PRODUCT DESCRIPTION
CAFCO SOUND-SHIELD 40 / ISOLATEK SOUND-SHIELD 40 is a spray applied high density acoustical treatment that provides high levels of acoustical control on walls and ceilings. Its unique blend of Portland cement and vermiculite delivers excellent physical property performance and unsurpassed noise reduction efficiency.

CAFCO SOUND SHIELD 40 / ISOLATEK SOUND-SHIELD 40 requires no hand finishing and is ideally suited for a variety of acoustical applications, including complex contoured surfaces. This non-combustible acoustical material is an excellent product for both retrofit and new projects such as schools, churches, libraries and other public buildings, where acoustical control is required.

Its aesthetically pleasing architectural finish makes it ideal for use in areas such as transportation centers, hotels/resorts, entertainment arenas, etc. that require an exposed, durable, abuse resistant sound absorbing treatment.

PRODUCT ADVANTAGES
• High density (40 pcf) material with NRC ratings up to 0.75
• Exceptional physical property performance
• Ideal for contoured surfaces
• No hand finishing required
• Aesthetically pleasing architectural finish

TESTED PERFORMANCE
CAFCO SOUND-SHIELD 40 / ISOLATEK SOUND-SHIELD 40 has been tested for surface burning characteristics in accordance with ASTM E84 and is rated Class A.

<table>
<thead>
<tr>
<th>Flame Spread</th>
<th>Smoke Developed</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>10</td>
</tr>
</tbody>
</table>

**Acoustical Performance**

<table>
<thead>
<tr>
<th>Thickness</th>
<th>Substrate</th>
<th>Coefficient Rating</th>
<th>NRC</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/8”</td>
<td>Solid Base</td>
<td>0.01 0.11 0.34 0.49 0.67 0.86 0.40</td>
<td></td>
</tr>
<tr>
<td>1”</td>
<td>Solid Base</td>
<td>0.24 0.32 0.44 0.51 0.71 0.96 0.50</td>
<td></td>
</tr>
<tr>
<td>1 1/2”</td>
<td>Solid Base</td>
<td>0.24 0.41 0.50 0.65 0.85 0.98 0.60</td>
<td></td>
</tr>
<tr>
<td>1 7/8”</td>
<td>Solid Base</td>
<td>0.36 0.52 0.64 0.85 0.98 0.99 0.75</td>
<td></td>
</tr>
</tbody>
</table>

The above values represent independent laboratory tests under controlled conditions. Sound absorption performance of building materials is dependent on thickness, density, surface texture and other factors. Lower density and rougher surface texture significantly contribute to optimum performance.

**Physical Performance**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>ASTM Method</th>
<th>Laboratory Tested Performance*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density**</td>
<td>E605</td>
<td>40 pcf (640.7 kg/m³)</td>
</tr>
<tr>
<td>Combustibility</td>
<td>E136</td>
<td>Noncombustible</td>
</tr>
<tr>
<td>Cohesion/Adhesion</td>
<td>E736</td>
<td>5,000 psf (239.4 kPa)</td>
</tr>
<tr>
<td>Compressive Strength</td>
<td>E761</td>
<td>43,200 psf (2,068.4 kPa)</td>
</tr>
<tr>
<td>Corrosion Resistance</td>
<td>E937</td>
<td>Does Not Promote Corrosion of Steel</td>
</tr>
<tr>
<td>Toxicity</td>
<td>University of Pittsburgh - Toxicity Test</td>
<td>LC (50)&gt;400 grams</td>
</tr>
<tr>
<td>Fungal Resistance</td>
<td>G21</td>
<td>Passed</td>
</tr>
</tbody>
</table>

* Values represent independent laboratory tests under controlled conditions.

** In-place density of CAFCO SOUND-SHIELD 40 / ISOLATEK SOUND-SHIELD 40 may range from the mid 30s to nominally 40 pcf by design. Refer to the CAFCO SOUND-SHIELD 40 / ISOLATEK SOUND-SHIELD 40 Application and Installation Manual for guidelines to control density and for application technique.
CAFCO SOUND-SHIELD 40 / ISOLATEK SOUND-SHIELD 40 Guide Specification

PART 1 - GENERAL

1.1 WORK INCLUDED

1.1.1 Provide all labor, materials, equipment and services necessary for, and incidental to, the complete and proper installation of all sprayed acoustical treatment and related work as shown on the drawings or when specified herein, and in accordance with all applicable requirements of the Contract Documents.

