Characteristics about Gypsum Plaster

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Coefficient of Expansion

Gypsum Plaster has another property which is advantageous; it has a very low coefficient of expansion. This simply means that it does not expand very much when it undergoes its crystallization into a solid form. For most craft purposes, therefore, it is considered one of the most dimensionally stable materials we can find; on the other hand, it does expand, minimal as that may be. In fact, one of the first lessons a gypsum plaster model-maker learns is that every plaster cast involving close tolerances must take this expansion into account. So the dimensional stability of ***gypsum plaster*** can be said to be excellent, relatively speaking. Since we know that it is a homogenous material, we can not only predict that the plaster will expand, we can depend on its percentage of expansion to remain constant. Thus we can plan around the expansion once its extent has been determined.

Other Characteristics

Compared to other craft materials, gypsum plaster ranks as one of the least expensive, thus making for s financially reasonable learning process; we need not fret over unavoidable material wastage. Also, a large percentage of the ***gypsum plaster*** used in the various steps is discarded, and since it cannot be reclaimed, we are fortunate that this material is so relatively available and inexpensive. Even though plaster offers all the advantages of low cost, homogeneity, and predictability, there are still two schools of thought regarding its use.

One school holds that plaster is, generally speaking, plaster of Paris and that it is a messy, almost uncontrollable but necessary evil which accompanies the art of sculpting. The other holds that it is a useful material in its own right and that it warrants specific study so that the craftsman may handle plaster in a much more satisfactory and assured way. With the latter view in mind, we must point out that, while all ***gypsum plaster*** has the same basic characteristics previously described, there are distinct types and grades of plaster, each differing in certain additional physical properties. These properties include setting time, hardness, strength, water required, workability, fineness, and surface characteristics.