



## SECTION 07810

### BARRIER COAT FIREPROOFING

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#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A. Barrier Coat Fireproofing.

##### 1.2 RELATED SECTIONS

- A. Section 07200 - Thermal Protection: Thermal insulation systems.
- B. Section 07810 - Applied Fireproofing: Requirements for and application of mineral fiber and cementitious fireproofing.
- C. Section 07815 - Sprayed-On Fireproofing: Requirements for and application of sprayed-on fireproofing.
- D. Section 07840 - Firestopping: Requirements for and installation of firestopping protection.
- E. Section 09260 - Gypsum Board Assemblies: Gypsum board fireproofing.
- F. Section 09210 - Gypsum Plaster: Gypsum plaster fireproofing.
- G. Section 09966 - Fire Retardant Coatings.
- H. Section 09967 - Intumescent Painting.

##### 1.3 REFERENCES

- A. ASTM D 412 - Tensile set of Rubber and Thermoplastic Elastomers.
- B. ASTM D 522 - Standard Test Methods for Mandrel Bend Test of Attached Organic Coatings.
- C. ASTM D 661 - Standard Test Method for Evaluating Degree of Cracking of Exterior Paints.

- D. ASTM D 968 - Standard Test Methods for Abrasion Resistance of Organic Coatings by Falling Abrasive.
- E. ASTM D 1729 - ASTM D1729-96 Standard Practice for Visual Appraisal of Colors and Color Differences of Diffusely-Illuminated Opaque Materials.
- F. ASTM D 2243 - Standard Test Method for Freeze-Thaw Resistance of Water-Borne Coatings.
- G. ASTM D 2486 - Standard Test Methods for Scrub Resistance of Wall Paints.
- H. ASTM D 2794 - Standard Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact).
- I. ASTM D 3273 - Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber.
- J. ASTM D 4214 - Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films.
- K. ASTM D 4541 - Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers.
- L. ASTM D 4585 - Standard Practice for Testing Water Resistance of Coatings Using Controlled Condensation.
- M. ASTM D 6904 - Standard Practice for Resistance to Wind-Driven Rain for Exterior Coatings Applied on Masonry.
- N. ASTM G 153 - Standard Practice for Operating Enclosed Carbon Arc Light Apparatus for Exposure of Nonmetallic Materials
- O. FTMS 141 M 4494 - Film Application & Test Charts - Leveling & Sagging.
- P. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
- Q. ASTM E 96 - Standard Test Methods for Water Vapor Transmission of Materials.
- R. ASTM E 119 - Standard Test Methods for Fire Tests of Building Construction and Materials.
- S. NFPA 286 - Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth.
- T. UL 723 - Test for Surface Burning Characteristics of Building Materials
- U. ICC - International Urban-Wildland Interface Code.
- V. SFI 54.1 - Non-Flammable Thermal Barrier Fire Extinguishing Coatings.
- W. ICC - AC 377 - Acceptance Criteria for Spray Applied Foam Plastic Insulation.

#### 1.4 DESIGN / PERFORMANCE REQUIREMENTS

- A. Fire-Resistance Ratings: As indicated by UL Fire Resistance Directory designation.

#### 1.5 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
  - 1. Preparation instructions and recommendations.
  - 2. Storage and handling requirements and recommendations.
  - 3. Installation methods.
- C. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.
- D. Certification: Obtain and submit certification by authority having jurisdiction that fireproofing products are acceptable.
- E. Installer's qualification statement indicating installer is approved by the manufacturer as an installer.
- F. Manufacturer's Certificates: Certify products meet or exceed specified requirements.

#### 1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in the manufacture of the products specified, with minimum of 5 years documented experience.
- B. Installer Qualifications: Trained and approved by manufacturer, with minimum of 3 years documented experience.
- C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
  - 1. Finish areas designated by Architect.
  - 2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
  - 3. Refinish mock-up area as required to produce acceptable work.
  - 4. Accepted mock-ups shall be comparison standard for remaining Work

#### 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Store products indoors in a heated location in manufacturer's unopened packaging until ready for installation.
- B. Protect products against freezing.

