
SUB HEAD : 3.0
MORTARS

BCD Analysis of Rates 2022

BUILDING WORK

3.0 Mortars

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
2103	Lime mortar 1:1.1 (1 time putty: 1 Surkhi: 1 coarse sand) Details of cost for 1 cum					
	Materials: (0.475 cum lime putty)=3.01 q of unslaked lime	quintal	3.010	300.000	(0773)	903.000
	Surkhi	cum	0.475	1557.000	(1182)	739.575
	Coarse sand	cum	0.475	175.800	(0982)	83.51
	Carriage of unslaked lime-(3.01 q unslaked lime =0.39 cum)	cum	0.390	163.930	(2208)	63.933
	Carriage of surkhi	cum	0.475	163.930	(2266)	77.867
	Carriage of coarses sand (lead of 29 l., i.e. 18 miles)	cum	475.000	0.000	(2203)	0.000
	Labour:					1867.879
	(a) For slaking lime.making lime putty .grinding,measuring, carying,depositing and mixing •					
	Beldar	per day	0.900	306.000	(0114)	275.400 (A)
	Bhishti	per day	0.450	332.000	(0101)	149.400 (A)
	Average cost of running and upkeep of mortar mill	1 time	10.350	2.120	(9999)	21.942
	Sundries	1 time	5.200	2.120	(9999)	11.024
						457.766
	Cost of 1 cum					2325.65
	Add labour cess @ 1%					23.26
	Rate including labour cess					2348.91
				Say Rs.		Rs.2349.00
	Note-Lime putty required is 47.5%					per cum
2144	Lime mortar 1:1:2(1 lime putty: 1 surkhi:2coarse sand)					
	Details of cost for 1 cum					
	Materials:					
	(0.356 cum lime putty=2.25 q of unslaked lim)					
	Unslaked lime	quintal	2.250	300.000	(0773)	675.000
	Surkhi	cum	0.356	1557.000	(1182)	554.292
	Coarse sand	cum	0.712	175.800	(0982)	125.170
	Carriage of unslaked lime- (2.25*0.129=0.29 cum)	cum	0.290	163.930	(2208)	47.540
	Surkhi	cum	0.356	163.930	(2266)	58.359
	Coarse sand	cum	0.712	0.000	(2203)	0.000
	Labour:					
	(Same as 'A' in code No. 2103)	cum	1.000	424.800	(210 3-A)	424.800
	Average cost of running and upkeep of mortar mill	1 time	10.350	2.120	(9999)	21.942
	Sundries	1 time	5.200	2.120	(9999)	11.024
	Cost of 1 cum					1918.126
	Add labour cess @ 1%					19.180
	Rate including labour cess					1937.306
				Say Rs.		Rs.1937.30
2104	Lime mortar 1:2(1 time putty:2 surkhi)					
	Details of cost for 1 cum					
	Materials:					
	(0.475 cum of lime putty=3.01 q of unslaked lime)					
	Unslaked lime	quintal	3.010	300.000	(0773)	903.000
	Carriage of unslaked lime (3.01 q of unslaked lime=0.39 cum)	cum	0.390	163.930	(2208)	63.933
	Surkhi	cum	0.950	1557.000	(1182)	1479.150

