

SECTION 147 – CHALK

3118. Chalk varies considerably in both hardness and porosity. Except in surface layers subject to evaporation, its moisture content is always close to the saturation value, which varies from 5 percent in the hardest chalk to about 30 percent in the softest types.

Chalk does not swell or shrink appreciably as its moisture content varies. It can be crushed and compacted.

3119. Chalk must never be used if frost action is likely, unless it is placed below frost penetration level.

3120. In the absence of frost, chalk provides a very stable subgrade material, both in its undisturbed state and when properly compacted.



Figure 31-5: Chalk

3121. When used as fill material or in a base full scale compaction trials should be carried out to determine the best size of crushed material, thickness of layer, and number of passes by the available roller to achieve the required density. As a guide, a 10-ton smooth-wheel roller, compacting in layers 6 to 9 ins thick, with a minimum lump size of 6 ins produces good results. Spreading by dozer is recommended, as crushing and vibration are beneficial.

3122. Really hard chalk can be used as concrete aggregate, if not exposed to frost.