#### 1.8 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
- B. Do not install when substrate temperature is less than 68 degrees F (20 degrees C) or above 95 degrees F (35 degrees C) and when relative humidity is above 80 percent.
- C. Maintain ventilation after application of fireproofing in accordance with manufacturer's recommendations.
- D. Coordinate sequence of work with other installers of work that needs to penetrate fireproofing, to avoid unnecessary damage and patching.
- E. Coordinate sequence of work with other installers of work that would obstruct access

to surfaces to be fireproofed.

## PART 2 PRODUCTS

### 2.1 MANUFACTURERS

- A. Acceptable Manufacturer: TPR2 Corp. (Thermal Product Research), which is located at: 36 Plains Rd. ; Essex, CT 06426; Tel: 860-767-8772; Fax: 860-767-8779; Email: request info; Web: www.tpr2.com
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

### 2.2 MATERIALS

- A. AFES-F1 Fire Extinguishing Coating:
  - 1. Proprietary Non-flammable Coating.
  - 2. Flexible, ductile, elastomeric.
  - 3. Extinguishes liquid fires as tested in accordance with SFI 54.1.
  - 4. Maintains protective integrity in vapor fires.
  - 5. Meets weatherability requirements for exterior coating as follows:
    - a. ASTM D 522: Flexibility over conical mandrel.
    - b. ASTM D 2486: Scrub resistance.
    - c. ASTM D 968: Abrasion, falling sand.
    - d. ASTM D 2794: Impact resistance.
    - e. ASTM D 4541: Adhesion, pull off strength.
    - f. ASTM D 2243: Freeze thaw resistance.
    - g. ASTM G 153: Accelerated weathering - 1000 hrs, 8 hours UVA 340@ 60c.
    - h. ASTM D 412: Tensile, elongation properties.
    - i. ASTM D 6904: Wind driven rain.
    - j. ASTM D 3273: Mold resistance.
    - k. FTMS 141 M4494: Sag resistance.
    - l. ASTM D 4585: Moisture resistance, 100 hours.
    - m. ASTM D 1729: Color change.
    - n. ASTM D 4214: Degree of chalking.
    - o. ASTM D 661: Degree of cracking.
  - 6. Non-toxic, drain safe, water based, non-fuming.
  - 7. Suitable for Interior and Exterior surfaces.
  - 8. Sprayable with standard spray equipment.
  - 9. Flame Spread/Smoke Developed ASTM E 84 and UL 723: flame 0 smoke 0.
  - 10. Volatility/VOC: 0.
  - 11. Solvent: Water based.
  - 12. Total Dry Film Thickness: 20 to 30 mils DFT, nominal.
  - 13. No primer required.
  - 14. Color:
    - a. White.
    - b. Gray.
    - c. Red.
    - d. Charcoal.
    - e. Black.
    - f. Custom Color.
- B. Fireshell F10E - NFPA 286 Thermal Barrier Coating for sprayfoam:
  - 1. Non-flammable, 1-part, water based, intumescent coating.

