

**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.

Richard C. Visconti, R.A., Acting Commissioner
MEA 177-00-M

Report of Material and Equipment Acceptance Division

Manufacturer - Star Maling Og Lakkfabrikk A/S, P.O. Box 593, Lierstranda, Norway.

Trade Name(s) - Carboline Nullifire S607.

Product - Mastic coating for fire protection, for Class II Buildings.

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

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

Laboratory - Underwriters Laboratories, Inc.

Test Report - UL File R11193.

Description - Type Nullifire S607 mastic coating with type Carboline Sanitile 250 or Carboline 3359 top coat per requirement of Underwriters Laboratories Inc. is designed to fire-proof interior steelwork of steel beams, columns, tubes, and pipes in Design No. N611.

Fire Resistance Ratings - ANSI/UL 263

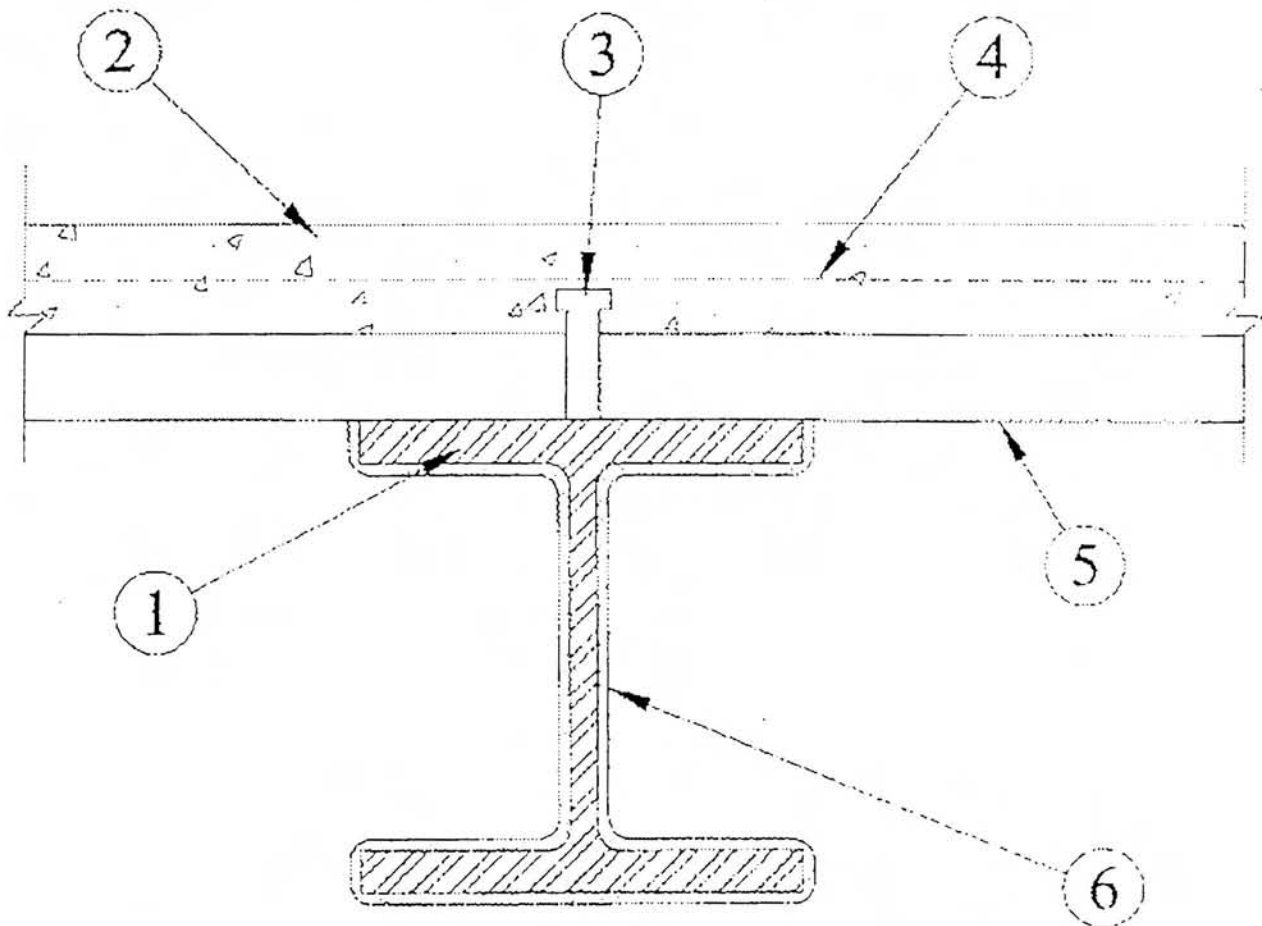
Guide Information

Design No. N611

December 02, 1999

Restrained Beam Ratings — 1, 1-1/2 and 2 Hr (See Item 6)

Unrestrained Beam Ratings — 1 and 1-1/2 Hr (See Item 6)



1. **Steel Beam** Wide flange steel beams with the minimum sizes shown in the tables below. Beams shall be free of dirt, loose scale and oil. Beams shall be primed with a red oxide zinc phosphate primer.

