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

Patricia J. Lancaster, F.A.I.A., Commissioner

MEA 135-05-M
Report of Material and Equipment Acceptance Division


Trade Name- Boccella Precast LLC.

Product- Prestressed, precast reinforced concrete slabs for floor/ceiling assemblies.

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

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

Laboratory- Underwriters Laboratories, Inc.


Description- Floor /ceiling assemblies as per sketch attached below, utilizing the Ultra-Span 848 “Whisper” prestressed, precast hollow core slab reinforced in one direction with a minimum of (7) strands of wire (conforming to the requirements of ASTM A416) with or without cementitous underlayment mixture applied to the specific thickness to achieve the fire resistance ratings listed below in accordance with Underwriters Laboratories Inc., Design Nos. J931 and J957.
Fire Resistance Ratings - ANSI/UL 263

See general Information for Fire Resistance Ratings - ANSI/UL 263

Design No. J931

May 12, 2005

Restrained Assembly Ratings—2 and 3 Hr.

Unrestrained Assembly Rating—1 1/2 Hr.

Restrained End Detail

Unrestrained End Detail

1. Concrete Topping — 3000 psi compressive strength, ltOto 153 pcf unit weight Normal weight aggregate.

<table>
<thead>
<tr>
<th>Rating Hr</th>
<th>Min Thkns In.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 1/2</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

1 A. Floor Topping Mixture* — (Alternate to concrete topping) — 8 gal max water to 80 lbs. min of
floor topping mixture to 220 lbs. max of sand. Compressive strength to be 1000 psi. Min thickness to be 1/2 in. min for 3 hr rating.


**Floor Mat Materials** — (Optional) — Floor mat material nom 1/4 in. thick adhered to subfloor with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of a min 1-1/2 in. of floor-topping mixture.

**Hacker Industries Inc** — Type Sound-Mat.

1B. **Finish Flooring — Floor Topping Mixture** — 4 to 7 gal of water mixed with 80 lbs of floor topping mixture and 1.4 to 1.9 cu ft of sand. Compressive strength to be 1200 psi min. Min thickness to be 3/4 in.

**Rapid Floor Systems** — Type RF, RFP, RFU, RFR, Ortecrete

**Metal Lath** — For use with floor mat material, 3/8 in. expanded galvanized steel diamond mesh. 3.4 lbs/sq yd placed over the floor mat material. Floor topping thickness a nom 1 in. over the floor mat.

**Floor Mat Materials** — (Optional) — Floor mat material nom 1/4 in. thick loose laid over the subfloor. Maxxon Floor Primer to be applied to the surface of the mat prior to die floor topping placement. Floor topping thickness a min 1 in. over die floor mat

**Maxxon Corp** — Type Acousti-Mat II.

1C. **Finish Flooring — Floor Topping Mixture** — 3 to 7 gal of water mixed with 80 lbs of floor topping mixture and 1.0 to 2.1 cu ft of sand. Compressive strength to be 1000 psi min. Min thickness to be 3/4 in.

**Maxxon Corp** — Type D-C, GC, GC 2000, L-R, T-F, CT.

**Metal Lath** — For use with floor mat material, 3/8 in. expanded galvanized steel diamond mesh. 3.4 lbs/sq yd placed over the floor mat material. Floor topping thickness a nom 1 in. over the floor mat.

**Floor Mat Material** — (Optional) — Floor mat material nom 1/4 in. thick loose laid over the subfloor. Maxxon Floor Primer to be applied to the surface of me mat prior to the floor topping placement. Floor topping thickness a min 1 in. over the floor mat

**Maxxon Corp** — Type Acousti-Mat II.

1D. **Alternate Floor Topping Mixture** — Compressive strength to be 1500 psi mln. Min thickness to be 1/2 in. Refer to manufacturer's instructions accompanying the material for specific mix design.

**United States Gypsum Co** — Levelrock 2500, Levelrock RH

**Floor Mat Materials** — (Optional) — Floor mat material nom 0.4 in. thick loose laid over the subfloor. Floor topping thickness a min 1 in. over the floor mat.

**United States Gypsum Co** — Levelrock Brand Sound Reduction Mat
**Alternate Floor Mat Materials** — (Optional) - Floor mat material ranging from 3/8 in. to 3/4 in. thick loose laid over the subfloor. Floor topping thickness a min 1/2 in. over the floor mat.