2. Expands up to 2000 percent.
  3. Non-toxic, drain safe, water based, non-fuming.
  4. Suitable for Interior and Exterior surfaces.
  5. Sprayable with standard spray equipment.
  6. Approvals: Meets weatherability requirements for exterior coating as follows:
    - a. ASTM D 522: Flexibility over conical mandrel.
    - b. ASTM D 2486: Scrub resistance.
    - c. ASTM D 968: Abrasion, falling sand.
    - d. ASTM D 2794: Impact resistance.
    - e. ASTM D 4541: Adhesion, pull off strength.
    - f. ASTM D 2243: Freeze thaw resistance.
    - g. ASTM G 153: Accelerated weathering - 1000 hrs, 8 hours UVA 340@ 60c.
    - h. ASTM D 412: Tensile, elongation properties.
    - i. ASTM D 6904: Wind driven rain.
    - j. ASTM D 3273: Mold resistance.
    - k. FTMS 141 M4494: Sag resistance.
    - l. ASTM D 4585: Moisture resistance, 100 hours.
    - m. ASTM D 1729: Color change.
    - n. ASTM D 4214: Degree of chalking.
    - o. ASTM D 661: Degree of cracking.
  7. Approvals:
    - a. Meets NFPA 286 over open cell Foam for Walls, Foam, Attics, and Crawl Spaces.
    - b. Meets NFPA 286 over closed cell Foam for Walls, Foam, Attics, and Crawl Spaces.
    - c. Meets Green Standards and Lead Paint Requirements.
    - d. Meets EPA requirements for Ultra Low VOC.
    - e. Meets ASTM E 84 and UL 723, 5 flame, 20 smoke.
    - f. Meets SCAQMD (California South Coast Air Quality Management District) requirements as a Supercompliant Coating.
  8. Color:
    - a. White.
    - b. Custom Color.
- C. Fireshell BMS TC - NFPA 286 Thermal Barrier Coating for Bayseal sprayfoam:
1. Non-flammable, 1-part, water based, intumescent coating.
  2. Expands up to 2000 percent.
  3. Non-toxic, drain safe, water based, non-fuming.
  4. Suitable for Interior and Exterior surfaces.
  5. Sprayable with standard spray equipment.
  6. Meets weatherability requirements for exterior coating as follows:
    - a. ASTM D 522: Flexibility over conical mandrel.
    - b. ASTM D 2486: Scrub resistance.
    - c. ASTM D 968: Abrasion, falling sand.
    - d. ASTM D 2794: Impact resistance.
    - e. ASTM D 4541: Adhesion, pull off strength.
    - f. ASTM D 2243: Freeze thaw resistance.
    - g. ASTM G 153: Accelerated weathering - 1000 hrs, 8 hours UVA 340@ 60c.
    - h. ASTM D 412: Tensile, elongation properties.
    - i. ASTM D 6904: Wind driven rain.
    - j. ASTM D 3273: Mold resistance.
    - k. FTMS 141 M4494: Sag resistance.

- l. ASTM D 4585: Moisture resistance, 100 hours.
  - m. ASTM D 1729: Color change.
  - n. ASTM D 4214: Degree of chalking.
  - o. ASTM D 661: Degree of cracking.
7. Approvals:
- a. Meets NFPA 286 over open cell Foam for Walls, Foam, Attics, and Crawl Spaces.
  - b. Meets NFPA 286 over closed cell Foam for Walls, Foam, Attics, and Crawl Spaces.
  - c. Meets Green Standards and Lead Paint Requirements.
  - d. Meets EPA requirements for Ultra Low VOC.
  - e. Meets ASTM E 84 and UL 723, 5 flame, 20 smoke.
  - f. Meets SCAQMD (California South Coast Air Quality Management District) requirements as a Supercompliant Coating.
8. Color:
- a. White.
  - b. Custom Color.
- D. Fireshell JM TC - NFPA 286 Thermal Barrier Coating for JM Corbond sprayfoam:
- 1. Non-flammable, 1-part, water based, intumescent coating.
  - 2. Expands up to 2000 percent.
  - 3. Non-toxic, drain safe, water based, non-fuming.
  - 4. Suitable for Interior and Exterior surfaces.
  - 5. Sprayable with standard spray equipment.
  - 6. Meets weatherability requirements for exterior coating as follows:
    - a. ASTM D 522: Flexibility over conical mandrel.
    - b. ASTM D 2486: Scrub resistance.
    - c. ASTM D 968: Abrasion, falling sand.
    - d. ASTM D 2794: Impact resistance.
    - e. ASTM D 4541: Adhesion, pull off strength.
    - f. ASTM D 2243: Freeze thaw resistance.
    - g. ASTM G 153: Accelerated weathering - 1000 hrs, 8 hours UVA 340@ 60c.
    - h. ASTM D 412: Tensile, elongation properties.
    - i. ASTM D 6904: Wind driven rain.
    - j. ASTM D 3273: Mold resistance.
    - k. FTMS 141 M4494: Sag resistance.
    - l. ASTM D 4585: Moisture resistance, 100 hours.
    - m. ASTM D 1729: Color change.
    - n. ASTM D 4214: Degree of chalking.
    - o. ASTM D 661: Degree of cracking.
7. Approvals:
- a. Meets NFPA 286 over open cell Foam for Walls, Foam, Attics, and Crawl Spaces.
  - b. Meets NFPA 286 over closed cell Foam for Walls, Foam, Attics, and Crawl Spaces.
  - c. Meets Green Standards and Lead Paint Requirements.
  - d. Meets EPA requirements for Ultra Low VOC.
  - e. Meets ASTM E 84 and UL 723, 5 flame, 20 smoke.
  - f. Meets SCAQMD (California South Coast Air Quality Management District) requirements as a Supercompliant Coating.
8. Color:
- a. White.
  - b. Custom Color.

