

**QUALITY ASSURANCE
&
MATERIALS TESTING
DIVISION
(QA&MTD)**



QA&MTD

Ken Sproul - Division Chief

TEAM LEADER

INTERDISCIPLINARY ENGINEERS

MINING EQUIPMENT COMPLIANCE SPECIALISTS

PHYSICAL SCIENTISTS

CHEMIST

TECHNICIAN

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MISSION

Maintain Integrity of MSHA Approval

QA - ensures mine equipment manufacturers continue to make the equipment as it was approved

Approval/Acceptance/Suitability of Mining Materials

MTD- evaluates mining materials to the applicable requirements of 30 CFR and voluntary standards

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PROGRAMS

Accident Investigations

Permissibility Training

Field Complaints

Product Audits

Technical Assistance

Approvals*

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Approval/Acceptance/Suitability of Mining Materials

QA&MTD evaluates mining materials to the applicable requirements of 30 CFR and voluntary standards, typically for **flame resistance**

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APPLICANT

An individual or organization that manufactures or *controls the assembly* of a product and that applies to MSHA for approval of that product.

Controls the assembly –

- design specifications must be specific to the applicant
- applicant must provide oversight of the manufacturing process

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FLAME RESISTANT- MATERIAL APPROVAL PROGRAMS

PART 7 APPROVALS

Cables: Power, Signal, Fiber Optic, Co-Axial & Splice Kits

Brattice Cloth & Vent Tubing

Flame Tests are Conducted at Applicants' or 3rd Party Lab

The A&CC Conducts Product Audit Flame Tests

Attachment No. 2

ELECTRIC AND SIGNALING CABLE APPLICATION FORM

Date _____

1. Company Name _____
Telephone No. (Area Code) _____
Company Representative _____
2. Application Code Number _____
3. Cable Description (Include all variations - use separate sheets if necessary)

	Indicate N/A if not Applicable
1. Trade Name	
2. Type - (nomenclature) (round/flat)	
4. Voltage Rating & Amperacity	
5. Design Standard	
6. Ground Check	
7. Ground	
8. Shield	
9. Conductor	
10. Jacket Material & Spec. # (Color)	
11. Conductor Insulation & Spec. #	
12. Filler Material	
13. Any Additional Materials or Components	

Submit:

- Application Form
- Certified Statements
- Testing Schedule
- Cross Sectional Drawing

- PAR No. _____, Company Code No. _____
- We [insert name] certify that the cable meets the design portion of the technical requirements as specified in 30CFR, Subpart 7K, Section 7.404.
- We [insert name] certify that we will perform the Quality Assurance requirements of 30CFR, Subpart A, Section 7.7.
- _____
- Signature of Authorized Company Representative
- Further;
- After completion of the required cable testing, the ***applicant*** must certify that the cable meets the performance portion of the Technical Requirements as specified in 30CFR, Subpart 7K, Section 7.404. However, if an MSHA representative witnesses the testing, this statement is not necessary.
- We _____ [insert name] _____ certify that the cable meets the performance requirements of Subpart K, [*choose one*]: Section 7.407 (power cable) or Section 7.408 (signal/fiber optic/co-axial) as specified in 30CFR, Subpart 7K, Section 7.404.
- _____
- Signature of Authorized Company Representative

BRATTICE CLOTH APPLICATION FORM

Date _____

1. Company Name _____
 Telephone No. (Area Code) _____
 Company Representative _____
2. Identifying Code Number _____
3. 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				

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FLAME RESISTANT - MATERIAL APPROVAL PROGRAMS

30CFR Part 18 Acceptances

Conveyor Belt

Fire Suppression Hose Jacket

Conduit Hose

Battery Box Insulation

Fire Hose Liner

Cable Reel Insulation

Non-Asbestos Packing Material

Life Lines

Attachment

Application Form
Conveyor Belt Product Description

Date _____ Telephone _____

Manufacturer _____

Address _____

Application Number _____

Check one: This is _____ a new application.
_____ a request for an extension (Include a photocopy of any
prior acceptance letters from MSHA.)

Manufacturer's Product Trade Name and/or I.D. No. _____

Covers: Compound Designation No. _____

Minimum Thickness: Top Cover _____ Bottom Cover _____

Carcass: No. of Plies (Min. & Max.) _____

Skim Coat: Compound Designation No. _____

Thickness _____

Friction Compound Designation No. _____

Carcass Fabric:

Textile(s), Warp _____ Weft (fill) _____

Binder _____

Fabric Weight (oz./sq. yd. - Max.) _____

Fabric Treatment _____

Cable: Type of Metal _____

Sizes Used _____

Breaker (or Floated Ply): Top _____ Bottom _____

Textile(s), Warp _____ Weft (fill) _____

Fabric Weight (oz./sq. yd.) _____

Fabric Treatment _____

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VOLUNTARY - FLAME RESISTANT ACCEPTANCES

Flame Resistant Solid Products Taken Into Mines

Hydraulic/Air/Water Hose Jacket

Belt Wipers/Skirt/Impact Bars

Roof/Rib Grid Material

Hydraulic Hose Protective Sleeve

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. Samples - were test samples sent, indicate: Yes ____ or No ____

6. Toxicity: For all products a statement must be provided that "the product in its final form and under normal use does not present a toxicity hazard to miners."

