

1.0 PURPOSE

This document establishes a voluntary Mine Safety and Health Administration (MSHA) Standard Application Procedure (SAP) for the flame testing, evaluation and acceptance of solid products taken into underground mines.

2.0 SCOPE

The Code of Federal Regulations (CFR), Title 30 contains mandatory regulations for flame resistant requirements of many products used in underground mines. However, there are numerous other products which may present similar fire hazards, but for which no specified test and/or regulation exist. As a result, this procedure provides for the testing and evaluation of these materials.

3.0 REFERENCES

- 3.1. Approval and Certification Center (A&CC) Cancellation Policy (APOL 1009).
- 3.2. Code of Federal Regulations (30 CFR), Part 7.44(a) (4) (i), Part 18.37(f) (1), Part 18.45(e) & Part 18, Section 18.65.

4.0 DEFINITIONS

- 4.1. Applicant: One that manufactures or controls the assembly of a product.
- 4.2. Preauthorization notice: A statement by the applicant authorizing MSHA to expend a stated amount of money in evaluating / testing the applicant's product prior to the preparation and issuance of the MSHA fee estimate.

5.0 APPLICATION PROCEDURE

- 5.1. It is recommended that applicants contact the Quality Assurance & Materials Safety Division at 304-547-0400 to discuss approval and testing requirements prior to submitting an application.
 - 5.1.1. The following products may be accepted under this Application Procedure:
 - a. Air hose cover,
 - b. Belt skirt,
 - c. Belt wipers,

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- d. Chute liner,
- e. Hydraulic hose cover,
- f. Mine spray hose cover,
- g. Pulley lagging (conveyor roller covers),
- h. Rock dust hose cover,
- i. Seat cushion material,
- j. Water hose cover, (not as fire hose),
- k. Impact bars,
- l. Roof/Rib Grid Material
- m. Hydraulic hose protective sleeve.

Note: Applications for the acceptance of Roof / Rib Grid Material must also complete Attachment 2.

This list is not totally inclusive. MSHA may evaluate and process other products, depending on the potential use and associated hazard. As such, the materials and required tests will be judged on a case by case basis.

- 5.1.2. The following products are also evaluated under these procedures and are required to be flame-resistant in accordance with 30 CFR.

30 CFR Referenced Sections

- | | | |
|----|------------------------|------------------|
| a. | Battery Box Insulation | 7.44 (a) (4) (i) |
| b. | Cable Reel Insulation | 18.45 (e) |
| c. | Packing Material | 18.37 (f) (1) |

- 5.2. The application requesting an approval or extension of approval should be sent to the following address:

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

- a. FAX to: 304-547-2084
- b. Email Submittals:
Application letters, specifications, drawings and other supporting documentation should be sent to zzMSHA-IPSO@DOL.gov

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- c. FTP Submittals:
Application letters and supporting documentation can be placed 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. Each application for approval of a product must be in the English Language and include the following information on the attached application forms (Attachment 1 - Item 1).
- a. Company name
 - b. Address
 - c. Telephone number of company representative
- 5.3.1. Provide a company assigned application No. (six digit or less) (Attachment 1 - Item 2).
- 5.3.2. Provide a complete description of the product to include (Attachment 1 - Item 3):
- a. Product name
 - b. Description/Style or Code #
 - c. Potential use
- 5.3.3. Complete formulation: Each ingredient must be specified by its chemical or generic name along with its percentage (weight) and tolerance. Organic ingredients should be named according to the current rules of the International Union of Pure and Applied Chemistry. Inorganic ingredients should be named according to the Chemical Abstract of the American Chemical Society. A prepolymer formulation which has been registered with MSHA may be identified by furnishing the MSHA assigned ID number. However, each additional ingredient the manufacturer adds to the chemical or generic name, along with its percentage (weight) and tolerance must be identified by chemical or generic name, along with its percentage (weight) and tolerance (Attachment 1 - Item 4).
- 5.3.4. Information on the toxicity of the finished product including an OSHA Materials Safety Data Sheet in accordance with 29 CFR 1910.1200 (Attachment 1 - Item 5).

- 5.3.5. A signed Certification Statement regarding toxicity as described in Attachment 1, Item 6.
- 5.3.6. Provide Quality Control information pertaining to the manufacturer's quality assurance procedures for (Attachment 1 - Item 7):
- a. Procurement procedures for the components or ingredients of the product;
 - b. Manufacturing practices to maintain the formulation,
 - c. Procedures for record keeping, such as inspection records, sampling plan, test results, etc.
 - d. Critical Characteristics that will be flame tested or inspected to ensure that the finished product meets the flame resistance test requirements.
- 5.3.7. Provide product drawings (if applicable - Attachment 1 - Item 8).
- 5.3.8. Provide sales literature (if available - Attachment 1- Item 9).
- 5.3.9. Samples Required for Testing.
- 5.3.9.1. Applicants must submit pre-cut, postpaid samples of the proper size and quantity (min. 4) as specified by MSHA. The size of the each sample will be 1/2" wide by 6" long by the thickness of the material. Generally, MSHA will accept a range of material thickness if the thinnest and thickest samples meet the flame test requirements (Attachment 1 - Item 10a).
- 5.3.9.2. Applicants for acceptance of Roof / Rib Grid Material must submit a 4 ft. by 50 ft. roll for testing; shipping must be prepaid (Attachment 1 - Item 10b).
- 5.4. Application Processing
- 5.4.1. Upon receipt of a complete application, an estimate for the cost of processing the application ("CAP" letter) will be prepared and sent to the applicant. However, the applicant may submit a preauthorization notice with their applications to expedite processing and to eliminate the "CAP" letter. Contact the Approval and Certification Center (304-547-0400) for a cost estimate.

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- 5.4.2. If an applicant chooses to cancel, fees will be charged for work performed up to the cancellation. If charges are less than the preauthorized amount, the lesser amount will be charged.
- 5.4.3. Acceptable flame resistance of a product will be determined by MSHA in accordance with one or more of the following flame test procedures:
- a. The "2G" test: ASTP5007 - MSHA's Standard Flame Test Procedure for: Hose Conduit, Fire Suppression Hose Cover, Fire Hose Liner and Other Materials; Title 30, Code of Federal Regulations, Part 18, Section 18.65
 - b. Standardized Small Scale Flammability Tests: ASTP5011 - Standardized Small Scale Flame Test Procedure for the Acceptance of Roof-Rib Grid Material; (Also see: 30 CFR, Part 7, Subpart B)

In instances where these flame test procedures may not be appropriate due to the physical characteristics or intended use of certain materials, another test may be specified by MSHA.

5.5. Product Acceptance

- 5.5.1. Upon successful testing and evaluation of the submitted product, MSHA will issue an acceptance number.
- 5.5.2. An accepted product shall be permanently and legibly labeled with the acceptance designation as instructed by MSHA. MSHA may permit alternate forms of labeling.
- 5.5.3. The manufacturer may submit a request for an "extension" of acceptance for a product, if minor changes in the product's construction, composition or use is contemplated. MSHA will determine if testing is required for these type modifications.
- 5.5.4. Companies other than the original manufacturer can market an accepted product under a different trade name or designation (private label). However, to maintain the validity of the acceptance, the original acceptance number issued by MSHA may not be changed. Any other markings on the product are at the discretion of the manufacturer or

distributor. Additionally, MSHA must be promptly notified of such actions.

5.5.5. A product may be advertised as “accepted by MSHA” but such terms as “approved”, “recommended” or “sanctioned” by MSHA must not be used.

5.5.6. All construction details, formulations and test results, or other information designated as proprietary and/or confidential, will be regarded as such with the exception of the company name, address, phone number product name, and intended product use.

5.6. Product Failure

Should the product fail the testing, the application will be cancelled and any accrued charges billed.

5.7. Notification of Discrepancy

The applicant will be notified of any problems (discrepancies) that require correction with the submitted documents before the acceptance can be issued. Discrepancies will be resolved in accordance with A&CC’s cancellation policy (APOL 1009).

5.8. Post Acceptance Audits

As part of the acceptance program, MSHA reserves the right to request samples from the manufacturers for testing at no cost to MSHA for post-acceptance audit. Samples of each product shall not be requested more than one a year except for cause.

5.9. Revocation

MSHA may revoke any acceptance and require a products removal from underground mines should it be found to be unsafe, create a health hazard, or otherwise not be in conformance with the acceptance criteria.

Attachment 1

Flame Resistant Acceptance of Solid Products - Application Form

Date _____

1. Company Name _____
Address: _____
Telephone No. (Area Code) _____ FAX No. _____
Company Representative _____

2. Company Assigned Application No. (six digits or less) _____

3. Product Description (Include all variations)

- a. Trade Name: _____
- b. Style, Code No., (or other description): _____
- c. Potential use: _____

4.	Formulation Ingredient	% by Weight	Tolerance (+ or - Percent)
	_____	_____	_____
	_____	_____	_____
	_____	_____	_____
	_____	_____	_____
	_____	_____	_____
	_____	_____	_____
	_____	_____	_____
	_____	_____	_____
	_____	_____	_____

5. Provide information on the toxicity of the finished product including a Materials Safety Data Sheet (MSDS) prepared in accordance with 29 CFR 1910.1200

6. Certification Statement:

I certify that _____, in its final form does not present
(Trade Name)
a toxicity hazard under normal use conditions. Furthermore, I certify that we will assure product compliance of this product with respect to all specifications submitted to MSHA, A&CC.

Signed _____ Title _____ Date _____
(Authorized Company Official)

7. Attach the following Quality Assurance Documentation information:
- a. Procurement procedures for the components or ingredients of the product,
 - b. Manufacturing practices to maintain the formulation,
 - c. Procedures for record keeping, such as inspection records, sampling plan, test results, etc.
 - d. Critical Characteristics that will be flame tested or inspected to ensure that the finished product meets the flame-resistance test requirements.

8. Attached - product drawings (if applicable) Yes ___ No ___

9. Attached - sales literature (if available) Yes ___ No ___

10. Samples Required for Testing:

- a. The following pre-cut samples (of the proper size) and quantity (min. 4) are submitted for testing. Generally, the size of the sample should be 1/2" wide by 6" long by the thickness of the material. Shipping of samples must be prepaid.

Sample 1: _____

Sample 2: _____

Sample 3: _____

- b. Samples of Roof/Rib Grid Material should be submitted to an MSHA approved Brattice Cloth Test Facility. Generally, the size of the sample for testing is 4 ft. by 50 ft. roll. Shipping of samples must be prepaid.

Sample 1: _____

Sample 2: _____

Sample 3: _____

Attachment 2

Flame Resistant- Roof / Rib Material Specification Sheet

1. Provide a typical drawing and specify all dimensions of the roof/rib product.
2. Specify (on the drawing) the location where the product will be marked with the MSHA Acceptance Number.

a. Trade Names				
b. Style, Code No. or other designation				
c. Color				
d. Thickness (mil)				
e. Weight (oz/sq. yd.)				
f. Aperture Specifications				
1. Aperture Size (length & width)				
2. Number of apertures (per liner ft./yd.) parallel to the product's length				
3. Number of apertures (per liner ft./yd.) parallel to the product's width				
4. Width of the fabric band at the product's edge				
5. Width of the fabric parallel to the product's length				
6. Width of the fabric parallel to the product's width				