material, resin, flame retardants, suppliers, supplier's ID numbers, and percentage of finished product by weight for the base material, resin, film, and flame retardants (Attachment 3B).

5.6. Application Processing

- 5.6.1. Upon receipt of a complete application, MSHA will decide if witnessing is necessary, and an estimate for the administrative cost of processing the application (authorization letter) will be prepared and sent to the applicant. The authorization letter will include the cost of personnel time spent to travel and witness the product testing. MSHA will separately charge the cost of the means of travel and lodging involved with witnessing the test.

MSHA reserves the right to witness any testing. MSHA's policy is to witness the testing of all first time Part 7 applicants. MSHA will also witness testing at laboratories that have not previously submitted test data for this test, or may witness tests at laboratories who in the past have demonstrated difficulties in conducting the tests according to the testing standards.

The applicant may preauthorize the estimate in order to eliminate the authorization letter. Check with MSHA personnel for the present amount.

- 5.6.2. Upon receipt of authorization from the company to the estimated cost (or preauthorization to charge the applicant), MSHA schedules any necessary travel for witnessing tests at the earliest time accessible to all parties.
- 5.6.3. MSHA will notify the applicant of the products required for approval testing. When the applicant submits a large family of products for approval, it is not necessary to test every product. MSHA's policy is to require testing of the lightest weight and heaviest weight brattice products within each family. If the applicant provides formulation showing pigments are a small portion of the total, and arranges testing for the most combustible color, MSHA may approve a material in a range of colors. Otherwise, different formulations require separate approval applications.
- 5.6.4. MSHA will prepare an approval letter and assign an approval number when it has received complete application information and successful

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laboratory test data with certifications relevant to the product described by the application.

- 5.6.5. If a product should fail testing, MSHA allows one retest based on a written request by the applicant. The request for retest must provide the justification for such action, such as improvement in product formulation or processing conditions. MSHA may require retesting of a selection or all samples depending on the nature of the failure. MSHA may issue approval for a reduced range for testing that passes at one material thickness and fails at another.

5.7. Notification of Discrepancy

MSHA notifies the applicant of any discrepancies that the applicant must correct. MSHA and applicant s will resolve discrepancies in accordance with the A&CC's cancellation policy (APOL 1009).

5.8. Maintaining the Approval

As a part of 30 CFR, Part 7, brattice and ventilation tubing products are subject to yearly audit each year that the approval holder are manufactures them. If an approval holder produces multiple approved brattice or ventilation tubing products in a year, MSHA requests the applicant only submit one for audit. MSHA conducts audit tests and charges costs to the approval holder.

MSHA assigns approved products an approval number that must be permanently marked on the product at least one inch high at a frequency of every 10 feet or less for brattice and at least each section of ventilation tubing.

The applicant must make the product to the specifications of the approval.

The applicant may modify the product by first contacting MSHA. Follow the Revised Approval Modification Program (RAMP) process to modify approvals (ASAP5001).

The approval may be retired by contacting MSHA. Applicants must apply for a new approval to bring a product out of retirement for use where approval is required.

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Attachment 1

Part B Flame Test Laboratories for Brattice Cloth and Ventilation Tubing

(Not endorsed or certified by MSHA, but listed as a convenience)

Glen Raven Technical Fabrics, LLC
1831 N. Park Avenue
Glen Raven, NC 27217-1137
Telephone: 336-221-2104

ABC Corporation
P.O. Box 77,
Warsaw, IN 46580
Telephone: 800-426-0921

Schauenburg Flexadux Corp.
2233 Sanford Drive
Grand Junction, CO 81505
Telephone: 970-245-9400

Bluefield Manufacturing, Inc.
P.O. Box 1010
Industrial Park
Bluefield, VA 24605
Telephone: 800-445-4461

Govmark
96 Allen Blvd., Suite D
Farmingdale, NY 11735-5626
Telephone: 631-293-8944

Johnston Morehouse Dickey (JMD) Company
5401 Progress Blvd.
Bethel Park, PA 15102
Telephone: 412-833-7100

RADCO (Resources, Applications, Designs, and Controls), Inc.
Listing and Testing Division
3220 E. 59th Street
Long Beach, CA 90805
Telephone: 562-272-7231

Attachment 2A

APPLICATION FORM FOR BRATTICE CLOTH AND CLOTH-BASED FLEXIBLE TUBING

Date_____

1. Company Name_____

Address _____

Telephone No. (Area Code)_____ Email address_____

Company Representative_____

Company EIN_____ Company TIN_____

2. Please assign an alphanumeric six-character code to identify the application until an MSHA number is assigned._____

3. Provide the proposed location, date & time of 30 CFR § 7.27 testing (if applicable).

4. A flame test report from the Part 7B flame test laboratory is attached: Yes_____ No_____

5. A 12 inch by 12 inch (approximate size) sample of each brattice cloth should be provided with the application: Yes_____ No_____(If No, attach explanation).

