

**TITLE: Application Procedures for Acceptance of Grommet/Compressible
Materials in Explosion-Proof Enclosures and Motors****MSHA Mine Safety and Health Administration, Approval & Certification Center**

1.0 PURPOSE

This document describes the application process for the Mine Safety and Health Administration (MSHA) flame resistance acceptance of compressible material used for grommets within explosion-proof enclosures and/or motor gland assemblies.

2.0 SCOPE

The Code of Federal Regulations (CFR), Title 30, Part 18.37(f)(1) and Part 7.304(h)(6)(i) requires the compressible materials used for grommets, that are used as part of gland assemblies, to be flame resistant. This application procedure and the associated forms describe the process for a manufacturer to acquire the required acceptance for their material(s).

3.0 REFERENCES

- 3.1. APOL 1009 Application Cancellation Policy
- 3.2. ASTP 5007 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
- 3.3. Code of Federal Regulations (30 CFR), Part 18.37(f)(1) and Part 7.304(h)(6)(i).

4.0 DEFINITIONS

- 4.1. Applicant - An individual, partnership, company, corporation, organization, or association that designs, manufactures, assembles, or controls the assembly of an electrical machine or accessory and seeks approval, certification, permit, or MSHA acceptance for listing of flame-resistant material.
- 4.2. Chemical Name - Name of a compound following International Union of Pure and Applied Chemistry (IUPAC), CAS number, and/or American Chemical Society (ACS) rules.
- 4.3. 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: 'Flashspun high density polyethylene', but not 'Tyvek'.
- 4.4. Gland assembly - Several parts, including grommets, that make an opening through a wall of an explosion-proof enclosure or motor to pass cables.
- 4.5. Grommet - A ring of compressible material used as a component of an explosion-proof enclosure and/or motor gland assembly.

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- 4.6. 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.
- 4.7. Sample - A portion of a material from which test specimens are made. A sample is the set of specimens tested. A minimum of four (4) specimens comprise a sample for this test, and three samples are needed at 1mm, 13 mm, and 25 mm thicknesses.
- 4.8. Specimen - A individual piece of material cut to 0.5 wide by 6 inches long (1.25 cm x 15 cm) by the thickness of the material.
- 4.9. Supplier - A company that supplies primary ingredients or pre-polymers to an applicant as part of a product under evaluation by MSHA.

5.0 APPLICATION PROCEDURE

- 5.1. We recommend that applicants contact the Quality Assurance & Materials Testing Division at 304-547-0400 or by email with a relevant employee to discuss acceptance and testing requirements prior to submitting an application.

- 5.2. The application requesting an acceptance is submitted via the following routes:

- 5.2.1. Physically mailed to:

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

- 5.2.2. Email Submittals:

Application letters, specifications, drawings and other supporting documentation should be sent to zzMSHA-IPSO@DOL.gov

- 5.2.3. FAX to: 304-547-2084

- 5.2.4. FTP Submittals:

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

- 5.3. Each application for acceptance and its supporting documents must be in the English Language and include the following information on the attached application forms (Attachment 1 – Item 1).

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- 5.3.1. Company name
- 5.3.2. Address
- 5.3.3. Telephone number
- 5.3.4. Email of company representative
- 5.3.5. Billing contact at the company (may be the same as main contact)
- 5.3.6. Employer Identification Number (EIN) assigned by the United States IRS. A DUNS number may also be used if necessary.
- 5.4. Provide a company-assigned application number (six digits or less) to identify concurrent application until MSHA assigns a tracking number. This number should not have been assigned to an application previously submitted by the Applicant. (Attachment 1 - Item 2).
- 5.5. Provide the product's name and/or formulation name (Attachment 1 – Item 3).
- 5.6. 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 (Attachment 1 - Item 4).
 - 5.6.1. If a component of the formulation is proprietary and not disclosed to the applicant, contact MSHA and the supplier together to have MSHA work with the supplier to have an ID-number assigned that can be stated as part of the formulation.
 - 5.6.2. If a pre-polymer with an MSHA ID-number is used, any additional ingredients the applicant adds to it must be included following the guidance stated above in section 5.6.
- 5.7. Provide a signed Certification Statement regarding toxicity (Attachment 1, Item 5).
- 5.8. Certify to or submit documents describing quality assurance procedures used to manufacture the product (Attachment 1 – Items 6 and/or 8):
 - 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.

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- d. Critical Characteristics that will be flame tested or inspected to ensure that the finished product meets the flame resistance test requirements.
- 5.9. Applicants must submit pre-cut, postpaid samples of the proper size and quantity as specified by MSHA. The sizes must be the following dimensions (Attachment 1 - Item 7):
- a. Each specimen should be 0.5 wide by 6 inches long (1.25 cm x 15 cm) by the thickness of the material.
 - b. Each sample must contain minimum four (4) specimens of the above dimensions.
 - c. Three samples are required at thicknesses of 1 mm, 13 mm, and 25 mm for a minimum of 12 specimens.
 - d. Contact the Approval and Certification Center if you may not be able to make samples at these sizes.
 - e. Shipping of samples must be prepaid. MSHA tests these samples by 30 CFR Part 18.65, a destructive test.