**UNITED STATES GYPSUM CO** — Levelrock Brand Sound Reduction Board

**Alternate Floor Mat Materials** — (Optional) - Floor mat material nom 1/4 in. thick loose laid over the subfloor. Floor topping thickness a min 1/2 in. over the floor mat.

**UNITED STATES GYPSUM CO** — Levelrock Brand Floor Underlayment SRM-25

**Alternate Floor Mat Materials** — (Optional) - Floor mat material nom 3/8 in. thick loose laid over the subfloor. Floor topping thickness a min 1/2 in. over the floor mat.

**UNITED STATES GYPSUM CO** — Levelrock Brand Sound Reduction Mat

**Alternate Floor Mat Material** — (Optional) - Floor mat material ranging from 3/8 in. to 3/4 in. thick loose laid over the subfloor. Floor topping thickness a min 1 in. 1/2 in. over the floor mat.

**UNITED STATES GYPSUM CO** — Levelrock Brand Sound Reduction Board

**Alternate Floor Mat Materials** — (Optional) - Floor mat material nom 1/4 in. thick loose laid over the subfloor. Floor topping thickness a rain 1/2 in. over the floor mat

**UNITED STATES GYPSUM CO** — Levelrock Brand Floor Underlayment SRM-25

**Alternate Floor Mat Materials** — (Optional) - Floor mat material nom 3/8 in. thick loose laid over the subfloor. Floor topping thickness a min 1/2 in. over the floor mat.

**SOLUTIA INC** — Type SC50

IE. **Alternate Floor Topping Mixture** — Compressive strength to be 2100 psi min, Min thickness to be 1/2 in. Refer to manufacturer's instructions accompanying the material for specific mix design.

**UNITED STATES GYPSUM CO** — Levelrock 3500, Levelrock Commercial RH

**Floor Mat Materials** — (Optional) - Floor mat material nom 0.4 in. thick loose laid over the subfloor. Floor topping thickness a min 1 in. over die floor mat.

**UNITED STATES GYPSUM CO** — Levelrock Brand Sound Reduction Mat

**Alternate Floor Mat Material** — (Optional) - Floor mat material ranging from 3/8 in. to 3/4 in. thick loose laid over the subfloor. Floor topping thickness a min 1 in. 1/2 in. over the floor mat.

**UNITED STATES GYPSUM CO** — Levelrock Brand Sound Reduction Board

**Alternate Floor Mat Materials** — (Optional) - Floor mat material nom 1/4 in. thick loose laid over the subfloor. Floor topping thickness a rain 1/2 in. over the floor mat

**UNITED STATES GYPSUM CO** — Levelrock Brand Floor Underlayment SRM-25

**Alternate Floor Mat Materials** — (Optional) - Floor mat material nom 3/8 in- thick loose laid over the subfloor. Floor topping thickness a min 1/2 in. over the floor mat.

**SOLUTIA TNC** — Type SC50

IE. **Alternate Floor Topping Mixture** — Compressive strength to be 3000 psi min. Min thickness to be 1/2 in. Refer to manufacturer's instructions accompanying the material for specific mix design.

**UNITED STATES GYPSUM CO** — Levelrock 4500

**Floor Mat Materials** — (Optional)- Floor mat material nom 0.4 in. thick loose laid over the subfloor. Floor topping thickness a min 1 in. over the floor mat.
United States Gypsum Co — Levelrock Brand Sound Reduction Mat

Alternate Floor Mat Materials* — (Optional) - Floor mat material ranging from 3/8 in. to 3/4 in. thick loose laid over the subfloor. Floor topping thickness 3 min 1/2 in. over the floor mat.

United States Gypsum Co — Levelrock Brand Sound Reduction Board

Alternate Floor Mat Materials* — (Optional) - Floor mat material nom 1/4 in. thick loose laid over the subfloor. Floor topping thickness a min 1/2 in. over the floor mat.

United States Gypsum Co — Levelrock Brand Floor Underlayment SRM-25

Alternate Floor Mat Materials* — (Optional) - Floor mat material nom 3/8 in. thick loose laid over the subfloor. Floor topping thickness a min 1/2 in. over the floor mat

Solutia Inc — Type SC50

1G. Alternate Floor Topping Mixture* — Compressive strength to be 1000 psi min. Thickness to be 3/4 in. min. Refer to manufacturer's instructions accompanying the material for specific mix design.

