

RIBBON SLATE

Ribbon slate is the name given to slate that has a distinct band of contrasting material running through it. The composition of the ribbon is similar to the surrounding material, but with an excess of Magnesium and Calcium Carbonates, a sedimentary layer of the original bedding. It is more susceptible to weathering and has a high rate of water absorption. This is most commonly found in Penn Black slate, quarried from the Lehigh valley in Pennsylvania.

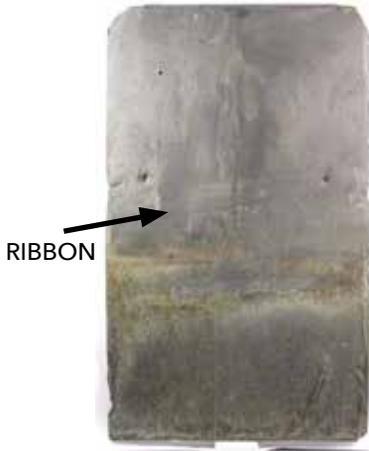
It is not to be confused with Chapman slate, colloquially referred to as Ribbon Slate and quarried from the same area, or Strata slate from Vermont. Both Chapman and Strata have striations across the slate, but these are largely quartz and carbonaceous deposits, as hard or harder materials than the slate itself.

Theoretically, during the quarrying process, sections of the slate bed displaying ribbons are cut out and thrown on the rubbish pile. However, when this produces an egregious amount of waste they are used to produce a second-tier quality of slate. Slate split from a block are holed and trimmed in such a manner that the ribbon occurs on the top end of the slate, thus hidden from view once they are installed on a roof.

In the *Technology of Slate* (Bulletin 218, Dept. of the Interior, 1922), famed geologist Oliver Bowles declared that the ribbons were of no consequence to the longevity of the slate, merely recommending they should be trimmed as described above. I suspect this was a paid event, since protected or not by the next course of slate, the freeze-thaw cycle is still in effect. A good Penn Black slate roof may have a life-expectancy of eighty years, given the right roof-pitch and weather exposure, but the ribbons are more likely to disintegrate well in advance.

The ribbon may appear in one of three places: a) above the nail holes, b) between the nail holes and c) beneath the nail holes.

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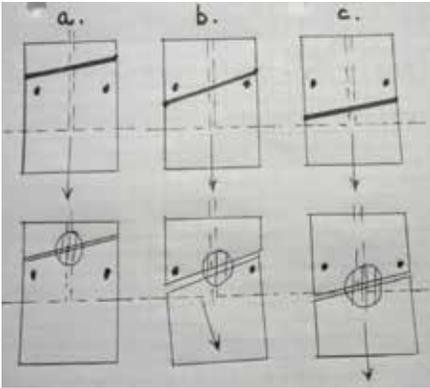
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CHAPMAN SLATE



STRATA SLATE



Once it deteriorates the ribbon leaves a gap through which water can penetrate.

a. There is no movement of the exposed slate when the ribbon is above the nail holes. If the ribbon is beneath the head-lap, however, a leak will occur as shown. These leaks are the hardest to locate.

b. A ribbon between the nail holes may cause the slate to skew to the side but the exposed section is still held in place by one nail. Again a leak will occur.



c. Once the ribbon disintegrates below the nail holes, the lower half of the slate will work loose and the largest area will be exposed to leaking.

For the homeowner and slater alike, this is a very frustrating situation.

The homeowner regards

a roof with a handful of breakages that appears an easy repair. The slater, with a little investigation, discovers the roof is made up of ribbon slate. Once the ribbons have disintegrated and slate are shedding, one can be assured that hundreds of slate in the roof are on the point of shedding. The slightest impact will precipitate breakage and a ten slate repair rapidly becomes a twenty or thirty slate repair. More importantly, while work performed and money spent may correct specific leaks, in the larger picture both are losing propositions. At this point it is often the underlayment paper alone that protects the home interior from water damage, and unfortunately the only solution is to replace the roof. Ribbon slate was always a low quality product and using them a bad idea. Finally it is catching up with us.