Alternate Temperature Assessment

Issued: September 24, 2020

UL Category Code: CDWZ

Product: Types Thermo-Lag 3000-SP, Thermo-Lag 3000-P, Thermo-Lag 3000-SA, Thermo-Lag 3000-A and Thermo-Lag 3000-FC Intumescent Fire-Resistive Materials

Report ID: XR620-1

COMPANY:

CARBOLINE CO.
350 HANLEY INDUSTRIAL CT
SAINT LOUIS, MO, 63144-1510 USA

Type Thermo-Lag 3000 Series fire-resistive materials are intumescent paints that are applied for fire resistance protection of structural steel framing members. This report is limited to the analysis and alternate limiting temperature thicknesses for the type of structural steel (e.g. Column) as shown in the table here within.

During the UL 1709 evaluation, the thickness of the fire resistive material is established based on limiting steel temperatures of 1000°F [538°C] (average) /1200°F [649°C] (individual) for columns. Based on the fire tests conducted and the performance of the fire resistive material, an alternate limiting temperature thickness table has been established. The alternate limiting temperature table is a UL design specific matrix that identifies the appropriate coating thickness for the selected steel size, limiting steel temperature and a specified time duration. This table is provided as additional information only for implementation by Authorities Having Jurisdiction. The UL 1709 test method has a similar approach for establishing fire resistance ratings and therefore lends itself to this type of engineering analysis. This information is intended to be used in conjunction with the specified UL Design only. All requirements specified in the UL Design shall be met to achieve the appropriate analysis.

Refer to UL File R11193 for product Classification under category CDWZ – Intumescent Fire-resistive Materials and Design No. XR620 for the fire resistance ratings developed in accordance with UL1709, Fifth edition. The alternate limiting temperature thickness is intended to be used in conjunction with UL Design No. XR620 only. All required components specified in the referenced UL Design shall remain as required components to achieve the time periods shown using the alternate limiting temperature thickness. Only the version of UL Design No. XR620 as shown on Product iQ at http://www.ul.com is considered current.

Type Thermo-Lag 3000 Series Intumescent Fire-resistive Materials described in this report shall be identified by a marking bearing the report holder's name (Carboline Co.) or UL file number (R11193), the product name, and the UL Classification Mark. The validity of this alternate temperature assessment is contingent upon this identification appearing on the product.

Alternate Limiting Temperature Thickness
UL Design: BYBU.XR620

Table 1	
Limiting Temperature: 752 °F (or 400 °C) Average based on UL 1709 (5th Edition)	
Time Duration (minutes)	Column Size W10×49 (Minimum W/D – 0.840)
	Thickness – mm (mils)
120	12 (472)