- E. Fireshell AFES-F1E Interior/Exterior Waterproof Ignition and Vapor Barrier; and Thermal Barrier as part of a wall system:
1. Non-flammable, 1-part water based, intumescent coating.
  2. Flexible, ductile, elastomeric.
  3. Expands up to 2000 percent.
  4. Non-toxic, drain safe, water based, non-fuming.
  5. Suitable for Interior and Exterior surfaces.
  6. Sprayable with standard spray equipment.
  7. Meets weatherability requirements for exterior coating as follows:
    - a. ASTM D 522: Flexibility over conical mandrel.
    - b. ASTM D 2486: Scrub resistance.
    - c. ASTM D 968: Abrasion, falling sand.
    - d. ASTM D 2794: Impact resistance.
    - e. ASTM D 4541: Adhesion, pull off strength.
    - f. ASTM D 2243: Freeze thaw resistance.
    - g. ASTM G 153: Accelerated weathering - 1000 hrs, 8 hours UVA 340@ 60c.
    - h. ASTM D 412: Tensile, elongation properties.
    - i. ASTM D 6904: Wind driven rain.
    - j. ASTM D 3273: Mold resistance.
    - k. FTMS 141 M4494: Sag resistance.
    - l. ASTM D 4585: Moisture resistance, 100 hours.
    - m. ASTM D 1729: Color change.
    - n. ASTM D 4214: Degree of chalking.
    - o. ASTM D 661: Degree of cracking.
  8. Approvals:
    - a. Water Vapor Transmission: 0.5 grains/sf/hr, ASTM E 96.
    - b. Water Vapor Permeance: 0.9 perms, ASTM E 96.
    - c. Meets UL 263/ASTM E 119, 1 Hour Wall, 1/2 inch gypsum with 12 mills DFT.
    - d. Meets UL 263 ASTM E 119, 2 Hour Wall, 1/2 inch gypsum with 3 inch sprayfoam with 18 mills DFT.
    - e. Meets AC 377 Crawl space Ignition Barrier test over foam insulation with various thicknesses.
    - f. Meets ASTM E 119 and UL 263 coated closed cell spray foam 15 minute wall assembly test with 16 mils DFT. 16 Minute Rating.
    - g. Meets ASTM E 119 and UL 263 coated closed cell spray foam 15 minute wall assembly test with 21 mils DFT. 34 Minute Rating.
    - h. Meets ASTM E 84 and UL 723, Class A and 1/2 hour noncombustible ratings. Meets Urban Wildlife Codes.
    - i. Meets ASTM E 84 and UL 723, Class A, 15 mils DFT on cement board. Flame 0, Smoke 0.
  9. Color:
    - a. Light Gray.
    - b. Custom Color.
- F. FIRESHHELL IB-4 Code approved Ignition Barrier Coating for Sprayfoam:
1. Non-flammable, 1-part, water based, intumescent coating.
  2. Expands up to 1000 percent.
  3. Non-toxic, drain safe, water based, non-fuming.
  4. Suitable for Interior and Exterior surfaces..
  5. Sprayable with standard spray equipment
  6. Meets weatherability requirements for exterior coating as follows:
    - a. ASTM D 522: Flexibility over conical mandrel.