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BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
	Carriage of surkhi	cum	0.950	163.930	(2266)	155.734
	Labour:					2601.816
	For slaking lime, making lime putty, grinding, measuring, carrying, depositing and mixing (Same as 'A' in code No. 2103)	cum	1.00	424.80	(2103-A)	424.800
	Average cost of running and upkeep of mortar mill	1 time	10.35	2.12	(9999)	21.942
	Sundries	1 time	5.20	2.12	(9999)	11.024
	Cost of 1 cum					457.766
	Add labour cess @ 1%					3059.582
	Rate including labour cess					30.600
				Say Rs.		3090.182
						per cum
	Note-Lime putty required is 47.5%					
2145	Lime mortar 1:3(1 lime putty:3 surkhi)					
	Details of cost for 1 cum					
	Materials:					
	(0.356 cum lime putty=2.25 q of unslaked lime)					
	Unslaked lime	quintal	2.25	300.00	(0773)	675.000
	Surkhi	cum	1.07	1557.00	(1182)	1662.876
	Carriage:					
	Unslaked lime	cum	0.28	163.93	(2208)	45.900
	Surkhi	cum	1.07	163.93	(2266)	175.077
	Labour:					
	(Same as 'A' in code No. 2103)	cum	1.00	424.80	(2103-A)	424.800
	Average cost of running and upkeep of mortar mill	1 time	10.35	2.12	(9999)	21.942
	Sundries	1 time	5.20	2.12	(9999)	11.024
	Cost of 1 cum					3016.62
	Add labour cess @ 1%					30.17
	Rate including labour cess					3046.79
				Say Rs.		Rs.3046.80
						per cum
2146	Lime mortar 1:3(1 lime putty :3 coarse sand)					
	Details of cost for 1 cum					
	Materials:					
	(0.356 cum lime putty=2.25 q of unslaked lime)					
	Unslaked lime	quintal	2.25	300.00	(0773)	675.000
	Coarse sand	cum	1.07	175.80	(0982)	187.754
	Carriage:					
	Unslaked lime	cum	0.29	163.93	(2208)	47.540
	Coarse sand	cum	1.07	0.00	(2203)	0.000
	Labour:					
	(Same as 'A' in code No. 2103)	cum	1.00	424.80	(2103-A)	424.800
	Average cost of running and upkeep of mortar mill	1 time	10.35	2.12	(9999)	21.942
	Sundries	1 time	5.20	2.12	(9999)	11.024
	Cost of 1 cum					1368.060
	Add labour cess @ 1%					13.68
	Rate including labour cess					1381.74
				Say Rs.		Rs.1381.70
						per cum
2110	Cement Mortar 1:1 (1 cement : 1 fine sand).					
	Details of cost for 1 cum.					
	MATERIAL:					
	(0.7125 cum. of cement = 1.02 tonne)					
	Cement required for cement mortar is 71.25%					
	Portland Cement		1.02	4408.00	(0367)	4496.160
	Carriage of cement		1.02	145.72	(2209)	148.634

BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
	Fine sand (zone IV)					
	Carriage of fine sand (1 part sand)		0.7125	175.80	(0983)	125.258
	parts sand)		0.7125	0.00	(2261)	0.000
	LABOUR:					
	For measuring, carrying, depositing and mixing-					
	Beldar					
	Bhisti		0.75	306.00	(0114)	229.500
	Hire and running charges of mechanical mixer		0.07	332.00	(0101)	23.240
	Sundries		26.9	2.12	(9999)	57.028
	TOTAL		13.52	2.12	(9999)	28.662
	Cost of 1 cum					5108.482
	Add labour cess @ 1%					5108.482
	Rate including labour cess					51.08
						5159.56
				Say Rs.	Rs.5159.60	per cum

2111 Cement mortar 1:2 (1 cement :2 coarse sand)

	Detail of cost for 1 cum					
	Materials:					
	(0.476 cum of cement=0.68 tonne) Cement	tonne	0.68	4408.00	(0367)	2997.440
	Carriage of cement	tonne	0.68	145.72	(2209)	99.090
	Coarse sand	cum	0.95	175.80	(0982)	167.010
	Carriage of coarse sand	cum	0.95	0.00	(2203)	0.000
	Labour:					
	For measuring, carrying, depositing and mixing					
	Beldar	per day	0.75	306.00	(0114)	229.500 A
	Bhishti	per day	0.07	332.00	(0101)	23.240 A
	Hire and running charges of mechanical mixer	1 time	26.91	2.12	(9999)	57.049
	Sundries	1 time	13.52	2.12	(9999)	28.662
	Cost of 1 cum					3601.99
	Add labour cess @ 1%					36.02
	Rate including labour cess					3638.01
				Say Rs.	Rs.3638.00	per cum

