

Shingles

Eastern White

untreated or treated Cedar for roofing and cladding





Eastern white Cedar shingles

The best natural and man-made slates the world has to offer are available from Cembrit Ltd.

Cembrit Ltd are members of the Cembrit Holding A/S Group of Denmark, one of Europe's major building material producers with over 80 years experience in the manufacture of fibre reinforced cement products for the roofing and cladding industry.

Using skills built up over 80 years, Cembrit Ltd select natural slate from Spain, Canada, Brazil, China and India. From UK quarries, Cembrit Ltd offer Welsh and Westmorland slates. A range of recommended accessories is also available. Cembrit Ltd import highly durable Cedar shingles from Canada, where they have been used as an exterior building material for centuries. After being cut from the block of Cedar each shingle is trimmed to create square corners and graded according to visual features. Timber off-cuts are converted into mulch which is used by gardeners and landscape architects.

Its naturally occurring preservatives make Eastern White Cedar resistant to fungal, insect and moisture decay which can be enhanced by extra chemical treatment.

Environment

Cedar logs are harvested from renewable well managed Canadian forests, which may allow re-harvesting in as few as 50 years.

Colours

Installed as pale brown (untreated), or green (treated), Eastern White Cedar will weather to a silver grey. Once dried (5-7 months after installation), shingles can be stained or painted.

Appearance

Eastern white Cedar shingles are delivered in bundles comprising approximately 2.3m². The bundles contain varying widths of wedged shaped shingles which are either pale brown (untreated) or green (treated). After installation both versions will weather to a silver grey.



Description

Eastern White Cedar has a fine even grain, low density and light weight making it easy to work. The wood has a characteristic pleasing spicy aroma. Cedar shingles are used on domestic dwellings and public buildings. They are ideal for chalets, sheds, summerhouses, animal shelters and mobile homes as well as conventional dwellings.

Grading

Eastern White Cedar Shingles are produced in three grades, A, B & C.

A (Blue Label) is knot free, paler in shade and homogeneous. B (Red Label) is similar to A but may contain knots in the top unexposed area of the shingle. C (Black Label) may contain visible sound knots, is a darker shade and more varied in appearance. Cembrit Ltd. only offer A Grade shingles treated or untreated as A is the only grade suitable for pitched roofing. B and C are only suitable for vertical applications.

Durability

Untreated shingles will have an in-service life of 25-30 years. Paint or stain will add 10 to 15% to service life but must be re-applied every 5-7 years. Factory applied ACQ treatment can add 25-30 years.

Quality assurance

Eastern White Cedar Shingles are manufactured according to CSA Standard 0118.2-2008 for Eastern White Canadian Shingles.

Performance

Eastern White Cedar Shingles are dimensionally stable and can be glued, stained or painted. They are easy to work with hand tools. With a low density of 0.3g/cm³ installed weight is only about 7kg/m². The shingles offer good thermal and acoustic insulation. They can be used on roof slopes as low as 14° in certain conditions.

General design considerations

Eastern White Cedar shingles, correctly installed to BS 5534: 2003 will meet the strength requirements for the imposed and uniformly distributed wind and snow loads etc. Detailed guidance on wind load calculations is given in BS 5534: 2003 and in BS 6399: Part 1: 1996, Part 2: 1997 and Part 3: 1988. In locations where abnormal conditions may be anticipated such as elevated sites, coastal locations, areas of heavy snowfall etc., we recommend that you contact our Technical Department for further advice. Additional information can also be found in BS 8104: 1992.

Shingle Properties

Length	400mm
Width	from 75mm to 300mm in each bundle
Thickness (exposed end)	10mm
Exposed area	100-150mm
Minimum Roof Pitch	14°

Suitability

Grade	Roofs from 14° to 18° pitch	Sheltered Roofs eg sheds or steeper than 18° pitch
Exposed area	Suitable 100mm	Suitable 125mm

Shingle Coverage

Application	Exposed area of shingle	m ² per bundle
Roofs	100mm	1.83m ²
	125mm	2.32m ²



Sitework

Storage and handling

- Shingles should be allowed to condition, with regard to humidity, for 2-3 days on site prior to installation.
- Shingles stored outside may over time depending on exposure grey on the edges but once installed will weather evenly.
- Do not store the bundles directly on the ground; place them on a raised platform.

