

**CITY OF NEW YORK  
DEPARTMENT OF BUILDINGS**

Pursuant to Administrative Code Section 27-131, the following equipment or material has been found acceptable for use in accordance with the Report of Materials and Equipment Acceptance (MEA) Division.

**Patricia J. Lancaster, F.A.I.A., Commissioner  
MEA 58-04-M**

**Report of Material and Equipment Acceptance Division**

**Manufacturer - Nu-Chem, Inc., 2200 Cassens Drive, St. Louis, Missouri 63026.**

**Trade Name(s) - Thermo-Sorb.**

**Product - Fire Resistive coating.**

**Pertinent Code Section(s) -27-323, 27-324.**

**Prescribed Test(s) - RS 5-2 (ASTM E119, ASTM E84).**

**Laboratory - Underwriters Laboratories Inc.; Omega Point Laboratories.**

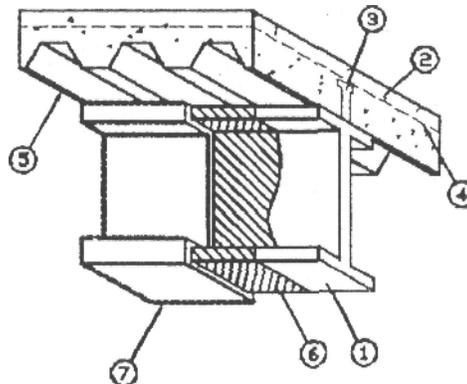
**Test Report(s) - UL Report R16350, Project 02NK091168 dated December 16, 2003, and Project No. 00NK41053 and Copies of UL Design No. N619, X660, X661, X662 and UL letter dated May 5, 2004. (ASTM E84).**

**Description -Thermo-Sorb is a single component, subliming/intumescant, acrylic, thin film, fire resistive coating which is spray applied directly to primed steel surfaces. Thermo-Sorb provides a durable, tough, aesthetically pleasing finish that allows the shape of the steel to be maintained while providing the specified level of fire resistance.**

**Thermo-Sorb is applied to structural members (columns, tubes, beams, pipe, angles, etc.) to provide fire ratings for 1, 2, and 3 hour protection based on testing performed by the Underwriters Laboratories with the required thicknesses following the manufacturer's instruction and in accordance with Underwriters Laboratories Design No. N619, X660, X661, and X662.**

Restrained Beam Rating — 1, 1-1/2 and 2 Hr |See Item 7 and 8)  
Unrestrained Beam Rating — 1, 1-1/2 and 2 Hr (Sec Item 7 and 8)

Design No. N619



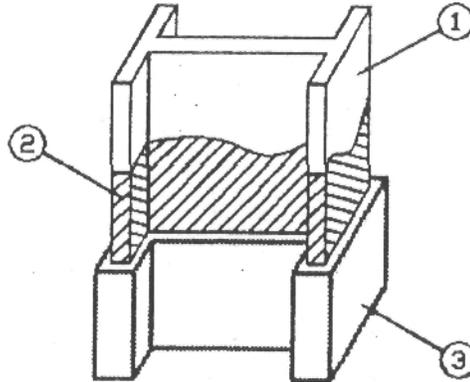
1. Steel Beam
2. Normal Weight or Lightweight Concrete - 148 lbs.
3. Shear Connectors - (optional)
4. Welded Wire Fabric

5. Steel Floor Units - units, welded to beam.
6. Primer Coating - Phenolic Modified Alkyd applied at 0.002 in. dry film thickness.
7. Mastic and Intumescent Coating\* - brush applied in accordance with the manufacturer's instructions.
8. Top Coat - (not shown)

NU-CHEM INC

Design No. X660

Ratings - 1, 1-1/2, 2, 2-1/2 and 3 Hr. (See Item 3)