Allied Custom Gypsum

Plasterworks L L C — Accu-Crete

IH. Alternate Floor Topping Mixture* — Compressive strength to be 2100 psi min. Thickness to be 3/4 in. min. Refer to manufacturer's instructions accompanying the material for specific mix design.

Maxit Inc — Maxit 493

2. Precast Concrete Units* — Nom 8, 10 or 12 in. thick units. Normal weight aggregate. Cross section similar to the above illustration.

3. End Details — Restrained and unrestrained.

4. Joint — Clearance between slabs at bottom, full length, 1/16 in. min., 5/16 in. max, grouted full length with sand-cement grout (3500 psi min compressive strength) to a max depth of 4 1/2 in. This depth may be maintained by placing a compressible material in the bottom of the joint before applying grout.

Note: — A 3/4-in. lateral expansion joint to be provided the full length and depth of the slabs every 14 ft. Expansion should be obtained with noncombustible, compressible material, for example, 24 sheets of 1/16 in. thick ceramic fiber paper (total thickness equals 1-1/2 in.).
5. **End Clearance** — Clearance for expansion at each end of slabs shall be equal to \((3/16 \pm 1/16\text{ in.}) \times L/17\text{ in.}\), where "L" is equal to length of span in feet.

6. **Min Bearing** — 1-1/2 in.

*Bearing the UL Classification Mart

*Last Updated* on 2005-05-11
Design No. J937

May 12, 2005

Restrained Assembly Ratings — 2 and 3 Hr. (Set Item 1)

Unrestrained Assembly Rating — 1 and 2 Hr.

Unrestrained Beam Rating — 1, 1/2, 2, 3 (See Items 8, 8A)

Restrained End Detail

1. Concrete Topping — 3000 psi corapressive strength, 110 to 153 pcf unit weight Normal weight aggregate.

<table>
<thead>
<tr>
<th>Rating Hr</th>
<th>Mill Thkos In.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

I A. floor Topping Mixture* — (Alternate to Concrete Topping) — 8 gal max water to 80 lbs min of floor topping mixture to 220 lbs max of sand. Cqpressive strength to be 1000 psi Min thickness to be 1/2 in. min for 3 hr rating.

**Floor Mat Materials*** — (Optional) — Floor mat material nom 1/4 in. thick adhered to subfloor with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of a min 1 - 1/2 in. of floor-topping mixture.

**HACKER INDUSTRIES INC** — Type Sound-Mat

**IB. Finish Flooring — Floor Topping Mixture*** — 4 to 7 gal of water mixed with 80 lbs of floor topping mixture and 1.4 to 1.6 cu ft of sand. Compressive strength to be 1200 psi min. Min thickness to be 1/2 in.

**RAPID FLOOR SYSTEMS** — Type RF, RFP, RFU, RF R, Ortecrete.

**Metal lath** — For use with floor mat material, 3/8 in. expanded galvanized steel diamond mesh, 3.4 lbs/sq yd placed over the floor mat material. Floor topping thickness a nom 1 in. over the floor mat.

**Floor Mat Materials*** — (Optional)—Floor mat material nom 1/4 in. thick loose laid over the subfloor. Maxxon Floor Primer to be applied to the surface of the mat prior to the floor topping placement. Floor topping thickness a min 1 in. over the floor mat.

**MAXXON CORP** — Type Acousti-Mat II.

**IC. Finish Flooring—Floor Topping Mixture*** — 3 to 7 gal of water mixed with 80 lbs of floor topping mixture and 1.0 to 2.1 cu ft of sand. Compressive strength to be 1000 psi min. Min thickness to be 3/4 in.

**MAXXON CORP** — Type D-C, GC, GC 2000, L-R, T-F, CT.

**Metal Lath** — For use with floor mat material, 3/8 in. expanded galvanized steel diamond mesh, 3.4 lbs/sq yd placed over the flow mat material. Floor topping thickness a nom 1 in. over the floor mat.

**Floor Mat Materials*** — (Optional)—Floor Mat material nom 1/4 in. thick loose laid over the subfloor. Maxxon Floor Primer to be applied to the surface of the mat prior to the floor topping placement. Floor topping thickness a min 1 in. over the floor mat.

