

1.0 PURPOSE

This document establishes a Mine Safety and Health Administration (MSHA) Standard Application Procedure (SAP) for the acceptance of a Battery Box insulating material for use on battery assemblies approved under the Code of Federal Regulations (30 CFR), Part 7, Subpart C.

2.0 SCOPE

30 CFR, Part 7, Subpart C requires that battery box and cover insulating material be MSHA flame resistant, have a minimum resistance of 100 megohms at 500 volts DC, pass the acid resistance test as specified in 30 CFR, 7.48, and pass as flame resistant under Part 18 of Chapter 1. This application procedure provides for the necessary documentation and testing for this battery box insulating material.

3.0 REFERENCES

- 3.1. Approval and Certification Center (A&CC) Cancellation Policy (APOL 1009).
- 3.2. 30 Code of Federal Regulations (30 CFR), Part 7.44(a) (4)(i), Part 7.44(b), Part 7, Section 7.48 & Part 18, Section 18.65.
- 3.3. 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.

4.0 DEFINITIONS

- 4.1. Applicant: One who 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.
- 4.3. Chemical Name – Name of a compound following International Union of Pure and Applied Chemistry (IUPAC), CAS number, and/or American Chemical Society (ACS) rules.
- 4.4. Generic Name – A non-IUPAC name that still inherently describes specific atoms, their bonding, and possibly their manufacturing process. A trademarked name is not generic. Example: Flash-spun high-density polyethylene, but not Tyvek.

5.0 APPLICATION PROCEDURE

- 5.1. We recommend 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. You may mail your application, supporting documents, and samples of battery box insulating material 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: You may send your application and supporting documents to zzMSHA-IPSO@DOL.gov. Mail samples separately when applying by email.
- 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. Mail samples separately when applying by FTP.

5.3. Application Form

Each application for approval of a product must be in the English language and include the following information on the attached application form (Attachment 1):

- 5.3.1. Provide company information (Attachment 1 - Item 1).
 - a. Company name
 - b. Address
 - c. Telephone number(s), email, and name of company representative.
 - d. Provide your company Employer Identification Number (EIN) and Tax Identification Number (TIN).
- 5.3.2. Self-assign an application number to differentiate concurrent applications until MSHA assigns a PAR tracking number (six alphanumeric characters or less) (Attachment 1 - Item 2).
- 5.3.3. Provide a complete description of the product to include (Attachment 1 - Item 3)
 - a. Product name

- b. Description/Style or Code #
 - c. Color of insulation and minimum/maximum thickness.
- 5.3.4. Complete formulation: You must specify each ingredient by its chemical or generic name along with its percentage (weight) and tolerance (Attachment 1 - Item 4).
- a. Use IUPAC naming, CAS number, and/or generic names – do not use trade names or acronyms.
 - b. Identify pre-polymer blends by the type of polymer, manufacturer, and product number; or by an MSHA-assigned ID-number. Identify each additional ingredient you add to the pre-polymer blend by 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.
- 5.3.5. Information on the toxicity of the finished product including an OSHA Safety Data Sheet (SDS) in accordance with 29 CFR 1910.1200 (Attachment 1 - Item 5). Note: If the final product falls under the “article” clause, it is exempt from this requirement. Please refer to 29 CFR 1910.1200 (b)(v) and (c).
- 5.3.6. Provide a signed certification statement regarding toxicity as described in (Attachment 1 - Item 5).
- 5.3.7. Provide signed certification statements regarding quality control as described in (Attachment 1 - Item 6). Attach a quality control inspection form that corresponds with meeting the certification statements.
- 5.3.8. Provide documentation that describes how the battery box insulating material is applied by the end user (if applicable), including preparation of the battery box to accept the coating (Attachment 1 - Item 7).
- 5.3.9. Provide documentation that the battery box insulating material has a minimum resistance of 100 megohms at 500 volts D.C. The documentation is to specify the thickness of insulation that meets this requirement. (Attachment 1 - Item 8).
- 5.3.10. Provide a test report showing the insulating material was tested, and meets the requirements of 30 CFR, Part 7, Section 7.48 (Acid Resistance Test). Pre-apply the battery box insulating material to the sample substrate accordance with specified manufacturer application instructions. MSHA will accept a range of material thickness if the thinnest and thickest samples meet the acid resistance test requirements. The test report must document the thickness of insulation and steel which was acid resistance tested. (Attachment 1 - Item 9)

- 5.3.11. Provide sales literature (if available – Attachment 1- Item 10).
- 5.3.12. Provide samples required for the Flame Resistance Test conducted by MSHA as part of the application. Applicants must submit a minimum of four samples with the battery box insulating material applied per the manufacturer’s instructions Apply the material to 10 gauge (1/8 inch) steel measuring 1/2" wide by 6" long. MSHA will accept a range of material layer thicknesses if the thinnest and thickest samples meet the flame test requirements. Therefore, applicants should submit a minimum of four samples of the thinnest application depth and four samples of the thickest application depth if applying for a range. Contact MSHA A&CC if steel is not compatible with manufacturer application instructions. Attachment 1- Item 11)

5.4. Application Processing

- 5.4.1. Upon receipt of a complete application, MSHA will prepare an estimate for the cost of processing the application (“CAP” letter) and send it 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.
- 5.4.2. If an applicant chooses to cancel, MSHA will charge fees for work performed up to the cancellation. If charges are less than the authorized amount, MSHA will charge the lesser amount.
- 5.4.3. MSHA determines acceptable flame resistance of a product in accordance with ASTP5007 and 30 CFR 18.65.