Working

Eastern white Cedar shingles can be cut with a craft knife.

Underlay

The use of underlay is not generally recommended in normal conditions for conventional "cold" roof constructions. Additional weatherproofing in the form of underlay may be required in specific roof details such as valleys, on low pitches or for roofs in exposed locations.

Fixing

Eastern White Cedar shingles must be laid in accordance with the Code of Practice for Slating and Tiling, BS 5534: 2003. The roof structure should be checked to ensure that it is to a true line and squareness tolerance, and set out to ensure that:

- the minimum cutting of shingles is necessary.
- the long edges of the shingles are parallel to the direction at which the water will run off the roof. In some instances this may result in raking all the eaves and the ridge.
- the horizontal lines of the courses are straight and true (this is best achieved using a chalked line).

Battens

Must be of sufficient thickness to allow nail penetration of 19mm. 50x25mm or 75x25mm are recommended.

The roof should be counter-battened with 50mm counter-battens to allow free flow of air from eaves to ridge.

A second horizontal eaves batten course should be fixed to allow for nailing the shingle with a 40mm overhang.

Batten spacing corresponds with shingle exposure measurement.

Adjust batten spacing within 1-2 courses of ridge so that final course is a full shingle.

Nailing/stapling

Shingles must be twice nailed 20mm from the shingle edge and 40mm above the exposure line. Nails should be driven home so that heads are flush with the surface but not so hard that the heads crush or split the wood.

Staples should have an 11mm crown and a 31mm long x 1.5mm diameter leg, driven so that their crown is aligned parallel to the exposure line i.e. across the grain of the shingle.

Nail Requirements

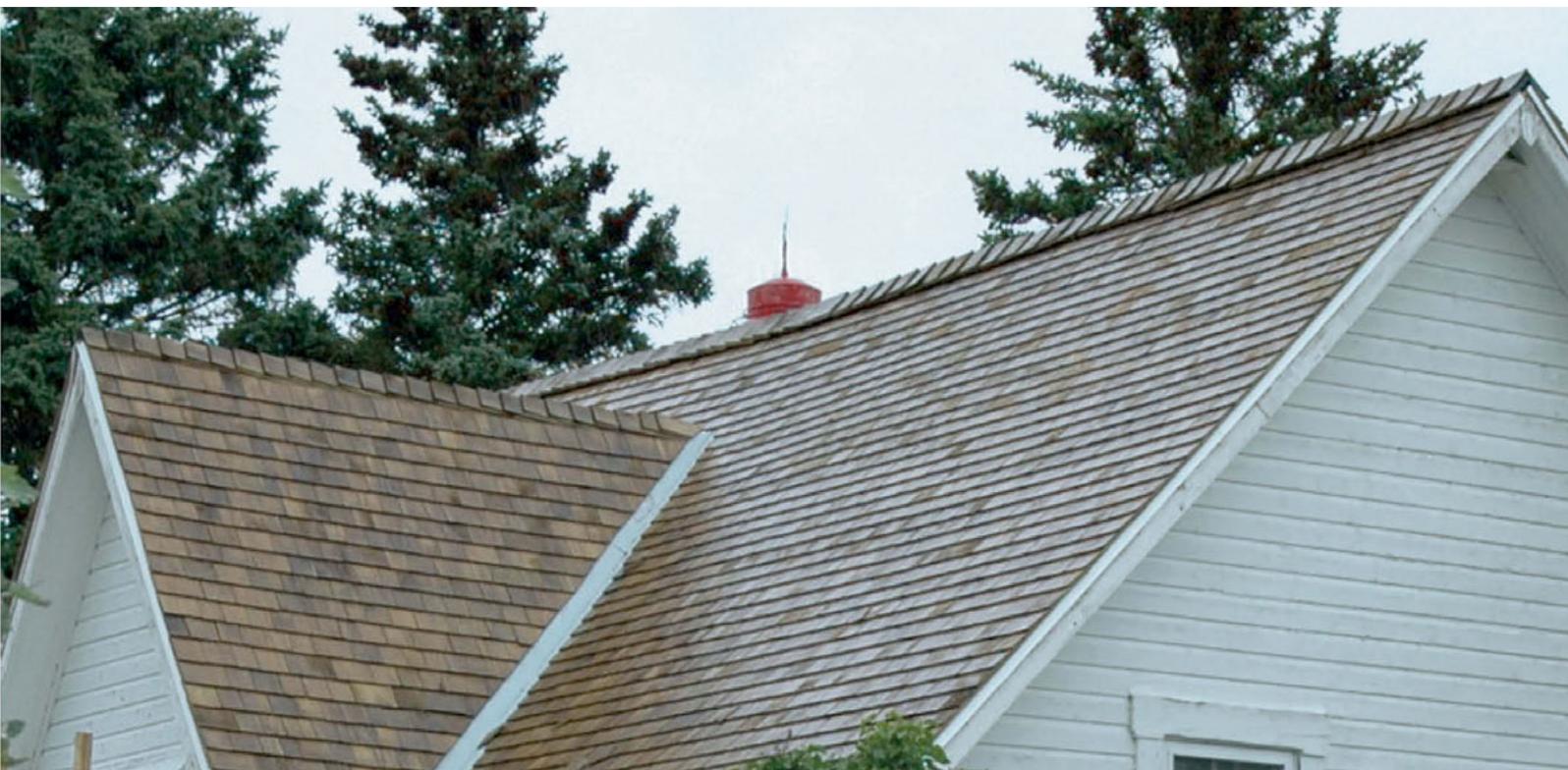
To fix untreated Cedar shingles at 130mm exposure, we recommend the use of 2.1mm diameter, 31mm hot-dipped galvanized, stainless steel or silicon bronze roofing nails. For fixing untreated Cedar shingles at 100mm exposure we recommend 38mm hot dipped galvanized, stainless steel or silicon bronze roofing nails. For ACQ treated shingles, we recommend stainless steel nails. All nails should be ribbed, have a minimum of 4mm head and must be long enough to penetrate a minimum of 19mm into the batten.

