

## COMMON PLASTER/STUCCO MIXES (Most Common)

### NHL Plaster – 1:2, 1:2.5 (7/8")

**Scratch (3/8"):** 1 NHL 3.5 : 2 SAND 5.46 lbs per sq. yard OR 10.07 yards/55 lbs bag

**Brown (3/8"):** 1 NHL 3.5 : 2.5 SAND 4.2 lbs per sq. yard OR 13.10 yards/55 lbs bag

**Scratch & Brown** 9.66 lbs NHL 3.5 sq. yard OR 5.7 yards/55 lbs bag  
**5.70 Yards for 1 bag of NHL 3.5**

**Finish (1/8"):** 1 NHL 2 : 2 SAND 1.64 lbs per sq. yard OR 33.54 yards/55 lbs bag  
**33.54 Yards for 1 bag of NHL 2**

**OR:**

**Premix:** EcoMortar F (1/8") 10.52 lbs per sq. yard OR 7.32 yards/77 lbs bag  
**7.32 Yards for 1 bag of EcoMortar F**

### For Straw Bale – 1:2, 1:2.5 (1 – 3/8")

**Scratch: (3/4")** 1 NHL 3.5 : 2 SAND 10.92 lbs/ sq. yd OR 5.03 yards/55 lbs bag

**Brown: (1/2")** 1 NHL 3.5 : 2.5 SAND 5.6 lbs/ sq. yard OR 9.82 yards/55 lbs bag

**Scratch & Brown** 16.52 lbs/ sq. yard OR 3.3 yards/55lbs bag  
**3.3 Yards for 1 bag of NHL 3.5**

**Finish: (1/8")** 1 NHL 2 : 2 SAND 1.64 lbs/sq. yard OR 33.54 yards/55 lbs bag  
**33.54 Yards for 1 bag of NHL 2**

**OR:**

**Premix:** EcoMortar F (1/8") 10.52 lbs per sq. yard OR 7.32 yards/77 lbs bag  
**7.32 Yards for 1 bag of EcoMortar F**

**Density:** NHL 3.5 is 40.6 lbs/ft<sup>3</sup> or 1 bag is 1.35 ft<sup>3</sup> = 0.05 cubic yards  
NHL 2 is 31.2 lbs/ft<sup>3</sup> or 1 bag is 1.73 ft<sup>3</sup> = 0.064 cubic yards

## COMMON PLASTER/STUCCO MIXES (stronger mix)

### NHL Plaster – 1:1.5, 1:2 (7/8")

**Scratch (3/8"):** 1 NHL 3.5 : 1.5 SAND      7.2 lbs per sq. yard OR 7.64 yards/55 lbs bag

**Brown (3/8"):** 1 NHL 3.5 : 2 SAND      5.46 lbs per sq. yard OR 10.07 yards/55 lbs bag

**Scratch & Brown**                              12.66 lbs NHL 3.5 sq. yard OR 4.34 yards/55 lbs bag  
**4.34 Yards for 1 bag of NHL 3.5**

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**Finish (1/8"):** 1 NHL 2 : 2 SAND              1.64 lbs per sq. yard OR 33.54 yards/55 lbs bag  
**33.54 Yards for 1 bag of NHL 2**

**OR:**

**Premix:** EcoMortar F (1/8")                      10.52 lbs per sq. yard OR 7.32 yards/77 lbs bag  
**7.32 Yards for 1 bag of EcoMortar F**

### For Straw Bale – 1:1.5, 1:2 (1 – 3/8")

**Scratch: (3/4")** 1 NHL 3.5 : 1.5 SAND              14.4 lbs/ sq. yd OR 3.82 yards/55 lbs bag

**Brown: (1/2")** 1 NHL 3.5 : 2 SAND              7.28 lbs./ sq. yard OR 7.55 yards/55 lbs bag

**Scratch & Brown**                              21.68 lbs./ sq. yard OR 2.53yards/55 lbs bag  
**2.53 Yards for 1 bag of NHL 3.5**

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**Finish: (1/8")** 1 NHL 2 : 2 SAND              1.64 lbs./sq. yard OR 33.54 yards/55 lbs bag  
**33.54 Yards for 1 bag of NHL 2**

**OR:**

**Premix:** EcoMortar F (1/8")                      10.52 lbs per sq. yard OR 7.32 yards/77 lbs bag  
**7.32 Yards for 1 bag of EcoMortar F**

**Density:** NHL 3.5 is 40.6 lbs/ft<sup>3</sup> or 1 bag is 1.35 ft<sup>3</sup> = 0.05 cubic yards  
NHL 2 is 31.2 lbs/ft<sup>3</sup> or 1 bag is 1.73 ft<sup>3</sup> = 0.064 cubic yards

## PLASTER/STUCCO MIXES FOR HARSH CLIMATES

### NHL 5 Plaster – 1:2, 1:2.5 (7/8" - 1")

**Scratch (3/8"):** 1 NHL 5 : 2 SAND      6.12 lbs per sq. yard OR 10.78 yards/66 lbs bag

**Brown (3/8"):** 1 NHL 5 : 2.5 SAND      4.92 lbs per sq. yard OR 13.41 yards/66 lbs bag

**Scratch & Brown**      11.04 lbs NHL 5 per sq. yard OR 5.97 yards/66 lbs bag  
**5.97 Yards for 1 bag of NHL 5**

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**Finish (1/4"):** 1 NHL 3.5 : 2 SAND      3.64 lbs per sq. yard OR 15.10 yards/55 lbs bag  
**15.10 Yards for 1 bag of NHL 3.5**

**OR:**

**Premix:** EcoMortar F-3.5 (1/8")      10.52 lbs per sq. yard OR 7.32 yards/77 lbs bag  
**7.32 Yards for 1 bag of EcoMortar F**

### For Straw Bale – 1:2, 1:2.5 (1 - 3/8" or 1 - 1/2")

**Scratch: (3/4")** 1 NHL 5 : 2 SAND      12.24 lbs/ sq. yd OR 5.39 yards/66 lbs bag

**Brown: (1/2")** 1 NHL 5 : 2.5 SAND      6.56 lbs/ sq. yard OR 10.06 yards/66 lbs bag

**Scratch & Brown**      18.8 lbs/ sq. yard OR 3.51 yards/66 lbs bag  
**3.51 Yards for 1 bag of NHL 5**

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**Finish (1/4"):** 1 NHL 3.5 : 2 SAND      3.64 lbs per sq. yard OR 15.10 yards/55lbs bag  
**15.10 Yards for 1 bag of NHL 3.5**

**OR:**

**Premix:** EcoMortar F (1/8")      10.52 lbs per sq. yard OR 7.32 yards/77 lbs bag  
**7.32 Yards for 1 bag of EcoMortar F**

**Density:** NHL 5 is 43.7 lbs/ft<sup>3</sup> or 1 bag is 1.51 ft<sup>3</sup> = 0.056 cubic yards  
NHL 3.5 is 40.6 lbs/ft<sup>3</sup> or 1 bag is 1.35 ft<sup>3</sup> = 0.05 cubic yards

## Consumption Charts - European (Metric)

**NHL products** are bought by weight but mixed by volume. Their low density in comparison with other binders means that with the same weight one would produce up to three times the amount of mortar.

### Binder consumption for 1m<sup>3</sup> of mortar: volume /weight comparison

Binder	Average Density (Kg/m <sup>3</sup> )	Volumetric Mixes - Kg/m <sup>3</sup>		
		1:2	1:2.5	1:3
NHL 5	666	333	266	222
NHL 3.5	610	305	244	203
NHL 2	560	280	224	186
Lime Putty	1350	675	540	450
OPC / w/Cement	1450	725	580	483

**Mortar required per 100 square meters of brickwork with 10mm joints.  
Brick sizes have been taken to be 215mm x 103mm x 65mm. Mix ratio 1:2.5.**

Type of wall	Wall thickness	No. frog m <sup>3</sup>	Single frog m <sup>3</sup>	Amount of NHLs in Kg (No frog/single frog)		
				NHL 5	NHL 3.5	NHL 2
Half brick	103mm	1.38	2.26	364/569	336/551	309/506
Cavity	255mm	2.76	4.52	728/1193	673/1102	618/1013
One brick solid	215mm	3.54	5.38	934/1399	863/1293	793/1187
one & half brick solid	328mm	5.69	8.34	1502/2201	1388/2034	1274/1868

**St Astier NHL binders required (in kg approx.)  
per mm. per m2 of render / plaster using well graded sand 3mm: 0.075  
(1 liter of sand per m2 per mm of thickness).**

Mix ratio	NHL 2	NHL 3.5	NHL 5
1:1.5	0.37	0.41	0.47
1:2	0.28	0.31	0.35
1:2.5	0.22	0.24	0.28
1:3	0.19	0.20	0.23

## Consumption Charts (USA)

**NHL products** are bought by weight but mixed by volume. Their low density in comparison with other binders means that with the same weight one would produce up to three times the amount of mortar.

### Binder consumption for 1yard<sup>3</sup> of mortar: volume /weight comparison

Binder	Average	Volumetric Mixes - lbs/yard <sup>3</sup>		
	Density (lbs/yard <sup>3</sup> )	1:2	1:2.5	1:3
NHL 5	1,123	561	448	374
NHL 3.5	1,028	514	411	342
NHL 2	944	472	378	314
Lime Putty	2276	1138	910	759
OPC/W.Cement	2444	1222	978	814

**Mortar required per 100 square yards of brickwork with 3/8" joints.  
Brick sizes have been taken to be 8-1/2" x 4" x 2-1/2". Mix ratio 1:2.5.**

Type of wall	Wall thickness	No. frog yard <sup>3</sup>	Single frog yard <sup>3</sup>	Amount of NHLs in lbs (No frog/single frog)		
				NHL 5	NHL 3.5	NHL 2
Half brick	4 inch	1.52	2.48	674/1054	622/1020	572/937
Cavity	10 inch	3.03	4.47	1348/2210	1246/2041	1145/1876
One brick solid	8-1/2 inch	3.89	5.91	1730/2591	1598/2395	1469/2198
one & half brick solid	13 inch	6.25	9.16	2782/4077	2571/3767	2360/3460

**St Astier NHL binders required (in lbs approx.)  
per 1/16" per square yard of plaster using well graded sand #6:#200  
(0.35 gal. of sand per square yard per 1/16" of thickness).**

Mix ratio	NHL 2	NHL 3.5	NHL 5
1:1.5	1.08	1.20	1.37
1:2	0.82	0.91	1.02
1:2.5	0.64	0.70	0.82
1:3	0.56	0.58	0.67