**MAXXON CORP** — Type Acoustic-Mat II.

**ID. Alternate Floor Mat Materials*** — Compressive strength to be 1500 psi minimum. Min thickness to be 3/4 in. Refer to manufacturer's instructions accompanying the material for specific mix design.

**UNITED STATES GYPSUM CO** — Levelrock 2500, Levelrock RH

**Floor Mat Materials*** — (Optional) - Floor mat material nom 0.4 in. thick loose laid over the subfloor. Floor topping thickness a min 1 in. over the floor mat.

**UNITED STATES GYPSUM CO** — Levelrock Brand Sound Reduction Mat

**Alternate Floor Mat Materials*** — (Optional) - Floor mat material ranging from 3/8 in. to 3/4 m. thick loose laid over the subfloor. Floor topping thickness a min 1/2 in. over the floor mat.

**UNITED STATES GYPSUM CO** — Levelrock Brand Sound Reduction Board
Alternate Floor Mat Material* — (Optional) - Floor mat material nom 1/4 in. thick loose laid over the subfloor. Floor topping thickness a min 1/2 in. over the floor mat

UNITED STATES GYPSUM CO — Levehock Brand Floor Underlayment SRM-25

Alternate Floor Mat Materials* — (Optional) - Floor mat material nom 3/8 in. thick loose laid over the subfloor. Floor topping thickness a min 1/2 in. over the floor mat

SOLUTIA INC — Type SC50

Alternate Floor Topping Mixture* — Compressive strength to be 2100 psi minimum. Min thickness to be 1/2 in. Refer to manufacturer's instructions accompanying the material for specific mix design.

UNITED STATES GYPSUM CO — Levelrock 3500, Levelrock Commercial KH

Floor Mat Materials* — (Optional) - Floor mat material nom 0.4 in. thick loose laid over the subfloor. Floor topping thickness a min 1 in. over the floor mat

UNITED STATES GYPSUM CO — Levelrock Brand Sound Reduction Mat

Alternate Floor Mat Materials* — (Optional) - Floor mat material ranging from 3/8 in. to 3/4 in. thick loose laid over the subfloor. Floor topping thickness a min 1/2 in. over the floor mat

UNITED STATES GYPSUM CO — Levelrock: Brand Sound Reduction Board

Alternate Floor Mat Materials* — (Optional) - Floor mat material nom 1/4 in. thick loose laid over the subfloor. Floor topping thickness a min 1/2 in. over the floor mat

UNITED STATES GYPSUM CO — Levelrock Brand Floor Underlayment SRM-25

Alternate Floor Mat Materials* — (Optional) - Floor mat material nom 3/8 in. thick loose laid over the subfloor. Floor topping thickness a min 1/2 in. over the floor mat

SOLUTIA INC — Type SC50

Alternate Floor Topping Mixture* — Compressive strength to be 3000 psi minimum. Min thickness to be 1/2 in. Refer to manufacturer's instructions accompanying the material for specific mix design.

UNITED STATES GYPSUM CO — Levelrock 4500

Floor Mat Materials* — (Optional) - Floor mat material nom 0.4 in. thick loose laid over the subfloor. Floor topping thickness a min 1 in. over the floor mat.

UNITED STATES GYPSUM CO — Levelrock Brand Sound Reduction Mat

Alternate Floor Mat Materials* — (Optional) - Floor mat material ranging from 3/8 in. to 3/4 in. thick loose laid over the subfloor. Floor topping thickness a min 1/2 in. over the floor mat
UNITED STATES GYPSUM CO — Levelrock Brand Sound Reduction Board

Alternate Floor Mat Materials* — (Optional) - - Floor mat material nom 1/4 in. thick loose laid over the subfloor. Floor topping thickness a min 1/2 in. over the floor mat

UNITED STATES GYPSUM CO — Uvelrock Brand Floor Underlayment SRM-25

Alternate Floor Mat Materials* — (Optional) - Floor mat material com 3/3 in. thick loose laid over the subfloor. Floor topping thickness a min 1/2 in. over the floor mat.

SOLUTIA INC — Type SC50

1G. Alternate Floor Topping Mixture" — Compressive strength to be 1000 psi min. Thickness to be 3/4 in. min. Refer to manufacturer's instructions accompanying the material for specific mix design.

ALLIED CUSTOM GYPSUM

PLASTERWORKS L L C — Accu-Crete

1H. Alternate Floor Topping Mixture* — Compressive strength to be 2100 psi min. Thickness to be 3/4 in. min. Refer to manufacturer's instructions accompanying the material for specific mix design.