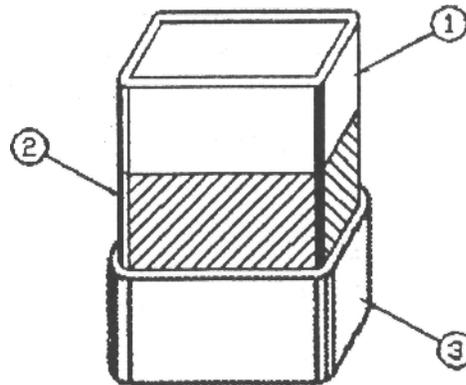


1. Steel Beam
2. Primer Coating -
3. Mastic and Intumescent Coating\*-
4. Top Coat - {not shown}

Design No. X661

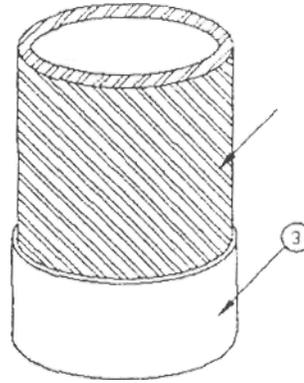
NU-CHEM INC

Ratings - 1, 1-1/2, 2, and 3 Hr. (See Item 3 and 4)



1. Steel Tube Column
2. Primer Coating-
3. Mastic and Intumescent Coating\*
4. Carbon Fiber Mesh - (optional, not shown)
5. Top Coat - (not shown)

Ratings - 1, M/2, 2, and 3 Hr. (See Item 3 and 4)



1. Steel Tube Column
2. Primer Coating -
3. Mastic and Intumescent Coating\*
4. Carbon Fiber Mesh - (optional, not shown)
5. Top Coat – (not shown)

**Note:** The following represents a summary of the test result of surface burning characteristics of mastic coating in accordance with the requirements of ASTM E84 for Thermo-Sorb at a maximum thickness of 0.080 inch:

Sample Description	Flame Spread Index	Smoke Developed Index
Thermo- Sorb	0	0

**Recommendation -** That the above described column protection assemblies be accepted for Class I and Class II Buildings only, as having the fire resistance ratings given above, when members framing into the columns have at least the same fire resistance rating, provided that following requirements for application and protection of the intumescent coating fireproofing be adhered to:

1. Where used in Class I Buildings, subject material shall be used for fireproofing of selected structural members and shall be limited to 20% of the gross area of all structural members on any one floor and a maximum of 20% of the gross area of all structural members in the entire building.
2. Where used for protection of floor column(s) in fireproofing buildings each such column(s) shall bear an identifying tag installed 7'-0" above finished floor. Subject tag shall be of metal construction mechanically attached to such column(s) and shall state the following: "This beam has been fireproofed with MEA approved Thermo-Sorb finish and such finish shall not be removed" nor any subsequent coating shall be applied other than Thermo-Sorb.

3. Surfaces to received intumescent coating shall be cleaned prior to the application of the fireproofing,
4. The finished fireproofing shall be applied to a uniform thickness, when shall not be less than the minimum thickness specified.
5. The general contractor and the owner shall provide qualified personnel to supervise the application of the sprayed fire resistive material. They shall certify to the Department of Buildings that the finished fireproofing of the completed building is in full compliance with the acceptance requirements and drawings approved by the Department of Buildings.
6. The installation of the sprayed fire resistive materials shall be subject to the controlled inspection requirements of Section 27-132.
7. The use of this material shall be subject to all pertinent regulations of the Department of Air Resources and the Department of Health.
8. All installations shall comply with 118-68 GR, the New York City Building Code, the Fire Department Directives, the manufacturer's instructions and laboratory recommendation.
9. All shipments and deliveries of the materials comprising this assembly shall be accompanied by a certificate or label certifying that the materials shipped or delivered are equivalent to those tested and acceptable for use, as provided for in Section 27-131 of the Building Code.

Final Acceptance June 21/04  
Examined by S Derphidan