2. **Normal Weight or lightweight Concrete** Compressive strength 3000 psi. For normal weight concrete either carbonate or siliceous aggregate may be used. Unit weight 148 lbs/cu ft for normal weight concrete and 110 lbs/cu ft for lightweight concrete.

3. **Shear Connector—(Optional)** Studs, 3/4 in. diam headed type or equivalent per AISC specifications welded to the top flange of beam through the steel floor units.

4. **Welded Wire Fabric** 6x6-10/10 SWG.

5. **Steel Floor and Form Units** 1-1/2, 2 or 3 in. deep fluted, cellular or corrugated units welded to beam.

6. **Mastic Coating*** Coating spray or trowel applied directly from containers to desired thickness. See table for appropriate final dry thickness. After each coat, the surface shall be lightly rolled with a paint roller. Flutes above beam to be completely filled with mineral wool insulation having a minimum density below of 6 lbs/cu ft or the top flange of the beam shall be protected with the same thickness of coating as required on the beam.

The following thickness apply for unrestrained beams supporting corrugated, fluted or cellular floor units topped with lightweight or normal weight concrete:

UNRESTRAINED BEAM RATINGS

STEEL SIZE	W/D	1 HR	1-1/2 HR
W5x19	0.78	0.050	0.069
W6x16	0.67	0.050	0.069
W6x20	0.68	0.050	0.069
W6x25	0.84	0.050	0.069
W8x21	0.67	0.050	0.069
W8x24	0.70	0.050	0.069
W8x28	0.81	0.050	0.069
W8x31	0.80	0.050	0.069
W8x35	0.90	0.050	0.069
W8x40	1.02	0.050	0.069
W8x48	1.20	0.050	0.069
W8x58	1.43	0.050	0.069
W8x67	1.63	0.050	0.069
W10x26	0.70	0.050	0.069
W10x30	0.81	0.050	0.069
W10x33	0.79	0.050	0.069
W10x39	0.92	0.050	0.069

W10x45	1.05	0.050	0.069
W10x49	1.01	0.050	0.069
W10x54	1.11	0.050	0.069
W10x60	1.23	0.050	0.069
W10x68	1.38	0.050	0.069
W10x77	1.55	0.050	0.069
W10x88	1.75	0.022	0.022
W10x100	1.96	0.022	0.022
W10x112	2.17	0.022	0.022
W12x30	0.69	0.050	0.069
W12x35	0.80	0.050	0.069
W12x40	0.86	0.050	0.069
W12x45	0.97	0.050	0.069
W12x50	1.07	0.050	0.069
W12x53	1.01	0.050	0.069
W12x58	1.10	0.050	0.069
W12x65	1.11	0.050	0.069
W12x72	1.23	0.050	0.069
W12x79	1.34	0.050	0.069
W12x87	1.46	0.050	0.069
W12x96	1.61	0.050	0.069
W12x106	1.76	0.022	0.022
W12x120	1.98	0.022	0.022
W12x136	2.21	0.022	0.022
W12x152	2.45	0.022	0.022
W12x170	2.71	0.022	0.022
W12x190	2.99	0.022	0.022
W12x210	3.26	0.022	0.022
W12x230	3.53	0.022	0.022
W12x252	3.82	0.022	0.022
W12x279	4.16	0.022	0.022
W12x305	4.48	0.022	0.022
W12x336	4.85	0.022	0.022

W14x34	0.72	0.050	0.069
W14x38	0.81	0.050	0.069
W14x43	0.87	0.050	0.069
W14x48	0.96	0.050	0.069
W14x53	1.05	0.050	0.069
W14x61	1.09	0.050	0.069
W14x68	1.21	0.050	0.069
W14x74	1.31	0.050	0.069
W14x82	1.44	0.050	0.069
W14x90	1.29	0.050	0.069
W14x99	1.42	0.050	0.069
W14x109	1.55	0.050	0.069
W14x120	1.69	0.050	0.069
W14x132	1.85	0.022	0.022
W14x145	1.97	0.022	0.022
W14x159	2.14	0.022	0.022
W14x176	2.36	0.022	0.022
W14x193	2.57	0.022	0.022
W14x211	2.78	0.022	0.022
W14x233	3.04	0.022	0.022
W14x257	3.32	0.022	0.022
W14x283	3.62	0.022	0.022
W14x311	3.93	0.022	0.022
W14x342	4.27	0.022	0.022
W14x370	4.57	0.022	0.022
W14x398	4.87	0.022	0.022
W14x426	5.15	0.022	0.022
W14x455	5.45	0.022	0.022
W14x500	5.89	0.022	0.022
W14x550	6.37	0.022	0.022
W14x605	6.89	0.022	0.022
W14x665	7.43	0.022	0.022
W14x730	7.99	0.022	0.022