6.0 APPLICATION PROCESSING

- 6.1. Upon receipt of a complete application, an estimate for the cost of processing the application (authorization letter) will be prepared and sent to the applicant. If the authorization letter is not returned within thirty days of the letter date, the application will be canceled.
 - 6.1.1. The applicant may submit a preauthorization notice with their applications to expedite processing and to eliminate the authorization letter. Contact the Approval and Certification Center (304-547-0400) for a cost estimate. MSHA will not charge without authorization. If charges are less than the preauthorized amount, MSHA will charge the lesser amount.
- 6.2. If an applicant chooses to cancel, MSHA will charge for work performed up to the cancellation.
- 6.3. MSHA will determine acceptable flame resistance of a product using ASTP 5007 MSHA's Standard Flame Test Procedure for: Hose Conduit, Fire Suppression Hose Cover, Fire Hose Liner and Other Materials following Title 30, Code of Federal Regulations, Part 18, Section 18.65.

7.0 PRODUCT ACCEPTANCE

- 7.1. Upon successful testing and evaluation of the submitted product, MSHA will issue an acceptance number.

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- 7.2. The applicant may provide the acceptance number to manufacturers of explosion-proof enclosures or motors gland assemblies, to be included in those applications to MSHA.
- 7.3. All construction details, formulations and test results, or other information designated as proprietary and/or confidential, will be regarded as such except the company name, address, phone number, product name, and intended product use.

8.0 PRODUCT FAILURE

- 8.1. Should the product fail testing, MSHA will cancel the application and bill any accrued charges.

9.0 NOTIFICATION OF DISCREPANCY

- 9.1. MSHA will notify the applicant of any problems (discrepancies) with the submitted documents that require correction before issuing an acceptance. Discrepancies will be resolved in accordance with A&CC's cancellation policy (APOL 1009).

10.0 MAINTAINING THE ACCEPTANCE

- 10.1. A product may be advertised as "accepted by MSHA" but such terms as "approved", "recommended", or "sanctioned" by MSHA must not be used. The MSHA logo is for MSHA use only.
- 10.2. 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 shall 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.
- 10.3. Audits: Grommets/compressible materials may be audited and re-tested by MSHA for cause.
- 10.4. Notify MSHA in the case of:
- 10.4.1. Any change in ownership.
- 10.4.2. You are obligated, as the manufacturer, to maintain the quality of the product to ensure the requirements of this acceptance are being met.
- 10.4.3. Any changes in formulation or processing that may affect flame-retardant properties.

11.0 RETIREMENT

11.1. The acceptance holder may retire discontinued accepted products by contacting MSHA. If the MSHA acceptance holder wants to resume manufacturing the retired product to represent it as MSHA accepted, a new acceptance application must be submitted to MSHA. Upon acceptance of the new application, a new MSHA acceptance number will be issued for the product.

12.0 REVOCATION

12.1. If it is found to be unsafe, create a health hazard, or otherwise not be in conformance with the acceptance criteria; MSHA may revoke any acceptance and may require a product's removal from underground mines.

Attachment 1

**Grommets and Compressible Materials for Explosion-Proof Enclosures and Motors
Application Form**

Date _____

1. Company Name _____

Address _____

Company Representative _____

Email Address _____ Telephone No. _____

Billing Contact _____

Email Address _____ Telephone No. _____

Employer Identification Number (EIN) or DUNS _____

2. Please assign an alphanumeric code of six digits or less to differentiate between concurrent applications until MSHA tracking numbers are assigned: _____

3. Product Description (Include all variations):

a. Trade Name: _____

b. Formulation Name: _____

4. Formulation Ingredient (use IUPAC naming, CAS number, and/or generic names – do not use trade names or acronyms)	Percent Weight	Percent Tolerance (of ingredient)
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_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

5. Non-Toxic Certification Statement:

I certify that _____, in its final form does not present
[*Product/Material 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 _____ [*authorized company official*]

Print Name _____

Title _____ Date _____

6. Attach the following quality assurance documentation information, or certify using the statements on the next page:

- 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.

7. Samples Required for Testing:

- a. Each specimen should be 0.5 wide by 6 inches long (1.25 cm x 15 cm) by the thickness of the material.
- b. Each sample must contain minimum four (4) specimens of the above dimensions.
- c. Three samples are required at thicknesses of 1 mm, 13 mm, and 25 mm for a minimum of 12 specimens.
- d. Contact the Approval and Certification Center if you may not be able to make samples at these sizes.
- e. Shipping of samples must be prepaid. MSHA tests these samples by 30 CFR Part 18.65, a destructive test.

8. Quality Assurance Certification Statements:

We _____ [*company name*]
certify that we will produce _____ [*product/material 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 acceptance.

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 acceptance 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 properties to conform to MSHA acceptance.

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 _____