MAXTT INC — Maxit 493

2. Precast Concrete Units* — Nom 8,10 or 12 in. thick units. Normal weight aggregate. Cross section similar to the above illustration.

BOLLOWCORE INC KERKSTRA

PRECAST INC PITTSBURGH FLEXICORE

CO INC PRESTRESSED SLABS INC

3. End Details — Restrained and unrestrained.

4. Joint — Clearance between slabs at bottom, full length, 1/16 in. min, 5/16 in. max, grouted full length with sand-cement grout (3500 psi min compressive strength) to a max depth of 4-1/2 in. This depth may be maintained by placing a compressible material in the bottom of the joint before applying grout.

Note: A 3/4 in. lateral expansion joint to be provided the full length and depth of the slabs every 14 ft Expansion should be obtained with noncombustible, compressible material, for example, 24 sheets of 1/16 in. thick ceramic fiber paper (total thickness equals 1-1/2 in.).

5. End Clearance — Clearance for expansion at each end of slabs shall be equal to (3/16 plus or minus l/16 in.)L/17 in., where "L" is equal to length of span in feet.

6. Min Bearing— 1-1/2 in.
7. Beam — Optional — (Not Shown) — W 8x28 min size. The Precast Concrete Units shall be welded to the top flange of the beam by means of weld plates (spaced 48 in. OC max) incorporated in the Units.

8. Spray-Applied Fire Resistive Materials* — (Not Shown) — Applied by mixing with water and spraying in one or more coats the final thicknesses as shown in the table below, on the steel beam following the beam contour. Surfaces of the beam shall be clean and free of dirt, loose scale and oil. Min avg and min ind density of 15/14 pcf respectively. Min avg and min ind density of 22/19 pcf respectively for Types Z-106, Z-106/G. Min avg and min ind density of 19/18 pcf respectively for Type 7GP and 7HD. For method of density determination, refer to Design Information Section.

<table>
<thead>
<tr>
<th>Restrained Assembly Rating Hr</th>
<th>Unrestrained Assembly Rating Hr</th>
<th>Unrestrained Beam Rating Hr</th>
<th>Thknson Beam In.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1</td>
<td>1</td>
<td>7/16</td>
</tr>
<tr>
<td>2</td>
<td>1-1/2</td>
<td>1-1/2</td>
<td>3/4</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>1-1/2</td>
<td>1-1/2</td>
<td>3/4</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>3</td>
<td>1-5/16</td>
</tr>
</tbody>
</table>

ARABIAN VERMICULITE INDUSTRIES — Type MK-5.

GRACE CANADA INC — Types MK-4, MK-5.

GRACE KOREA INC — Types MK-6/CBF, MK-6/ED, MK-6/HY, MK-6s, Monokote Acoustic 1, Monokote Acoustic 5, Z-106,2-106/G.

PYROK INC — Type LD.

SOUTHWEST VERMICULITE CO — Types 4,5,5EF, 5GP, 5MD, 7GP, 7HD, 8EF, 8GP, 8MD, 9EF,9GP,9MD.

VERMICULITE PRODUCTS INC — Types MK-4, MK-5, VP4, VP5.

WR GRACE & CO - CONN

CONSTRUCTION PRODUCTS DIV — Types MK-4, MK-5, MK-6/HY, MK-6s, Monokote Acoustic 1, Monokote Acoustic 5, RG, Z-106, Z-106/G.

8A. Spray-Applied Fire Resistive Materials* — (Not Shown) — Applied by spraying with water to the final thickness as shown in the table below, to the steel beam following the beam contour. Surfaces of the beam shall be clean and free of dirt, loose scale and oil. Min avg and min ind density of 13 and 11 pcf, respectively for Type D-C/F or II. Min avg and min ind densities of 22 and 19 pcf; respectively, for Type HP. For method of density determination, refer to Design Information Section, Sprayed Material.
### Restrained Assembly Rating Hour Unstrained Assembly Rating Hour Unstrained Beam Rating Hour Thkns on beam In.

| 2 | 1 | 1 | 3/8 |
| 2 | 1-1/2 | 1-1/2 | 11/16 |
| 2 | 2 | 2 | 1 |
| 3 | 1-1/2 | 1-1/2 | 11/16 |
| 3 | 2 | 2 | 1 |
| 3 | 2 | 3 | 1-5/8 |