1.1.2 The material and installation shall conform to the applicable building code requirements and the requirements of all authorities having jurisdiction.

1.2 QUALITY ASSURANCE

1.2.1 Provide a Portland cement-vermiculite based material which has been tested and meets the following physical performance properties.

| TEST METHOD | PROPERTY | PERFORMANCE
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTM E605</td>
<td>Density</td>
<td>40 lb/ft³</td>
</tr>
<tr>
<td>ASTM E761</td>
<td>Compressive Strength</td>
<td>300 psi</td>
</tr>
<tr>
<td>ASTM E783</td>
<td>Bond Strength</td>
<td>5000 psi</td>
</tr>
<tr>
<td>ASTM E84</td>
<td>Surface Burning</td>
<td>Flame: 0</td>
</tr>
<tr>
<td>ASTM C423</td>
<td>Sound Absorption</td>
<td>NRC: 0.20 @ 2500 Hz</td>
</tr>
</tbody>
</table>

1.3.1 Provide test results from an NVLAP accredited testing laboratory.

1.3.2 Provide test results for the sprayed acoustical material in accordance with recognized standard methods under controlled conditions.

1.4 INSTALLATION

1.4.1 The application of the sprayed acoustical material to any smooth, dense substrate is to be performed by the applicator and shall be in accordance with these instructions.

1.4.2 All surfaces to receive sprayed acoustical treatment are to be free of oil, grease, dust, dirt, paint, linseed oil or other materials which could impair the adhesion of the sprayed material.

1.4.3 The sprayed material shall be applied to a substrate temperature not less than 60°F (15°C) and not more than 100°F (38°C). Substrates requiring adhesion promotion should be identified by the manufacturer.

1.4.4 Potable water shall be used for the application of sprayed acoustical material.

1.5 SUBMITTALS

1.5.1 Manufacturer’s Data: Submit manufacturer’s specifications, including certification as may be required to show material compliance with Contract Documents and quality assurance performance minimums.

1.5.2 Test Data: Provide test results. Independent laboratory test results shall be submitted for all specified performance criteria.

1.5.3 Submit samples of sprayed insulation showing texture variations for approval.

1.5.4 Submit certification from all suppliers indicating no detectable asbestos content in materials and materials are free of polystyrene and cellulose.

1.5.5 Submit certification of applicator recognition.

1.6 DELIVERY, STORAGE AND HANDLING

1.6.1 Deliver materials to the project in manufacturer’s unopened packages, fully identified as to trade name, type and other identifying data.

1.6.2 Store materials above ground, in a dry location, protected from the weather. Damaged packages found unsuitable for use should be rejected and removed from the project.

1.7 PROJECT CONDITIONS

1.7.1 When the prevailing outdoor temperature at the building is less than 40°F (4°C), a minimum substrate and ambient temperature of 40°F (4°C) shall be maintained prior to, during, and 24 hours after application of sprayed acoustical material. In the case of job progress, the General Contractor shall ensure the temperatures and humidity levels maintain the application conditions.

1.7.2 General Contractor shall provide ventilation to allow proper drying of the sprayed acoustical material during and subsequent to its application.

1.7.3 Ventilation must not be less than 4 complete air exchanges per hour until the material is dry. When spraying in enclosed areas such as basements, stairwells, shafts, and small rooms, additional air exchanges may be necessary.

1.8 SEQUENCING/SCHEDULING

1.8.1 All sprayed acoustical treatment work on a floor shall be completed before proceeding to the next floor.

1.8.2 The Contractor shall cooperate in the coordination and scheduling of acoustical work to avoid delays in job progress.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

2.1.1 The sprayed acoustical material shall be manufactured under the CAFCO® or ISOLATEK® brand name by authorized producers. When determining whether acoustical insulation is required, the material shall be CAFCO SOUND-SHIELD 40 / ISOLATEK SOUND-SHIELD 400.

2.2 MATERIALS

2.2.1 Material shall be CAFCO SOUND-SHIELD 40 / ISOLATEK SOUND-SHIELD 40 applied to conform to the drawings, specifications and quality assurance performance minimums.