W16x36	0.70	0.050	0.069
W16x40	0.77	0.050	0.069
W16x45	0.87	0.050	0.069
W16x50	0.96	0.050	0.069
W16x57	1.08	0.050	0.069
W16x67	1.08	0.050	0.069
W16x77	1.24	0.050	0.069
W16x89	1.42	0.050	0.069
W16x100	1.58	0.050	0.069
W18x35	0.67	0.050	0.069
W18x40	0.76	0.050	0.069
W18x46	0.87	0.050	0.069
W18x50	0.88	0.050	0.069
W18x55	0.96	0.050	0.069
W18x60	1.04	0.050	0.069
W18x65	1.12	0.050	0.069
W18x71	1.22	0.050	0.069
W18x76	1.12	0.050	0.069
W18x86	1.26	0.050	0.069
W18x97	1.41	0.050	0.069
W18x106	1.53	0.050	0.069
W18x119	1.71	0.050	0.069
W21x44	0.74	0.050	0.069
W21x50	0.84	0.050	0.069
W21x57	0.95	0.050	0.069
W21x62	0.95	0.050	0.069
W21x68	1.04	0.050	0.069
W21x73	1.11	0.050	0.069
W21x83	1.26	0.050	0.069
W21x93	1.40	0.050	0.069
W21x101	1.30	0.050	0.069
W21x111	1.42	0.050	0.069

W21x122	1.55	0.050	0.069
W21x132	1.67	0.050	0.069
W21x147	1.85	0.022	0.022
W24x55	0.83	0.050	0.069
W24x62	0.93	0.050	0.069
W24x68	0.94	0.050	0.069
W24x76	1.04	0.050	0.069
W24x84	1.14	0.050	0.069
W24x94	1.27	0.050	0.069
W24x104	1.23	0.050	0.069
W24x117	1.38	0.050	0.069
W24x131	1.53	0.050	0.069
W24x146	1.70	0.050	0.069
W24x162	1.87	0.022	0.022
W27x84	1.03	0.050	0.069
W27x94	1.15	0.050	0.069
W27x102	1.24	0.050	0.069
W27x114	1.38	0.050	0.069
W27x146	1.55	0.050	0.069
W27x161	1.70	0.050	0.069
W27x178	1.87	0.022	0.022
W30x99	1.12	0.050	0.069
W30x108	1.21	0.050	0.069
W30x116	1.30	0.050	0.069
W30x124	1.38	0.050	0.069
W30x132	1.47	0.050	0.069
W30x173	1.67	0.050	0.069
W30x191	1.84	0.022	0.022
W30x211	2.02	0.022	0.022
W33x118	1.21	0.050	0.069
W33x130	1.32	0.050	0.069
W33x141	1.43	0.050	0.069
W33x152	1.53	0.050	0.069

W33x201	1.80	0.022	0.022
W33x221	1.96	0.022	0.022
W33x241	2.13	0.022	0.022
W36x135	1.29	0.050	0.069
W36x150	1.43	0.050	0.069
W36x160	1.52	0.050	0.069
W36x170	1.61	0.050	0.069
W36x182	1.71	0.050	0.069
W36x194	1.82	0.022	0.022
W36x210	1.96	0.022	0.022
W36x230	1.95	0.022	0.022
W36x245	2.07	0.022	0.022
W36x260	2.19	0.022	0.022
W36x280	2.35	0.022	0.022
W36x300	2.50	0.022	0.022

The following thickness apply for restrained beams supporting corrugated, fluted or cellular floor units topped with lightweight or normal weight concrete;

RESTRAINED BEAM RATINGS

STEEL SIZE	W/D	1 HR	1-1/2 HR	2 HR
W5x19	0.78	0.050	0.050	NR
W6x16	0.67	0.050	0.050	NR
W6x20	0.68	0.050	0.050	NR
W6x25	0.84	0.050	0.050	NR
W8x21	0.67	0.050	0.050	NR
W8x24	0.70	0.050	0.050	NR
W8x28	0.81	0.050	0.050	NR
W8x31	0.80	0.050	0.050	NR
W8x35	0.90	0.050	0.050	NR
W8x40	1.02	0.050	0.050	NR
W8x48	1.20	0.050	0.050	NR
W8x58	1.43	0.050	0.050	NR
W8x67	1.63	0.050	0.050	NR