**ISOLATEK INTERNATIONAL** — Type D-C/F, HP or fl.

8B. **Spray-Applied Fire Resistive Materials** — (Not Shown) — Applied by spraying with water to the final thickness as shown in the table below, to the steel beam following the beam contour. Surface of the beam shall be clear and free of dirt, loose scale and oil. Minimum average and minimum individual density of 17.5 and 16 pcf, respectively for Types 300, 300ES, 300N and SB. Minimum average and minimum individual density of 22 and 19 pcf, respectively for Type 400. For method of density determination, refer to Design Information Section, Sprayed Material.

<table>
<thead>
<tr>
<th>Restrained Assembly Rating, Hr</th>
<th>Unrestrained Assembly Rating, Hr</th>
<th>Unrestrained Beam Rating, Hr</th>
<th>MinThkns On Beam In.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1</td>
<td>1</td>
<td>5/16</td>
</tr>
<tr>
<td>2</td>
<td>1-1/2</td>
<td>1-1/2</td>
<td>1/2</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>2</td>
<td>11/16</td>
</tr>
<tr>
<td>3</td>
<td>1-1/2</td>
<td>1-1/2</td>
<td>1/2</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>2</td>
<td>11/16</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>3</td>
<td>1-1/16</td>
</tr>
</tbody>
</table>

**ISOLATEK INTERNATIONAL** — Type 300, Type 300ES, Type 300N, Type SB or Type 400

Tie thickness of Spray-Applied Fire Resistive Materials shown in the table below are applicable when the beams are supporting solid concrete slabs or floor assemblies containing only fluted floor or form units.

<table>
<thead>
<tr>
<th>Rating Hr</th>
<th>Mia Thkns In.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restrained Beam Rating Hr</td>
<td>Unrestrained Beam Rating Hr</td>
</tr>
<tr>
<td>1</td>
<td>7/16</td>
</tr>
<tr>
<td>1-1/2</td>
<td>1/2</td>
</tr>
<tr>
<td>2</td>
<td>13/16</td>
</tr>
<tr>
<td>3</td>
<td>1-5/16</td>
</tr>
<tr>
<td>4</td>
<td>1-5/8</td>
</tr>
</tbody>
</table>

**CARBOUNE CO** — Types 15, 15HY, 22
SC. Spray-Applied Fire Resistive Materials* — (Not Shown) — Applied by mixing with water and spraying in one or more coats the final thicknesses as shown in the table below, on the steel beam following the beam contour. Surfaces of the beam shall be clean and free of dirt, loose scale and oil. Mill avg and min ind density of 15/14 pcf respectively. Min avg and min ind density of 22/19 pcf respectively for Types Z-106, Z-106/G. For method of density detenu (nation, refer to Design Information Section.

| Restrained Assembly Rating Hr | Unrestrained Assembly Rating Hr | Unrestrained Beam Rating Hr | Thk as on Beam | la. |
|-------------------------------|--------------------------------|---------------------------|----------------|
| 2                             | 1                              | 1                         | 3/8            |
| 2                             | 1-1/2                          | 1-1/2                     | 5/8            |
| 2                             | 2                              | 2                         | 7/8            |
| 3                             | 1-1/2                          | 1-1/2                     | 5/8            |
| 3                             | 2                              | 2                         | 7/8            |
| 3                             | 2                              | 3                         | 1-7/16         |

W R GRACE & CO - CONN


GRACE KOREA INC—Types MK-6CBF, MK-6ED, MK-6HY, MK-6HY Extended Set, MK-& Sonotex 1, Sonotex 5, Z-106, Z-1067G.

*Bearing the UL Classification Mark

Last Updated on 2005-05-12
Recommendation – That the assemblies shown above be accepted as having the hourly fire resistance listed for floor and ceiling assemblies provided the following conditions are complied with:

1. Structural requirements shall comply with Article 10, Reference Standard RS 10-3 and other applicable provisions of the building Code.

2. Minimum bearing on supports as specified in UL file R21476 must be provided. The acceptance of this assembly is limited to fire resistance only. Structural and other requirements shall be in compliance with pertinent Building Code provisions and above mentioned limitations.

All shipments and deliveries of such materials 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/30/2003]

Examined By [Signature]