- b. ASTM D 2486: Scrub resistance.
  - c. ASTM D 968: Abrasion, falling sand.
  - d. ASTM D 2794: Impact resistance.
  - e. ASTM D 4541: Adhesion, pull off strength.
  - f. ASTM D 2243: Freeze thaw resistance.
  - g. ASTM G 153: Accelerated weathering - 1000 hrs, 8 hours UVA 340@ 60c.
  - h. ASTM D 412: Tensile, elongation properties.
  - i. ASTM D 6904: Wind driven rain.
  - j. ASTM D 3273: Mold resistance.
  - k. FTMS 141 M4494: Sag resistance.
  - l. ASTM D 4585: Moisture resistance, 100 hours.
  - m. ASTM D 1729: Color change.
  - n. ASTM D 4214: Degree of chalking.
  - o. ASTM D 661: Degree of cracking.
7. Approvals:
- a. Meets International Building Code- Evaluation Service AC 377 over open cell foam for Attics, and Crawl Spaces.
  - b. Meets International Building Code- Evaluation Service AC 377 over closed cell foam for Attics, and Crawl Spaces.
  - c. Meets Green Standards and Lead Paint Requirements.
  - d. Meets EPA requirements for Ultra Low VOC.
  - e. Meets ASTM E 84 and UL 723, 0 flame, 20 smoke.
  - f. Meets SCAQMD (California South Coast Air Quality Management District) requirements as a Supercompliant Coating.
8. Color:
- a. White.
  - b. Custom Color.
- G. FIRESHELL BMS IC Code approved Ignition Barrier Coating for Bayseal Sprayfoam:
- 1. Non-flammable, 1-part, water based, intumescent coating.
  - 2. Expands up to 1000 percent.
  - 3. Non-toxic, drain safe, water based, non-fuming.
  - 4. Suitable for Interior and Exterior surfaces.
  - 5. Sprayable with standard spray equipment.
  - 6. Meets weatherability requirements for exterior coating as follows:
    - a. ASTM D 522: Flexibility over conical mandrel.
    - b. ASTM D 2486: Scrub resistance.
    - c. ASTM D 968: Abrasion, falling sand.
    - d. ASTM D 2794: Impact resistance.
    - e. ASTM D 4541: Adhesion, pull off strength.
    - f. ASTM D 2243: Freeze thaw resistance.
    - g. ASTM G 153: Accelerated weathering - 1000 hrs, 8 hours UVA 340@ 60c.
    - h. ASTM D 412: Tensile, elongation properties.
    - i. ASTM D 6904: Wind driven rain.
    - j. ASTM D 3273: Mold resistance.
    - k. FTMS 141 M4494: Sag resistance.
    - l. ASTM D 4585: Moisture resistance, 100 hours.
    - m. ASTM D 1729: Color change.
    - n. ASTM D 4214: Degree of chalking.
    - o. ASTM D 661: Degree of cracking.
7. Approvals:
- a. Meets International Building Code- Evaluation Service AC 377 over