2.2.2 Color shall be white or grey or finish as selected by the architect, engineer or building owner.

2.2.3 Texture shall be a standard spray-applied or a semi-smooth troweled finish as selected by the architect, engineer or building owner.

2.2.4 Thickness shall be as specified.

2.2.5 Potable water shall be used for the application of sprayed acoustical material.

PART 3 - EXECUTION

3.1 PREPARATION

3.1.1 Examine all substrates and conditions where the acoustical treatment is to be applied.

3.1.2 All surfaces to receive acoustical treatment shall be free of oil, grease, loose mill scale, dirt, paint, linseed oil or other foreign materials which could impair the adhesion of the sprayed material.

3.1.3 Clips, hangers, supports, sleeves and other attachments to the substrate are to be placed by others prior to the application of sprayed acoustical material.

3.1.4 The installation of ducts, piping, conduit or other suspended equipment shall not take place until the application of sprayed acoustical material is complete in an area.

3.1.5 The sprayed acoustical material shall only be applied to substrates which have been approved and/or tested by the sprayed acoustical material manufacturer.

3.1.6 Do not proceed until the referenced substrate(s) and conditions are acceptable.

3.1.7 Prepare the substrate by filling voids, cracks and/or offsets. Remove projections that result in telegraphing through the finish.

3.1.8 Prime substrate with CAFCO BOND-SEAL (ISOLATEK Type E83) or manufacturer-approved bonding agent.

3.1.9 Do not apply acoustical insulation material when material temperature is below 44°F (7°C) or substrate temperature is below 40°F (5°C).

3.1.10 Mask all adjoining surfaces in order to minimize damage from overspray.

3.1.11 Ventilation must not be less than four (4) complete air exchanges per hour.

3.1.12 Provide tarp(s) or temporary enclosures as necessary to confirm proper application.

3.1.13 Perform all patching and/or repairs of acoustical treatment as needed.

3.2 APPLICATION

3.2.1 Equipment, mixing and application shall be in accordance with the manufacturer’s written application instructions.

3.2.2 The application of the sprayed acoustical material shall not commence until certification has been received by the General Contractor that submittals to receive the sprayed acoustical treatment have been inspected by the applicator and are acceptable to receive the material.

3.2.3 All unsuitable substrates must be identified and made known to the General Contractor and corrected prior to the application of the sprayed acoustical material.

3.2.4 Install to thickness specified or thickness required to achieve desired NRC.

3.2.5 sprayed acoustical material shall be applied to an overall nominal thickness not to exceed 1 1/8” (-7.9 mm). Individual build-up coats shall not exceed 1/4” (6.5 mm) and shall be allowed to dry 12 to 24 hours prior to applying additional thickness of material.

3.2.6 Proper temperature and ventilation shall be maintained as specified in Sections 3.1.1.2 and 3.1.2.2.

3.2.7 Provide masking, drop cloths or other suitable coverings to prevent overspray from coming into contact with surfaces not intended to receive sprayed acoustical material.

3.2.8 Protect finished walls, windows, doors and trim with plastic film secured with moisture resistant tape. Protect all floors with plastic film, or other suitable drop cloths.

3.2.9 The application of sprayed acoustical insulation to the underside of roof deck shall not commence until the roofing is completely installed and tight, all penetrations are complete, all mechanical units have been placed, and after construction roof traffic has ceased.

3.2.10 The sprayed acoustical material shall not be directly applied to cellular or fluted steel decking or to any painted surfaces.

3.2.11 The application of the sprayed acoustical material to any smooth, dense surface requires the application of an adhesive prior to the application of the material. The adhesive shall be mixed in accordance with the manufacturer’s written instructions.

3.2.12 Ensure that the texture and finish are as per the approved control sample.

3.3 REPAIRING AND CLEANING

3.3.1 All patching of and repair of damaged sprayed acoustical material shall be performed under this section and paid for by the trade responsible for the damage.

3.3.2 After the completion of the work in this section, equipment shall be removed and all surfaces not to be sprayed shall be cleaned to the extent previously agreed to by the contractor and General Contractor.

Product Availability

Isolatek International provides passive fireproofing materials under the CAFCO® and FENDOLITE® trademarks throughout the Americas and under the ISOLATEK® trademark throughout the world.