7. A Materials Safety Data Sheet (MSDS) is required for the final end product, if one has been prepared in accordance with 29 CFR 1200, or for the hazardous components used to manufacture the final end product. Attach quality assurance information and sales literature.

8. Certification Statement

9. Each applicant for acceptance shall provide a certification statement which states:

The product in its final form does not present a toxic hazard under "normal use" conditions.

Signature of authorized company official.

Submit:

- Application Form
- Toxicity Statement
- Test Samples
- QA Plan

- 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 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.

Acceptance Formats

Typically 30CFR Part 18 Acceptance will have this format:

18-CBXXYYYYY/0 - for conveyor belt (2G)

18-FHXXYYYYY/0 - for fire hose liner (2G)

18-FSXXYYYYY/0 - for fire suppression hose cover (2G)

18-HCXXYYYYY/0 – for hose conduit (2G)

Voluntary Acceptances will have this format:

IC-xxx/00

However, when there is a dual use product such as fire suppression hose cover & hydraulic hose cover, the acceptance number may look like this:

"2G-IC-xxxC/0"

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VOLUNTARY EVALUATIONS "SUITABILITY"

Ventilation Products – 30CFR Part 75.333

Sealants – Strength Enhancing & Non-Strength Enhancing

Non-strength Enhancing

- ASTM E-162 – (Flame spread index of less than 25)

Strength Enhancing

- ASTM E-162 & ASTM E-72 (39 PSF min. average.)

8. A 5 pound sample of sealant sent (Yes/No) _____
(If foam, 4 samples as tested per ASTM E162)
(If No, attach explanation.)
9. Sales literature attached (Yes/No) _____
(Sales literature may be sent later when available)
10. Application procedures attached (Yes/No) _____
(If No, attach explanation.)
11. A Material Safety Data Sheet (MSDS) for the final end
product attached (Yes/No) _____
(If No, attach explanation.)
12. You may contact at _____ at _____
(Company Representative) (Telephone No.)
for further information.
13. TOXICITY AND QUALITY ASSURANCE STATEMENT
I certify that the sealant _____, in its final form
(Trade Name)
presents no toxic hazard under normal use conditions. Furthermore, I certify,
that we will assure product compliance for this product with respect to all
specifications submitted to MSHA, A&CC.
- Signed _____
(Authorized Company Official)
- Title _____
- Date _____

Submit:

- Application Form
- Toxicity Statement
- Sample
- QA Plan
- Testing Schedules

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VOLUNTARY EVALUATIONS "SUITABILITY"

Ventilation Products – 30CFR Part 75.333

Non - Traditional Stoppings

30CFR Part 75.333 defines traditional as steel, concrete etc.

Non-combustibility Test

- ASTM E-119 – (no flames or holes larger than 2 sq. in.)

Strength Test

- ASTM E-72 – (39 PSF min. average.)

11. Installation instruction attached (Yes/No) _____
(If No, attach explanation.)
12. Quality assurance information attached (Yes/No) _____
(If No, attach explanation)
13. Sales literature attached (Yes/No) _____
(Sales literature may be sent later when available.)
14. TOXICITY AND QUALITY ASSURANCE STATEMENT

I certify that the ventilation control _____
(Trade Name)

in its final form presents no known toxic hazard under normal use conditions.
Furthermore, I certify, that we will assure product compliance for this product
with respect to all specifications submitted to MSHA, A&CC.

Signed _____
(Authorized Company Official)

Title _____

Date _____

Submit:

- Application Form
- Toxicity Statement
- QA Plan
- Testing Schedules

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VOLUNTARY SUBMITTALS

Issuance of an “ID” Number for Formulations

Chemical suppliers do not want to divulge their proprietary formulations to the applicant.

- Applicants are required to list the ingredients of their products by chemical terms in their application
- Provide MSDS Sheets

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FIRE RESISTANT HYDRAULIC FLUIDS

30 CFR Part 35

Water Glycols

Invert Emulsions

Synthetics

High Waters - concentrates

Basic Tests

Auto Ignition Spray

Spray Flammability

Wick Evaporation

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CONTACT INFORMATION

Ken Sproul - 304-547-2038

Jim Erlinger - 304-547-2306

Dave Creamer - 304-547-2085

Mark Schwartz - 304-547-2083

Don Peiffer - 304-547-2045