- open cell foam for Attics, and Crawl Spaces.
      - b. Meets International Building Code- Evaluation Service AC 377 over closed cell foam for Attics, and Crawl Spaces.
      - c. Meets Green Standards and Lead Paint Requirements.
      - d. Meets EPA requirements for Ultra Low VOC.
      - e. Meets ASTM E 84 and UL 723, 0 flame, 20 smoke.
      - f. Meets SCAQMD (California South Coast Air Quality Management District) requirements as a Supercompliant Coating.
    - 8. Color:
      - a. White.
      - b. Custom Color.
- H. FIRESHHELL JM IC Code approved Ignition Barrier Coating for JM Corbond Sprayfoam:
- 1. Non-flammable, 1-part, water based, intumescent coating.
  - 2. Expands up to 1000 percent.
  - 3. Non-toxic, drain safe, water based, non-fuming.
  - 4. Suitable for Interior and Exterior surfaces.
  - 5. Sprayable with standard spray equipment.
  - 6. Meets weatherability requirements for exterior coating as follows:
    - a. ASTM D 522: Flexibility over conical mandrel.
    - b. ASTM D 2486: Scrub resistance.
    - c. ASTM D 968: Abrasion, falling sand.
    - d. ASTM D 2794: Impact resistance.
    - e. ASTM D 4541: Adhesion, pull off strength.
    - f. ASTM D 2243: Freeze thaw resistance.
    - g. ASTM G 153: Accelerated weathering - 1000 hrs, 8 hours UVA 340 @ 60c.
    - h. ASTM D 412: Tensile, elongation properties.
    - i. ASTM D 6904: Wind driven rain.
    - j. ASTM D 3273: Mold resistance.
    - k. FTMS 141 M4494: Sag resistance.
    - l. ASTM D 4585: Moisture resistance, 100 hours.
    - m. ASTM D 1729: Color change.
    - n. ASTM D 4214: Degree of chalking.
    - o. ASTM D 661: Degree of cracking.
  - 7. Approvals:
    - a. Meets International Building Code- Evaluation Service AC 377 over open cell foam for Attics, and Crawl Spaces.
    - b. Meets International Building Code- Evaluation Service AC 377 over closed cell foam for Attics, and Crawl Spaces.
    - c. Meets Green Standards and Lead Paint Requirements.
    - d. Meets EPA requirements for Ultra Low VOC.
    - e. Meets ASTM E 84 and UL 723, 0 flame, 20 smoke.
    - f. Meets SCAQMD (California South Coast Air Quality Management District) requirements as a Supercompliant Coating.
  - 8. Color:
    - a. White.
    - b. Custom Color.
- I. FIRESAFE IP-10 Interior Paint
- 1. White, Non-flammable coating.
  - 2. Non-toxic, drain safe, water based, non fuming.
  - 3. Interior tintable.
  - 4. Topcoatable.

5. Meets ASTM E 84 and UL 723, Class A. 7 mils DFT on cement board. Flame 0, Smoke 0.
  6. Color:
    - a. White.
    - b. Gray.
    - c. Red.
    - d. Charcoal.
    - e. Black.
    - f. Custom Color.
- J. STRUCTURE SAVIOUR AFES-F1EP Fireproof Intumescent Primer:
1. Non-flammable, 1-part water based, intumescent coating.
  2. Expands up to 2000 percent.
  3. Non-toxic, drain safe, water based, non fuming.
  4. Suitable for Interior and Exterior surfaces.
  5. Has stain blocking capability.
  6. Meets weatherability requirements for exterior coating as follows:
    - a. ASTM D 522: Flexibility over conical mandrel.
    - b. ASTM D 2486: Scrub resistance.
    - c. ASTM D 968: Abrasion, falling sand.
    - d. ASTM D 2794: Impact resistance.
    - e. ASTM D 4541: Adhesion, pull off strength.
    - f. ASTM D 2243: Freeze thaw resistance.
    - g. ASTM G 153: Accelerated weathering -1 000 hrs, 8 hours UVA 340@ 60c.
    - h. ASTM D 412: Tensile, elongation properties.
    - i. ASTM D 6904: Wind driven rain.
    - j. ASTM D 3273: Mold resistance.
    - k. FTMS 141 M4494: Sag resistance.
    - l. ASTM D 4585: Moisture resistance, 100 hours.
    - m. ASTM D 1729: Color change.
    - n. ASTM D 4214: Degree of chalking.
    - o. ASTM D 661: Degree of cracking.
  7. Approvals:
    - a. Meets ICC urban-wildland interface code requirements for ignition resistance over wood and lumber.
    - b. Water Vapor Transmission: 0.5 grains/sf/hr, ASTM E 96.
    - c. Water Vapor Permeance: 0.9 perms, ASTM E 96.
    - d. Meets ASTM E 84 and UL 723, Class A, 15 mils DFT on cement board. Flame 0, Smoke 0.
  8. Color: Gray.
- K. AFES-F4 non flammable exterior paint:
1. Proprietary Non-flammable Coating.
  2. Flexible, ductile, elastomeric.
  3. Maintains protective integrity in vapor fires.
  4. Meets weatherability requirements for exterior coating as follows:
    - a. ASTM D 522: Flexibility over conical mandrel.
    - b. ASTM D 2486: Scrub resistance.
    - c. ASTM D : Abrasion, falling sand.
    - d. ASTM D 2794: Impact resistance.
    - e. ASTM D 4541: Adhesion, pull off strength.
    - f. ASTM D 2243: Freeze thaw resistance.
    - g. ASTM G 153: Accelerated weathering - 1000 hrs, 8 hours UVA 340@ 60c.