Spacing

Shingles should be spaced with a 2mm gap for wet shingles and a 3-4mm gap if shingles are dry but installed in a damp or humid climate. The joint between shingles must not align in the subsequent 2 courses.

Starter Course

Either 1 or 2 under eaves courses may be used. Two under eaves courses are recommended in severe exposure areas. Where one under eaves course is used, the under eaves course should overhang the fascia by 20mm and the top course should overhang the under eaves course by a further 20mm. Where two under eaves courses are used, the first under eaves course should overhang the fascia by 13mm. The second under eaves course should overhang the first under eaves course by a further 13mm and the top course should overhang the second under eaves course another 13mm beyond that.



Hip/Ridge Treatment

The most efficient method for weathering hips and ridges is to use pre-formed ready tapered cappings available exclusively from Cembrit Ltd. They are supplied in bundles of 30, 15 right and 15 left bevel, as shown on the picture bottom left,

On ridges start at both ends and work towards the centre. On hips the lowest capping should overhang the under eaves courses by the same distance as stated in the section "Starter Course" above.



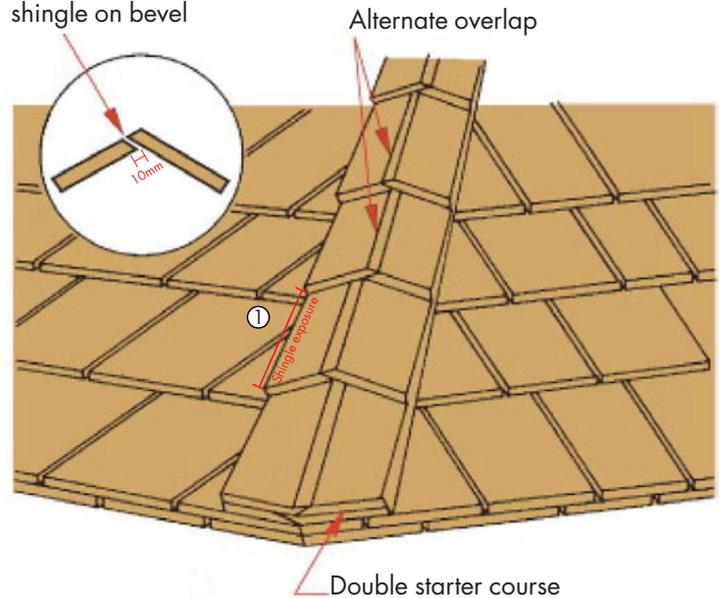
they require no additional fabrication. Also available treated or untreated they weather to the same silver grey shade as shingles.