W10x26	0.70	0.050	0.050	NR
W10x30	0.81	0.050	0.050	NR
W10x33	0.79	0.050	0.050	NR
W10x39	0.92	0.050	0.050	NR
W10x45	1.05	0.050	0.050	NR
W10x49	1.01	0.050	0.050	NR
W10x54	1.11	0.050	0.050	NR
W10x60	1.23	0.050	0.050	NR
W10x68	1.38	0.050	0.050	NR
W10x77	1.55	0.050	0.050	NR
W10x88	1.75	0.022	0.022	NR
W10x100	1.96	0.022	0.022	0.022
W10x112	2.17	0.022	0.022	0.022
W12x30	0.69	0.050	0.050	0.022
W12x35	0.80	0.050	0.050	NR
W12x40	0.86	0.050	0.050	NR
W12x45	0.97	0.050	0.050	NR
W12x50	1.07	0.050	0.050	NR
W12x53	1.01	0.050	0.050	NR
W12x58	1.10	0.050	0.050	NR
W12x65	1.11	0.050	0.050	NR
W12x72	1.23	0.050	0.050	NR
W12x79	1.34	0.050	0.050	NR
W12x87	1.46	0.050	0.050	NR
W12x96	1.61	0.050	0.050	NR
W12x106	1.76	0.022	0.022	NR
W12x120	1.98	0.022	0.022	0.022
W12x136	2.21	0.022	0.022	0.022
W12x152	2.45	0.022	0.022	0.022
W12x170	2.71	0.022	0.022	0.022
W12x190	2.99	0.022	0.022	0.022
W12x210	3.26	0.022	0.022	0.022
W12x230	3.53	0.022	0.022	0.022

W12x252	3.82	0.022	0.022	0.022
W12x279	4.16	0.022	0.022	0.022
W12x305	4.48	0.022	0.022	0.022
W12x336	4.85	0.022	0.022	0.022
W14x34	0.72	0.050	0.050	NR
W14x38	0.81	0.050	0.050	NR
W14x43	0.87	0.050	0.050	NR
W14x48	0.96	0.050	0.050	NR
W14x53	1.05	0.050	0.050	NR
W14x61	1.09	0.050	0.050	NR
W14x68	1.21	0.050	0.050	NR
W14x74	1.31	0.050	0.050	NR
W14x82	1.44	0.050	0.050	NR
W14x90	1.29	0.050	0.050	NR
W14x99	1.42	0.050	0.050	NR
W14x109	1.55	0.050	0.050	NR
W14x120	1.69	0.050	0.050	NR
W14x132	1.85	0.022	0.022	NR
W14x145	1.97	0.022	0.022	NR
W14x159	2.14	0.022	0.022	NR
W14x176	2.36	0.022	0.022	0.022
W14x193	2.57	0.022	0.022	0.022
W14x211	2.78	0.022	0.022	0.022
W14x233	3.04	0.022	0.022	0.022
W14x257	3.32	0.022	0.022	0.022
W14x283	3.62	0.022	0.022	0.022
W14x311	3.93	0.022	0.022	0.022
W14x342	4.27	0.022	0.022	0.022
W14x370	4.57	0.022	0.022	0.022
W14x398	4.87	0.022	0.022	0.022
W14x426	5.15	0.022	0.022	0.022
W14x455	5.45	0.022	0.022	0.022
W14x500	5.89	0.022	0.022	0.022

W14x550	6.37	0.022	0.022	0.022
W14x605	6.89	0.022	0.022	0.022
W14x665	7.43	0.022	0.022	0.022
W14x730	7.99	0.022	0.022	0.022
W16x36	0.70	0.050	0.050	NR
W16x40	0.77	0.050	0.050	NR
W16x45	0.87	0.050	0.050	NR
W16x50	0.96	0.050	0.050	NR
W16x57	1.08	0.050	0.050	NR
W16x67	1.08	0.050	0.050	NR
W16x77	1.24	0.050	0.050	NR
W16x89	1.42	0.050	0.050	NR
W16x100	1.58	0.050	0.050	NR
W18x35	0.67	0.050	0.050	NR
W18x40	0.76	0.050	0.050	NR
W18x46	0.87	0.050	0.050	NR
W18x50	0.88	0.050	0.050	NR
W18x55	0.96	0.050	0.050	NR
W18x60	1.04	0.050	0.050	NR
W18x65	1.12	0.050	0.050	NR
W18x71	1.22	0.050	0.050	NR
W18x76	1.12	0.050	0.050	NR
W18x86	1.26	0.050	0.050	NR
W18x97	1.41	0.050	0.050	NR
W18x106	1.53	0.050	0.050	NR
W18x119	1.71	0.050	0.050	NR
W21x44	0.74	0.050	0.050	NR
W21x50	0.84	0.050	0.050	NR
W21x57	0.95	0.050	0.050	NR
W21x62	0.95	0.050	0.050	NR
W21x68	1.04	0.050	0.050	NR
W21x73	1.11	0.050	0.050	NR
W21x83	1.26	0.050	0.050	NR