Note: Cement required is 47.5%

2112 Cement mortar 1:3(1 cement:3 coarse sand)

	Details of cost for 1 cum					
	Materials: (0.357 cum of cement=0.51 tonne)	tonne	0.51	4408.00	(0367)	2248.080
	Cement					
	Carriage of cement	tonne	0.51	145.72	(2209)	74.317
	Coarse sand	cum	1.07	175.80	(0982)	188.106
	Carriage of coarse sand	cum	1.07	0.00	(2203)	0.000
	Labour:					
	For measuring, carrying, depositing and mixing-					
	(Same as 'A' in code No. 2111)	cum	1.00	252.74	(2111-A)	252.740
	Hire and running charges of mechanical mixer	1 time	26.91	2.12	(9999)	57.049
	Sundries	1 time	13.52	2.12	(9999)	28.662
	Cost of 1 cum					2848.95
	Add labour cess @ 1%					28.49
	Rate including labour cess					2877.44
				Say Rs.	Rs.2877.40	per cum

Note: Cement required is 35.7%

2113 Cement mortar 1:4(1 cement:4 coarse sand)

Details of cost for 1 cum
Materials:



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BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
	(0.268 cum of cement=0.38 tonne)					
	cement	tonne	0.38	4408.00	(0367)	1675.040
	Carriage of cement	tonne	0.38	145.72	(2209)	55.374
	Coarse sand	cum	1.07	175.80	(0982)	188.106
	Carriage of coarse sand	cum	1.07	0.00	(2203)	0.000
	Labour:					
	For measuring, carrying, depositing and mixing (Same as 'A' in code No. 2111)	cum	1.00	252.74	(2111-A)	252.740
	Hire and running Charges of mechanical mixer	1 time	26.91	2.12	(9999)	57.049
	Sundries	1 time	13.52	2.12	(9999)	28.662
	Cost of 1 cum					2256.97
	Add labour cess @ 1%					22.57
	Rate including labour cess					2279.54
				Say Rs.	Rs.2279.50	per cum

Note. White cement required is 47.5%

2114 Cement mortar 1:5(1 cement:5 coarse sand)

Details of cost for 1 cum

Materials:

(0.214 cum of cement=0.31 tonne)

Cement	tonne	0.31	4408.00	(0367)	1366.480
Carriage of cement	tonne	0.31	145.72	(2209)	45.173
Coarse sand	cum	1.07	175.80	(0982)	188.106
Carriage of coarse sand	cum	1.07	0.00	(2203)	0.000

Labour:

For measuring, carrying, depositing and mixing
(Same as 'A' in code No. 2111)

	cum	1.00	252.74	(2111-A)	252.740
Hire and running charges of mechanical mixer	1 time	26.91	2.12	(9999)	57.049
Sundries	1 time	13.52	2.12	(9999)	28.662

Cost of 1 cum

Add labour cess @ 1%

Rate including labour cess

Say Rs. Rs.1957.60 per cum

Note: Cement required is 21.4%

2115 Cement mortar 1:6(1 cement 6 coarse sand)

Details of cost for cum

Materials:

(0.178 cum of cement=0.25 tonne)

Cement	tonne	0.250	4408.000	(0367)	1102.000
Carriage of cement	tonne	0.250	145.720	(2209)	36.430
Coarse sand	cum	1.070	175.800	(0982)	188.106
Carriage of coarse sand	cum	1.070	0.000	(2203)	0.000

Labour:

For measuring, carrying, depositing and mixing
(Same as 'A' in code No. 2111)

	cum	1.000	252.740	(2111-A)	252.740
Hire and running charges of mechanical mixer	1 time	26.91	2.120	(9999)	57.049
Sundries	1 time	13.52	2.120	(9999)	28.662

Cost of 1 cum

Add labour cess @ 1%

Rate including labour cess

Say Rs. Rs.1681.60 per cum

Note: Cement required is 17.8%

BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
2128A	Cement mortar 1:2 (1 cement : 2 marble dust). Details of cost for 1 cum. MATERIAL: 0.475 cum. of cement = 0.68 tonne) Cement required for cement mortar is 47.50%					
	Portland Cement	tonne	0.680	4408.000	(0367)	2997.440
	Carriage of cement	tonne	0.680	145.720	(2209)	99.090
	Marble dust/ powder	cum	0.950	1130.000	(0784)	1073.500
	Carriage of marble dust and/or marble chips	cum	0.950	163.930	(2268)	155.734
	LABOUR: For measuring, carrying, depositing and mixing-					
	Beldar	day	0.750	306.000	114	229.500
	Bhisti	day	0.070	332.000	101	23.240
	Hire and running charges of mechanical mixer	L.S.	26.910	2.120	9999	57.049
	Sundries	L.S.	13.520	2.120	9999	28.662
	Cost of 1 cum					4664.21
	Add labour cess @ 1%					46.64
	Rate including labour cess					4710.85
	Say Rs.			Rs.4710.9		per cum
2128	White cement mortar 1:2(1 White cement :2 marble dust) Details of cost for 1 cum Materials: (0.475 cum of white cement =0.68 tonne) Cement	ton	0.680	11200.000	(0368)	7616.000
	Carriage of white cement	tonne	0.000	145.720	(2209)	0.000
	Marble dust	cum	0.950	1130.000	(0784)	1073.500
	Carriage of marble dust	cum	0.950	163.930	(2268)	155.734
	Labour: For measuring, carrying, depositing and mixing-					
	Unskilled Labour	per day	0.750	306.000	(0114)	229.500
	Bhisti	per dsy	0.070	332.000	(0101)	23.240
	Hire and running chrges of mechanical mixer	1 time	26.910	2.120	(9999)	57.049
	Sundries	1 time	13.520	2.120	(9999)	28.662
	Cost of 1 cum					9183.69
	Add labour cess @ 1%					91.84
	Rate including labour cess					9275.53
	Say Rs.			Rs.9275.5		per cum
	Note:White cement required is 4 7.5%					
2125	Cement lime mortar 1:1:3(1 cement :1 lime putty:3 coarse sand) Details of cost for 1 cum Materials: (0.286 cum of lime putty=1.81 q of unslaked lime) Unslaked lime	quintal	1.810	300.000	(0773)	543.000
	(0.23 cum of unslaked lime=1.81 q) Carriage of unslaked lime	cum	0.230	163.930	(2208)	37.704
	Cement	tonne	0.410	4408.000	(0367)	1807.280
	Carriage of cement	tonne	0.410	145.720	(2209)	59.745
	Coarse sand	cum	0.858	175.800	(0982)	150.836
	Carriage of coarse sand	cum	0.858	0.000	(2203)	0.000
	Labour: For slaking lime, making lime putty, grinding, measuring, carrying, depositing and mixing (Same as 'A' in code No. 2103)	cum	1.000	424.800	(2103-A)	424.800

BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
	Hire and running charges of mechanical mixer	1 time	10.350	2.120	(9999)	21.942
	Average cost of running and upkeep of mortar mill	1 time	10.350	2.120	(9999)	21.942
	Sundries	1 time	5.20	2.12	(9999)	11.024
	Cost of 1 cum					3078.274
	Add labour cess @ 1%					30.78
	Rate including labour cess					3109.05
	Note: Cement required is 28.6%					
			Say Rs.	Rs.3109.10		per cum

2126 Cement lime mortar 1:1:6 (1 cement: 1 lime putty:6 coarse sand)

Details of cost for 1 cum

Materials:

(0.178 cum of cement=0.25 tonne) Cement	tonne	0.25	4408.00	(0367)	1102.000
Carriage of cement	tonne	0.25	145.72	(2209)	36.430
(0.178 cum of lime putty= 1. i . q of unslaked lime)					
Unslaked lime	quintal	1.13	300.00	(0773)	339.000
(0.15 cum of unslaked lime=1.13 q) Carriage of unslaked lime	cum	0.15	163.93	(2208)	24.590
Coarse sand	cum	1.07	175.80	(0982)	188.106
Carriage of coarse sand	cum	1.07	0.00	(2203)	0.000

Labour:

For slaking lime, making lime

putty, grinding, measuring, carrying, depositing and mixing (Same as 'A' in code No. 21 03)	cum	1.00	424.80	(2103-A)	424.800
Hire and running charges of mechanical mixer	1 time	10.35	2.12	(9999)	21.942
Average cost of running and upkeep of mortar mill	1 time	10.35	2.12	(9999)	21.942
Sundries	1 time	5.20	2.12	(9999)	11.024
Cost of 1 cum					2169.83
Add labour cess @ 1%					21.70
Rate including labour cess					2191.53
			Say Rs.	Rs.2191.50	per cum

Note: Cement required is 17.80%