

# THE NATURE OF SLATE

## ORIGIN AND COMPOSITION

Slate is a homogenous, fine-grained rock which is opaque and tough. It can be readily split into thin, flat sheets.

Its origins lie in complex clayey sediments, generally made of silicon and aluminium, in which a more or less profound metamorphosis has taken place. It is made up, therefore of the original sedimentary material plus new, diagenic formations such as quartz, clayey minerals, sericite, illite, chlorite, sedimentary muscovite, feldspar, calcite, pyrites and carbonaceous substances which are rarely of macroscopic size. If it contains visible neo-formations of muscovite it is known as phyllite. It can sometimes contain tourmaline, zircon, apatite and other substances. It is made up mainly of clayey minerals and laminar mica, which give it a smooth schistose structure with exfoliation in fine sheets. This makes clayey slate and phyllite highly suitable materials for roofing slates.

The fineness of the grain and high content of carbonaceous materials give slate colours ranging from dark, bluish grey to black, though it can be green or even pink.

If the dominant macroscopic materials are quartz and mica it is called micacite. This variety cannot be used for roofing. In general if its schistosity runs in more than one direction slute can break into non laminar fragments and cannot therefore be used for roofing.

Roofing grade slate meets all standard requirements for roofing materials for buildings.