Install a 200mm waterproof flashing on both sides of the hip/ridge. Preformed 400mm long tapered cedar cappings with a 178mm flat width are fitted over the flashing. Cappings are fixed on each wing a minimum of 40mm from the tapered end and 20mm from the edge. Fixings should be the same as used on the rest of the roof slope. Subsequent cappings overlap the tapered end of the previous capping so that the exposed measurement is the same as the shingles on the rest of the roof slope. Cappings should be laid alternately with the right and left bevelled wing beneath. The image below left shows the right-hand wing bevelled.

Alternatively ridge or hip cappings can be fabricated from shingles as follows; Install flashing 200mm either side of hip/ridge. Select/cut shingles to the same width as the exposure measurement ① (100 or 125mm). Cut back edge of shingle on bevel plus 10mm on longer edge ②. Overlap one shingle onto the bevel on the other. Alternate overlap on succeeding courses. The exposed measurement on hips should be as the rest of the roof. On ridges, start at both ends and work towards the centre of the ridge.



② Cut back edge of shingle on bevel

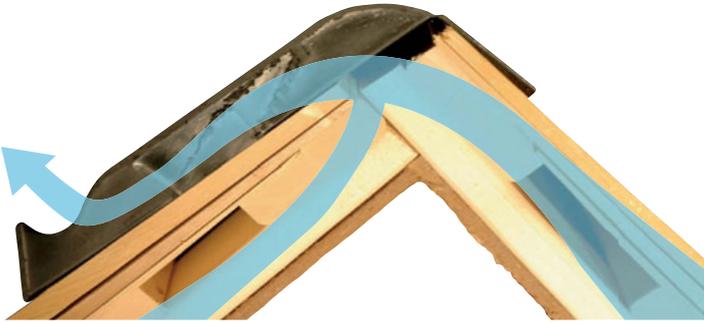


Ventilation

Please note: Pre-formed cedar cappings are not compatible with the "Evolution" ridge ventilator.

The roof space and/or batten cavity must be ventilated in accordance with the latest edition of BS 5250: 2002. Particular attention should be given to the need for adequate ventilation where the insulation follows the rafter line. Cembrit Ltd offer the "Evolution" ridge ventilator specially designed for use with Cedar shingles.

Ridge ventilation can be achieved using the "Evolution" under ridge ventilator which provides 19,000mm² of free air space per linear metre. The polypropylene unit ventilates both roof slopes, through a baffle opening under the ridge capping on only one of the slopes.



Choose the roof slope which will receive the open or baffle side (long side when viewed from end) of the vent unit. This will usually be the least conspicuous slope.

A 20mm opening should be left/cut, in the top course of shingles and ridge flashing, on the slope which will receive the open side of the ventilator (see below), to allow a free flow of air. The opening should be a minimum of 500mm from the verge or 100mm inside the wall line, whichever is greater.



The ventilator is fixed only on the baffle opening side, through the "nailing band" indicated on the "Evolution" ventilator, at least 3 times per length. The fixings must penetrate at least 19mm into the batten. Note ridge flashing is not shown on the photograph below.



If it is desired that the tail of the shingles laid horizontally to form the ridge (see Hip /Ridge Treatment) are not to be exposed, the head (thin) end can be tapered 30mm along a 150mm length.

The 2 photographs below show the open (baffle) and closed roof slopes with tapered ridge shingles.



Typical specification

Roof to be covered with Eastern white Cedar shingles, length 400mm width 75 - 300mm, either treated or untreated, laid to a minimum exposed area ofmm. Ridges and hips to be covered with alternately bevelled cappings.

Supply

Cembrit Ltd's Eastern white Cedar shingles are supplied directly to approved accounts, roofing contractors and builders merchants. Prices are available on request from Cembrit Ltd.



The information contained in this publication and otherwise supplied to users of the company's products is based on the company's general experience, best knowledge and belief. However, because of factors beyond the company's knowledge and control, which can affect the use of the products, no warranty is given or implied with respect to such information.

The company's policy is one of continuous improvement. Cembrit Limited therefore reserves the right to alter specifications at any time and without notice.

As with all natural materials, colours and textures of shingles may vary according to light and weather conditions. It is advisable to ask for samples of shingles prior to specification and purchase.

Owing to this and limitations of the printing process, colours of shingles in this brochure may only be taken as indicative.

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