W21x93	1.40	0.050	0.050	NR
W21x101	1.30	0.050	0.050	NR
W21x111	1.42	0.050	0.050	NR
W21x122	1.55	0.050	0.050	NR
W21x132	1.67	0.050	0.050	NR
W21x147	1.85	0.022	0.022	NR
W24x55	0.83	0.050	0.050	NR
W24x62	0.93	0.050	0.050	NR
W24x68	0.94	0.050	0.050	NR
W24x76	1.04	0.050	0.050	NR
W24x84	1.14	0.050	0.050	NR
W24x94	1.27	0.050	0.050	NR
W24x104	1.23	0.050	0.050	NR
W24x117	1.38	0.050	0.050	NR
W24x131	1.53	0.050	0.050	NR
W24x146	1.70	0.050	0.050	NR
W24x162	1.87	0.050	0.050	NR
W27x84	1.03	0.050	0.050	NR
W27x94	1.15	0.050	0.050	NR
W27x102	1.24	0.050	0.050	NR
W27x114	1.38	0.050	0.050	NR
W27x146	1.55	0.050	0.050	NR
W27x161	1.70	0.050	0.050	NR
W27x178	1.87	0.022	0.022	NR
W30x99	1.12	0.050	0.050	NR
W30x108	1.21	0.050	0.050	NR
W30x116	1.30	0.050	0.050	NR
W30x124	1.38	0.050	0.050	NR
W30x132	1.47	0.050	0.050	NR
W30x173	1.67	0.050	0.050	NR
W30x191	1.84	0.022	0.022	NR
W30x211	2.02	0.022	0.022	NR
W33x118	1.21	0.050	0.050	NR

W33x130	1.32	0.050	0.050	NR
W33x141	1.43	0.050	0.050	NR
W33x152	1.53	0.050	0.050	NR
W33x201	1.80	0.022	0.022	0.022
W33x221	1.96	0.022	0.022	0.022
W33x241	2.13	0.022	0.022	0.022
W36x135	1.29	0.050	0.050	NR
W36x150	1.43	0.050	0.050	NR
W36x160	1.52	0.050	0.050	NR
W36x170	1.61	0.050	0.050	NR
W36x182	1.71	0.050	0.050	NR
W36x194	1.82	0.022	0.022	0.022
W36x210	1.96	0.022	0.022	0.022
W36x230	1.95	0.022	0.022	0.022
W36x245	2.07	0.022	0.022	0.022
W36x260	2.19	0.022	0.022	0.022
W36x280	2.35	0.022	0.022	0.022
W36x300	2.50	0.022	0.022	0.022

NR - Not Rated

CARBOLINE CO — Type Nullifire S607. Investigated for Interior Conditioned Space Purpose and Interior General Purpose.

*Bearing the UL Classification Marking

Recommendation - That the above described assemblies be accepted for 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 mastic coating fireproofing be adhered to:

1. Where used for protection of floor ceiling and/or assemblies in roof/ceiling in fireproof buildings each such assembly shall bear an identifying tag installed at each beam. Subject tag shall be of metal construction mechanically attached to such beams and shall state the following: "this beam has been fireproofed with MEA approved Nullifire S607 coating with type Carbolite Sanitile 250 or Carbolite 3359 top coat finish and such finish shall not be removed" nor any subsequent coating shall be applied other than Nullifire S607 coating with type Carbolite Sanitile 250 or Carbolite 3359 top coat.
2. The general contractor and the owner shall provide qualified personnel to supervise the application of the sprayed-on fireproofing. 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.
3. The installation of the sprayed on fire protection shall be subject to the controlled inspection requirements of Section 27-132.
4. The use of this material shall be subject to all pertinent regulations of the Department of Air Resources and the Department of Health.
5. 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.
6. 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 JUL 27 2000
Examined by S Derk Hudam