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DIVISION: 07—THERMAL AND MOISTURE PROTECTION
Section: 07310—Shingles

REPORT HOLDER:

CHEMCO INC.
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EVALUATION SUBJECT:

FTX, CEDARPLUS AND CHEMCO FIRE-RETARDANT-TREATED WOOD SHAKES AND SHINGLES

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2003 *International Building Code*® (IBC)
- 2003 *International Residential Code*® (IRC)
- 1997 *Uniform Building Code*™ (UBC)

Properties evaluated:

- Roof covering
- Fire classification

2.0 USES

The fire-retardant-treated wood shake and shingle roof coverings are for use where Class A, B or C wood roof coverings are permitted.

3.0 DESCRIPTION

The fire-retardant-treated wood shakes and shingles are produced from No. 1 grade western red cedar shakes complying with IBC Section 1507.9.5, IRC Section R905.8.5 or UBC Section 1507.12, or No. 1 western red cedar shingles complying with IBC Section 1507.8.4, IRC Section R905.7.4 or UBC Section 1507.13. The shakes and shingles, having a maximum moisture content of 25 percent, are pressure-treated by Chemco Inc. with proprietary fire-retardant chemicals. Treated products are identified as "Class B" or "Class C." The "Class B" treated shakes and shingles have higher levels of chemical retention than the "Class C" treated shakes and shingles. Fire-retardant-treated starter course materials are supplied by Chemco Inc. and are produced from No. 2 grade taper sawn shakes or No. 2 grade shingles complying with the previously referenced code sections, and are also available in "Class B" and "Class C." Products are sold under the trade names FTX, CEDARPLUS and Chemco.

4.0 INSTALLATION

4.1 General:

The wood shakes and shingles shall be installed on spaced or solid sheathing complying with the applicable code. The wood shakes shall be installed in accordance with IBC Section 1507.9, IRC Section R905.8 or UBC Section 1507.12. The wood shingles shall be installed in accordance with IBC Section 1507.8, IRC Section 905.7 or UBC Section 1507.13. Fasteners shall be hot-dipped galvanized or stainless steel. The wood shakes shall be installed on roofs with a minimum slope of 4:12 (33%), while wood shingles may be installed on roofs with a minimum slope of 3:12 (25%).

Weather exposure of the hip and ridge shakes or shingles shall not exceed those exposures permitted for the field of the roof.

Starter courses at the eave shall be doubled, with the first course being full-size treated shakes or shingles or 15-inch (381 mm) treated starter-course shakes or shingles, supplied by Chemco Inc. Fifteen-inch (381 mm) or 18-inch (457 mm) treated shakes or shingles may be used for the final course at the ridge.

4.2 Class A Roof Covering:

Products labeled as "Class B" shakes or shingles shall be installed in accordance with Section 4.1 of this report, over spaced or solid sheathing covered either with one layer of 1/4-inch-thick (6.4 mm) Dens-Deck® Roof Board, manufactured by Georgia Pacific Corporation, or with one layer of mineral-surfaced cap sheet complying with ASTM D 3909. Where underlayment is required, the underlayment shall be installed over the Dens-Deck® board or mineral-surfaced cap sheet. Fastener length for the shakes or shingles shall be increased for the thickness of the Dens-Deck board or cap sheet. The Dens-Deck boards shall be fastened to spaced or solid sheathing using a minimum of four fasteners per board to avoid panel shifting prior to installation of the shakes or shingles. The mineral-surfaced cap sheet shall be installed with 2-inch (51 mm) overlaps on the sides and ends, and attached with a sufficient number of fasteners to hold the sheet in place prior to installation of the shakes.

4.3 Class B Roof Covering:

Products labeled as "Class B" shakes or shingles shall be installed in accordance with Section 4.1 of this report, except that for shake installation a 36-inch-wide (914 mm), Type II underlayment, complying with ASTM D 226, shall be installed under the 15- or 18-inch-long (381 or 457 mm) starter course at the eave line.

4.4 Class C Roof Covering:

Products labeled as "Class C" shakes or shingles shall be installed as described in Section 4.3 of this report for the Class B roof covering.

5.0 CONDITIONS OF USE

The FTX, CEDARPLUS and Chemco fire-retardant-treated shakes and shingles described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 The shakes and shingles are treated, identified and installed in accordance with this report.
- 5.2 The use of the Class B and C shakes and shingles shall be limited to use on roofs where the respective classification is permitted, except that the Class B shakes and shingles are permitted to be used on roofs required to have a Class A roof covering where they are installed as part of the assembly described in Section 4.2 of this report.
- 5.3 The shakes and shingles are pressure-treated by Chemco Inc. in Ferndale, Washington, under a quality control program with inspections by Fire Tech Services, Inc. (AA-641).