- h. ASTM D 412: Tensile, elongation properties.
- i. ASTM D 6904: Wind driven rain.
- j. ASTM D 3273: Mold resistance.
- k. FTMS 141 M4494: Sag resistance.
- l. ASTM D 4585: Moisture resistance, 100 hours.
- m. ASTM D 1729: Color change.
- n. ASTM D 4214: Degree of chalking.
- o. ASTM D 661: Degree of cracking.
- 5. Non-toxic, drain safe, water based, non-fuming.
- 6. Suitable for Interior and Exterior surfaces.
- 7. Sprayable with standard spray equipment.
- 8. Flame Spread/Smoke Developed ASTM E 84 and UL 723: flame 0 smoke 0.
- 9. Volatility/VOC: 0.
- 10. Solvent: Water based.
- 11. Total Dry Film Thickness: 7-9 mils DFT, nominal.
- 12. Color:
  - a. White
  - b. Gray.
  - c. Red.
  - d. Charcoal.
  - e. Black.
  - f. Custom Color.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. Verify that substrates are ready to receive barrier coat fireproofing.
- C. Ensure that all primers are compatible with the barrier coat fireproofing.
- D. Verify that items that need to penetrate the barrier coat fireproofing film are in place, including clips, hangers, supports, and sleeves.
- E. Verify that other work that would obstruct access to surfaces to be fireproofed has not been installed.
- F. Where barrier coat fireproofing is to be exposed to view as a finished surface, verify that surfaces are smooth, without voids, cracks, or projections.
- G. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

### 3.2 PREPARATION

- A. Clean surfaces thoroughly in accordance with manufacturer's instructions prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Clean surfaces of dirt, dust, grease, oil, loose material, and other matter that may affect bond of fireproofing.
- D. Seal penetrations and open ended fireproofing terminations as required by manufacturer.

- E. Protect floors and adjacent walls and ceilings from overspray, fall-out, and dusting.

### 3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Prime all surfaces unless existing primer is suitable and undamaged and compatible with fireproofing.
- C. Install fireproofing in sufficient thickness to achieve fire rating indicated. Use as many passes as necessary to cover with a monolithic coating of uniform hardness, density, and texture.
- D. Remove fireproofing from surfaces not specifically required to be fireproofed.

### 3.4 FIELD QUALITY CONTROL

- A. Field inspection and testing will be performed by Owner's independent testing agency.
- B. Correct defective work and provide further inspection and testing to verify compliance, at no cost to Owner.

### 3.5 PROTECTION

- A. Protect installed products until completion of project.
- B. Remove excess material, overspray, droppings, and debris.
- C. Where fireproofing is subsequently cut away to facilitate installation of other work, patch fireproofing to same thickness and texture after installation of other work at no cost to Owner.
- D. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION