

Injection Grouting

INJECTION - PURE LIME

PUMP

NHL5	1bag + 10.5 gallons (40 liters) of water	Capacity: 35 ft ³ /h (1.1 m ³ x h)
NHL 3.5	1bag + 10.5 gallons (40 liters) of water	Pressure: 45 psi (3.1 bar max.)
NHL 2	1bag + 13 gallons (50 liters) of water	

To these mixes an addition of casein (See Resources) can be made (1% of weight of the lime) to increase fluidity if so required. If casein is added the water addition can be reduced between 25% and 50%. Obviously NHL 2 mixes are more fluid than NHL 3.5 or 5.

Use a non-cavitating whisk (1500/2000 revs per minute) to ensure total homogenization.

GRAVITY FILL MORTAR.

Sand: fine #150 – 80 (01/02max)

WATER ADDITION

NHL 5 - 1bag + 10.5 gallons (40 lt. of sand) (55kg. approx)	Enough to obtain a paste
NHL 3.5 - 1bag + 10.5 gallons (40 lt. of sand) (55kg. approx)	with the required fluidity.
NHL 2 - 1bag + 13 gallons (50 lt. of sand) (70kg. “ ”)	Much less water is required if casein is added.

Casein addition is possible (see above).

General

Where open joints in the masonry show cavities, they should be marked as reference points. Point up open joints in masonry before grouting begins. Allow grout to settle and top up as necessary. Leave to cure for up to 3 or 4 weeks depending on the lime grout used before removing small areas of pointing to check the cavities are completely filled. If grouting by gravity only, weep holes may be required to check the grout distribution.

The addition of casein will increase the compressive strength and the set while improving flow and reducing the water demand. Shrinkage, already low in NHL products and mortars, will be further reduced due to the lower water content of the grout.

This document is a guide only and is not intended to be a specification. Its purpose is to provide the reader with helpful information that may assist in determining the correct choice of materials, methods of application and determine the best working practice. The guidelines refer to our experience with St. Astier NHL binders and some recommendations might not be applicable to other products.