6.0 EVIDENCE SUBMITTED

- 6.1 Data in accordance with the ICC-ES Evaluation Guideline for Classified Wood Roof Systems (EG107), dated September 2004.

- 6.2 Treater's published installation instructions.

- 6.3 A quality control manual.

7.0 IDENTIFICATION

Bundles of treated wood shakes and shingles shall bear a label noting the shingle or shake grading agency name and compliance with the grading standards noted in the applicable code. An additional label, affixed to each bundle, shall bear the treater's name (Chemco Inc.), the product name, the name of the inspection agency (Fire Tech Services, Inc.), the fire classification and the evaluation report number (ESR-1410). Labels for "Class B" shakes shall be printed with red ink and labels for "Class C" shakes shall be printed with blue ink. See Figure 1 of this report for product treatment labels.

Starter-course shingles and shakes shall be identified with a label bearing the treater's name (Chemco Inc.), the product name (Starter-Course), the name of the inspection agency (Fire Tech Services, Inc.), the fire classification, the evaluation report number (ESR-1410) and the words "To be used as starter course only." Labels for "Class B" starter course materials shall be printed with orange ink and labels for "Class C" starter course materials shall be printed with purple ink. See Figure 2 of this report for starter-course product treatment labels.



FIGURE 1—PRODUCT TREATMENT LABELS

 <p>Class C Fire Retardant ICC-ES ESR - 1410 FIRE TECH SERVICES INC., ISSAQUAH, WA Q.C. INSPECTION AGENCY AA - 641 LISTING NO. 1000C MUST BE APPLIED IN ACCORDANCE WITH APPLICATION INSTRUCTIONS INCLUDED WITH THIS ROOFING</p> <p>Treated by  4191 Grandview Rd. Ferndale, WA 98248 • (360) 366-3500</p>		<p>LEGAL FOR SALE AND USE IN CALIFORNIA Complies with weathering requirements of State of California Health and Safety Code 13132.7(j) and ICC ES EG107 Passed the 10 year natural weather test (Report no. FTT 21060-3) Listed with California State Fire Marshal (Listing no. 04150-1450:100)</p> <p>Check with Local Building Official for any additional requirements or restrictions</p>
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 <p>Class B Fire Retardant ICC-ES ESR - 1410 FIRE TECH SERVICES INC., ISSAQUAH, WA Q.C. INSPECTION AGENCY AA - 641 LISTING NO. 501B MUST BE APPLIED IN ACCORDANCE WITH APPLICATION INSTRUCTIONS INCLUDED WITH THIS ROOFING</p> <p>Treated by  4191 Grandview Rd. Ferndale, WA 98248 • (360) 366-3500</p>		<p>LEGAL FOR SALE AND USE IN CALIFORNIA Complies with weathering requirements of State of California Health and Safety Code 13132.7(j) and ICC ES EG107 Passed the 10 year natural weather test (Report no. FTT 21080-3) Listed with California State Fire Marshal (Listing no. 04150-1450:100)</p> <p>Check with Local Building Official for any additional requirements or restrictions</p>
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 <p>Class C Fire Retardant ICC-ES ESR - 1410 FIRE TECH SERVICES INC., ISSAQUAH, WA Q.C. INSPECTION AGENCY AA - 641 LISTING NO. 601C MUST BE APPLIED IN ACCORDANCE WITH APPLICATION INSTRUCTIONS INCLUDED WITH THIS ROOFING</p> <p>Treated by  4191 Grandview Rd. Ferndale, WA 98248 • (360) 366-3500</p>		<p>LEGAL FOR SALE AND USE IN CALIFORNIA Complies with weathering requirements of State of California Health and Safety Code 13132.7(j) and ICC ES EG107 Passed the 10 year natural weather test (Report no. FTT 21060-3) Listed with California State Fire Marshal (Listing no. 04150-1450:100)</p> <p>Check with Local Building Official for any additional requirements or restrictions</p>
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FIGURE 1—PRODUCT TREATMENT LABELS (Continued)

TO BE USED AS STARTER COURSE ONLY	
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">STARTER COURSE</p> <div style="text-align: center;">  <p>PRESSURE TREATED SHAKES AND SHINGLES</p> <p>CHEMCO 4191 Grandview Rd. Ferndale, WA 98248 • (360)-366-3500</p> </div>	<p style="writing-mode: vertical-rl;">STARTER COURSE</p> <p>Class B Fire Retardant ICC-ES ESR - 1410 FIRE TECH SERVICES INC., ISSAQUAH, WA Q.C. INSPECTION AGENCY AA - 641 LISTING NO. 1100B MUST BE APPLIED IN ACCORDANCE WITH APPLICATION INSTRUCTIONS INCLUDED WITH THIS ROOFING</p>

FIGURE 2—STARTER-COURSE PRODUCT TREATMENT LABEL