6. Each application shall include certification statements as described in Part 7, Subpart A, Section 7.3(f).

a. We_____ certify that the product meets the design portion of the
(insert name)
Technical requirements as specified in 30CFR, Subpart 7B, Section 7.24.

b. We_____ certify that we will perform the Quality Assurance
(insert name)
requirements of 30CFR, Subpart A, Section 7.7.

Signature of Authorized Company Representative

c. We_____ certify that the brattice cloth meets the
(insert name)
performance requirements of 30 CFR, Subpart B, Section 7.27 as specified in Subpart 7B, Section 7.24.

Signature of Authorized Company Representative

Attachment 2B

Product Description (Include all variations):

Trade Names				
Style, Code No. or other designation				
Color				
Type of Brattice (jute, cotton, plastic, etc.)				
1. Thickness				
2. Weight (oz./sq. yd.)				
Type of Film				
1. Film Supplier				
2. Supplier's Stock #				
3. Thickness (mil)				
4. Weight (oz./sq. yd)				
5. Percent of finished product by weight				
Type of Scrim				
1. Scrim Supplier				
2. Supplier's Stock #				
3. Weight (oz./sq. yd)				
4. Threads/inch				
5. Denier				
6. Percent of finished product by weight				
Type of Adhesive				
1. Adhesive Supplier				
2. Suppliers Stock #				
3. Percent of finished product by weight				

Attachment No. 3A

APPLICATION FORM FOR VENTILATION TUBING MADE FROM RIGID MATERIAL

Date_____

1. Company Name_____

Address _____

Telephone No. (Area Code)_____ Email address _____

Company Representative_____

Company EIN_____ Company TIN_____

2. Please assign an alphanumeric six-character code to identify the application until an MSHA number is assigned._____

3. Provide the proposed location, date & time of 30 CFR § 7.28 testing (if applicable).

4. A copy of the laboratory's flame test report is attached: Yes_____ No ____
(If No, attach explanation).

5. Each application shall include certification statements as described in Part 7, Subpart A, Section 7.3(f).

a. We_____ certify that the product meets the design portion of the
(insert name)
Technical requirements as specified in 30CFR, Subpart 7B, Section 7.24.

b. We_____ certify that we will perform the Quality Assurance
(insert name)
requirements of 30CFR, Subpart A, Section 7.7.

Signature of Authorized Company Representative

c. We_____ certify that the brattice cloth meets the performance
(insert name)
requirements of 30 CFR, Subpart B, Section 7.27 as specified in Subpart 7B, Section 7.24.

Signature of Authorized Company Representative

Attachment No. 3B**VENTILATION TUBING APPLICATION FORM**

Date _____

3. Product Description (Include all variations)

Trade Name(s)	
Style, Code No., or other designation	
Color	
Inside diameter(s)	
Length(s)	
Average wall thickness in inches (minimum+ maximum)	
Configuration(s) (round, oval, etc.)	
Base material 1. Type (fiberglass, vinyl, etc.) 2. Supplier 3. Supplier's stock # 4. Percent finished product by weight	
Resin, coating, etc. 1. Type (epoxy, etc.) 2. Supplier 3. Supplier's stock # 4. Percent finished product by weight	
Other components (steel, wire, etc.) 1. Type 2. Supplier 3. Supplier's stock # 4. Percent finished product by weight	

Attachment No. 4**Recommended Test Report**

Sample Information:

Product Manufacturer _____ Trade name _____

Date/time Conditioning initiated (minimum 24 h) _____ Temperature (required _____

_____ Relative humidity (%) _____

MSHA PAR # _____

Brattice: weight (oz./yd²) _____ Color _____ Size (length x height) _____

Rigid vent tube: wall thickness _____ Color _____ Size (length, diameter) _____

Test procedure (Select one):

30 CFR 7.27

30 CFR 7.28

Testing laboratory _____ Date _____

Personnel conducting test _____

Anemometer calibration date _____

TESTS RESULTS**Still Air** - Required value 0 ± 5 fpm - Measured value: _____

Sample	Flame height (inches)	Distance Sample bottom to chamber floor (inches)	Ignition time (sec)	Burn Time A: floor during ignition period (min./sec.)	Burn Time B: suspended & floor after ignition period (min./sec.)	Lengthwise Flame Propagation (inches)	Total Burn Time A + B (min./sec.)
1							
2							
3							
						Average Time:	

Moving Air - Required value 125 ± 12 fpm - Measured value: _____

1							
2							
3							
						Average Time:	

Video Recorded (select one)?

Yes

No

COMMENTS _____

Signed _____ Date _____

Print name _____