

deGruchy's



LIME WORKS.usTM

Makers of



Brand
Mortar & Plaster
For Historic Restoration
and Green Building

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Comparison Blends NHL vs Cement

Comparison Blends NHL vs. Cement		Ecologic TM NHL 1:2.5	Type N Cement 1:1:6	Type O Cement 1:2:9
Water content		7.76 oz	200 g	200 g
Water to binder ratio		1.07	.72	.65
Penetration	INCH	23/64	9/32	9/32
Set (beginning)	H	6	1.3	1
Bulk density (no curing)	lb/cu.ft.	134	131	131
Air content	%	0	0	0
Elasticity Moduli	Mpa			
28 days		9000	16200	15595
6 months		13505	22010	19300
12 months		13620	22010	19700
24 months		13785	22150	19650
Flexural strength	PSI			
7 days		83	297	239
28 days		69.6	283	225
6 months		246.5	304	217
12 months		297.25	319	246
24 months		290	319	254
Compressive strength	PSI			
7 days		83	728	719
28 days		213	1116	834
6 months		774	1174	834
12 months		855	1261	877
24 months		870	1232	863
Permeability vapor exchange	gr of air x m² x hour x mmHg	.65	.23	.25
Shrinkage at 28 days	mm.m	.44	.63	.42
Water absorbtion	L.h.m²	7.3	.23	.25
Capillarity	g.min	4.7	1.08	6.86

Suitably replace Type N or O mortars by accepting the limitation that Natural Hydraulic Lime mortars set slower. Standard Type N and O mortars meet their criteria at various intervals such as 28 day strength. Brick and stone walls built with Natural Hydraulic Lime mortars can continue to be built upon with no delay in continuing the work on each successive day for standard walls up to 12" thick. The final strengths of NHL mortars will be reached over time and the mortar will adequately provide weight distribution for the veneers until final strengths are achieved.

Check with us regarding your application. We can create similar Type S and Type M mortars for below grade building and where increased strength is needed with the addition of special non-Portland cement pozzolans so that green technology is adhered to throughout the entire selection of mortars for building sustainable buildings.

The relationship between the elasticity moduli and flexural strength noted above is very important. The higher the number reaches for the elasticity moduli the more brittle the mortar is. The importance of having more elasticity in mortar its ability to deflect and recover with expansion and contraction. Ordinary Portland Cement has the same expansion and contraction coefficient as that of steel.

The relationship between the number for measuring final flexural strength of mortar and that number measuring the final compressive strength of mortar is also very important. NHL mortars have a smaller gap between the final performance numbers for flexural strength and compressive strengths in comparison to Ordinary Portland cement mixes. This is beneficial to creating durable mortar.