

**ARCHITECTURAL SPECIFICATION  
SUBLIMING FIRE RESISTANT MATERIAL  
ELECTRICAL RACEWAYS**

**PART 1      GENERAL**

**1.1      DESCRIPTION**

- A. This section includes specifications for applying subliming, epoxy based fire barrier system to electrical raceways where shown on drawing.

**1.2      DESIGN CRITERIA**

- A. Subliming Fire Resistant Materials must be 100% or 95% solids and comply with the "Bay Area Air Quality Management District Rules and Regulations, Regulation 8 Rule 3 for Architectural Coating for Volatile Organic Compounds" (V.O.C.).
- B. Apply subliming fire barrier system to electrical raceway surfaces based on hydrocarbon test documentation and ratings specified by the project.

**1.3      QUALITY ASSURANCE**

- A. Manufacturer: Company specializing in subliming, fire barrier materials.

- B. **Applicator:** The application shall be performed by a qualified contractor having prior training, equipment and experience. All supervisory or lead personnel involved with the application shall be or have been trained by the Field Service Organization of subliming fire resistant material manufacturer, and shall submit written verification of such training.
- C. **Safety Precautions:** The contractor shall follow standard industrial hygiene practices for the handling of chemical coatings and shall conform to applicable OSHA and owner safety rules in all respects.
- D. **Delivery:** The coating materials shall be delivered to the site in original, unopened pallets or containers bearing clearly visible product name, batch number, color, name of manufacturer and expiration date.
- E. **Storage:** The coating materials not in immediate use shall be stored off the ground in an area assigned for that purpose by the owner. The materials in storage shall be in accordance with the manufacturers recommendations.

#### **1.4 SUBMITTALS**

- A. **Working Drawings:** Complete details and description of proposed method and equipment for applying subliming fire resistant material.
- B. **Product Data:** Manufacturer's catalog, materials specification, installation instructions and other pertinent data for all products furnished.
- C. **Certification:**
  - 1. Manufacturer's certification that all products furnished meet specified requirements.
  - 2. Manufacturer's certified thickness of subliming fire resistant material required to satisfy ratings shown for each application.
  - 3. Manufacturer's certificate of applicator training.
- D. **Indication of reasonable conformance with physical properties of subliming fire resistant material specified under Part 2.**

- E. U.S. Department of Labor Material Safety Data Sheets (MSDS) for all hazardous or toxic materials used during work of this section.
- F. Sample Installation: Prior to actual production work, a sample test area shall be prepared following all specified procedures. This sample will then be approved by representatives of the Owner, Applicator, Architect and any others having a vested interest in the installation. Final acceptance of the site sample test area shall be by the Owner. All approved work following the sample installation shall conform to the standards of the site sample.

## **1.5 JOB CONDITIONS**

- A. The subliming fire resistant material shall be applied in good weather, following good painting practices. Any deviation shall be subject to approval by the subliming fire resistant material manufacturer and the Owner.
- B. Safety Requirements: Consult material safety data sheets, technical data bulletins, container labels and manufacturer's literature for precautions regarding proper storage and application procedures including ventilation, protective clothing and eye shield recommendations.

## **PART 2 - PRODUCTS**

### **2.1 MANUFACTURER :**

Nu-Chem, Inc.  
2200 Cassens Drive  
St. Louis, MO. 63026  
(636) 349-1515.  
THERMO-LAG™ 3000

## 2.2 MATERIALS:

- A. Subliming Fire Resistive Material: THERMO-LAG™ 3000
- B. Top Coat: Must be approved by the Owner, Architect and subliming fire resistant material manufacturer.

## 2.3. PHYSICAL AND MECHANICAL PROPERTIES OF THERMO-LAG™ 3000

<b><u>PHYSICAL AND MECHANICAL PROPERTIES</u></b>		
<b><u>Property</u></b>	<b><u>Nominal Value</u></b>	<b><u>Procedure</u></b>
Hardness	50	Shore D
Tensile Strength	766 psi ASTM D 638	
Compressive Strength	2190 psi	ASTM D 695
Flexural Strength	2253 psi	ASTM D 790
Flame Spread	<25 (Class A)	ASTM E-84
Smoke Generation	<15 (Class A)	ASTM E-84

## PART 3 - EXECUTION

### 3.1 GENERAL

Apply subliming fire resistant material after all electrical raceway is approved in accordance with drawings, but prior to any follow-on work which would interfere with proper application.

### 3.2 SITE CONFERENCE

After approval of the sample installation and prior to job application, arrange a meeting to discuss the proposed materials and application method. The Owner, Engineer, Contractor, subcontractor, and supervisors responsible for the application of subliming fire resistant material should attend.

### **3.3 INSPECTION**

Examine conditions where the subliming fire resistant material is to be installed. Notify the Owner or Engineer of conditions adverse to proper and timely completion of the work. Do not proceed with installation until unsatisfactory conditions have been corrected.

### **3.4 APPLICATOR**

Apply subliming fire resistant material including all preparation work in accordance with Article 3.5, 3.6 and 3.7 herein.

### **3.5 APPLICATION**

The subliming fire resistant material must be applied in strict accordance with the manufacturer's application procedures manual (T/N 82099-A).

### **3.7 REPAIR AND PROTECTION**

- A. Protect subliming fire resistant material from damage resulting from construction operations.
- B. Coordinate installation of subliming fire resistant material with other work.
- C. Repair or replace work which has not been successfully protected.

END OF SECTION