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. The applicant/manufacturer shall be permanently and legibly label the product with the acceptance designation as instructed by MSHA. MSHA may permit alternate forms of labeling. Contact MSHA about labeling before applying if you have concerns.
- 5.5.3. The manufacturer may submit a request for a “modification” of acceptance for a product, if a minor change in the product’s construction, composition or use is proposed. MSHA will determine if testing is required for 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, you must promptly notify MSHA of such actions. You will need to add the alternate labeling via a modification application.

5.5.5. You may advertise products as “accepted by MSHA” but you must not use terms such as “approved...”, “recommended...”, “endorsed...”, or “sanctioned by MSHA.”

5.5.6. MSHA will regard all construction details, formulations and test results, or other information designated as proprietary and/or confidential 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

MSHA will notify the applicant of any problems (discrepancies) that require correction with the submitted documents before issuing the acceptance. Discrepancies will be resolved in accordance with A&CC’s cancellation policy (APOL 1009) and may result in a cancelled application.

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. MSHA will not request samples more than one per 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

Application for Acceptance of Battery Box Insulating Material

Date_____

1. Company Name

Address

Telephone No. _____ FAX No. _____

E-mail_____

Company EIN_____ Company TIN_____

Company Representative_____

2. Assign an Application No. (six alphanumeric characters or less) to distinguish concurrent applications until MSHA assigns a tracking number:

3. Product Description (Include all variations)

- a. Trade Name:

- b. Style, Code No., (or other description):

- c. Color:_____

- d. Minimum Coating Thickness:_____

Maximum Coating Thickness:_____

5. Toxicity Certification Statement:

I certify that _____ [*trade name*],
in its final form does not present 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 _____ [*authorized company official*]

Print Name _____

Title _____ Date _____

6. Quality Assurance Certification Statements:

We _____ [*company name*]

certify that we will produce _____ [*trade name*]
using the procurement, manufacturing, testing, and record keeping requirements detailed
below. If we are unable to continue to meet these requirements, we will cease production
of the product featuring the MSHA marking until the issue is resolved, contact MSHA if
defective product was sold, or contact MSHA to retire the approval.

Procurement

We certify that we will procure each formulation component of the above-named product
from suppliers that certify the component meets its specified purity. We will conduct and
record our own inspections prior to use to ensure components conform to previous
performance. If working with a formulation component that is not certified for purity, we
will perform our own analysis.

Manufacturing

We certify that we will employ manufacturing tools and procedures that ensure
production of the above-named product in a manner that continuously matches the
formulation, and matches the performance of the samples sent to MSHA for testing and
ultimately the MSHA approval documentation.

Testing

We certify that we will inspect each lot of the above-named product, and that the
inspection method will ensure we will find and correct changes to the product's flame-
resistant, acid resistance, or electric insulating properties in order to meet MSHA
approval

Record Keeping

We certify that we will store records of procurement, inspections, testing, and
manufacture of the above-named product for a minimum of five years from the date of
manufacture.

Signed _____ [*authorized company official*]

Print Name _____

Title _____ Date _____

7. Provide documentation that describes how the battery box insulating material should be applied, including preparation of the battery box to accept the coating.
8. Provide documentation that the battery box insulating material has a minimum resistance of 100 megohms at 500 volts D.C. The documentation is to specify the thickness of insulation that meets this requirement.
9. Attached - Provide the test report that the battery box insulating material was tested and meets the requirements of 30 CFR, Part 7, Section 7.48 (Acid Resistance Test). The battery box insulating material should be applied to the battery box sample in accordance with specified OEM application instructions. MSHA will accept a range of material thickness if the thinnest and thickest samples meet the acid resistance test requirements. The test report must document the thickness of insulation and steel which was acid resistance tested.
10. Attached - sales literature (if available) Yes _____ No _____
11. Samples required for the Flame Resistance Test: Provide a minimum of four samples of with the battery box insulating material applied per the manufacturer's instructions. Apply the material to 10 gauge (1/8 inch) steel measuring 1/2" wide by 6" long. MSHA will accept a range of material layer thicknesses if the thinnest and thickest samples meet the flame test requirements. Therefore, applicants should submit a minimum of four samples of the thinnest application depth and four samples of the thickest application depth if applying for a range. Contact MSHA A&CC if steel is not compatible with the manufacturer's application instructions.