

UKU hydraulic plasters are 100% natural. Inspired by old traditions, we have developed a plaster system suitable for use on various substrates whose properties and moisture regimes require a mixture of hydraulic properties (for example, natural stone foundation/plinths). The plaster system consists of three layers: the adhesive layer, the filling layer, and the finishing layer. Each layer can also be used separately for different purposes.

Properties

NHL plaster offers similar water vapor permeability properties as other air-lime plasters, but are stronger. They can be used for plastering using spraying and hand-applied techniques and require less aftercare than regular air-lime plasters. Plastering with hydraulic lime plaster usually consists of three layers. This guide is based on plasters made with a moderately hydraulic lime (NHL 3.5) and different sands selected according to a unique sieve curve. Lime plasters are carbonized (strengthened) by reabsorbing carbon dioxide from the air. Their drying and absorption process is inherently slower than gypsum plasters, etc., so the lime carbonation process should not be rushed, allowing 3-5 days per layer to carbonize, depending on the system layer used.

Substrate

Plastered substrates are usually made of brick or natural stone. The substrate must be stable, load-bearing, dry, absorbent, have excellent adhesion, and be free of dust, paints, and lubricants (oils, greases, etc.). When plastering wooden surfaces (logs, boards, smooth-faced chipboard, etc.), we recommend using reed mats or reed boards, wood fiberboard, or a corkboard for insulation. In the second layer, we recommend using a reinforcement mesh with at least 10x10 mm hole size, with an overlap of 7-10 cm, for reinforcing the plaster.

The walls can be very uneven - that is why it is customary to have different pre-treatments that need to be dealt with before plastering. Deep holes, wide joints, or pockets should be pre-filled. The aim of substrate preparation should be to achieve a smoother and more adhesive surface. The quality of the preparatory work is crucial for the quality of the whole work. Absorbency is the primary means of bonding between the first layer, the wall, and all subsequent layers, although physical adhesion is also essential.

Adhesion mix

NHL 3.5 adhesion mix. Fraction 0-4mm.

The first layer's purpose is to create a strong adhesion between the substrate and the subsequent layers. The NHL bonding layer mixture is the richest in its lime content, so the layer thickness should not exceed 5-6 mm. The first layer can be applied with a spray, brush, or broom. It is essential that the surface remains as rough as possible. The surface must not remain smooth (troweled). Before applying the next layer, the first layer should be dried light (minimum 2-5 days). The NHL bonding layer can also be used, for example, as an adhesive layer for clay plaster and other UKU plasters on natural stone substrates.

Base coat

NHL 3.5 base coat. Fraction 0-4mm.

The purpose of the filling layer is to fill and level the surface to the desired result. The filling layer fills the surface irregularities. Not to be applied thicker than 10-15 mm. The filling layer can be applied with a sprayer as well as with hand tool techniques. In the case of very uneven surfaces, spot repairs are made with the mixture, and after they have dried (3-5 days), the entire surface can be leveled with a uniform layer and reinforced if necessary. A minimum of 10x10mm hole size mesh must be used for reinforcement. The freshly plastered surface is compacted and leveled with a float. Both wood and plastic/cork floats can be used. After compacting the surface, horizontal lines must be drawn on the surface with a plaster comb to ensure the next layer's best adhesion. When the desired result is achieved, the surface is left to carbonize for 3-5 days.

The NHL base coat can also be used for masonry and grouting of natural stone and brick or other building blocks.

Finish

NHL 3.5 finish. Fraction 0-1mm.

The purpose of the finishing layer is, as the name implies, finishing. Its properties are with finer sand, which ensures a more even and dense layer for the protection of the entire plaster system and a more aesthetic appearance. The finishing layer can be applied with a sprayer as well as with hand tool techniques. The thickness of the layer should not exceed 3 mm. Various tools can be used for finishing, e.g., Rubber, wood, plastic, cork, sponge floats. Different techniques can also be used according to the desired result.

The finishing layer should be covered with lime paint afterward, which provides an opportunity to color the surface to the desired result.

The product description lists the possible uses of the material and gives recommendations for working. The manufacturer has tested the material and ensures its quality, but cannot guarantee that it is used in the proper manner. Hence, the user is not released from liability. The particular conditions and surfaces need to be taken into account for each object.