TECHNICAL ADVICE

The Use of Lime Putty Bedding & Pointing Mortars

TGN4 RJ2.03

Non-hydraulic lime putty mortars are soft, porous and permeable. These are the mortars used to build most traditional buildings and are therefore normally the appropriate materials for the repair of these older buildings.

When durability of a non-hydraulic mortar is a concern (because of the exposure of the site for example), pozzolans can be added immediately prior to use. Pozzolans, both natural and manufactured, are materials used extensively by the Romans that react with lime producing a weak hydraulic set.

Modern Natural Hydraulic Limes are increasingly used for the repair of traditional buildings but these produce stronger, less porous and less permeable mortars than almost all traditional lime mortars.

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Lime putty mortars are supplied ready-mixed and in a ready-for-use consistency, but stiffen after periods of storage. Workability can be restored by re-mixing in conventional mortar mixer or by whisking. Avoid the addition of water, as this will increase the likelihood of shrinkage.

Do not gauge lime mortars with cement, and seek advice from our Technical Dept if gauging with hydraulic lime is proposed. Gauging with a pozzolanic material is normally acceptable if durability or strength is a concern in the particular application or location. (seek technical advice)

Thoroughly pre-moisten substrate and/or building materials to reduce suction.

Do not build faster than the slow setting mortar will allow. 'Tend' the mortar during curing by mist-spraying and compressing back any shrinkage cracks until the mortar has "turned" and shrinkage ceased. Pointing mortars are not placed and finished in the same operation. Place the mortar, leaving it proud, tend and check for shrinkage and compress as necessary, and finish the joint later that day or even the morning of the next day (depending on circumstances). Note that lime mortars form a weak bond with building materials, and therefore good building practice, in particular "bonding" of brickwork and stonework is essential.

Clean off lime stains immediately with clean water. Citric or distilled acetic acid, diluted with clean water, is sometimes necessary.

Lime putty mortars must be stored in a frost-free environment, and recently placed lime mortars must be protected from frost and rain for a prolonged period, as they are vulnerable for significantly longer than cement mortars as they set more slowly.

Lime mortars must be protected from drying too quickly in warm, sunny or windy weather by periodically mist-spraying with water and covering with wet hessian and/or polythene sheeting.