

Ergonomics For General Construction



Musculoskeletal Risks in the General Construction Industry

MATERIAL HANDLING

Handling materials manually is a major part of a construction laborer’s job. Materials that are typically handled include:

- Lumber
- Plywood
- Rebar
- Bricks/blocks
- Mortar
- Rolls of poly and paper (vapor barriers)
- Durawall
- Insulation (batting)
- Mastic (5-gallon buckets)
- Drywall

Wheelbarrows, A-frame carts, and pallet jacks are generally the best ways to move material on a job. For materials that must be moved by hand, adding a handle such as brick tongs, drywall carrying handles, or plywood carriers is helpful. Shoulder pads are useful for carrying materials on the shoulder, and gloves protect the hands.

Often, peer pressure is placed on an individual to carry more than is safe, especially for apprentices. A general rule to follow is that if something weighs more than 50 to 75 pounds, ask for help. Some construction companies have a 50-pound carrying limit that is enforced. This has reduced injury rates significantly.

When lifting and carrying materials, keep them close to your body (between knees and at shoulder height). The size and bulk of the load are important factors to consider as well as how often you have to lift or carry. Balance the load on the center of gravity. Some union contracts state that if you are lifting a 12-inch block over 5 feet, it

becomes a two-person lift. Other contract provisions state the maximum weight that can be placed in a wheelbarrow is 300 pounds, the height limit of palletized materials is 5’6”, and pallets that weigh more than 1,500 pounds requires two mason tenders to move them.

WEIGHTS OF DRYWALL BOARDS- 1/2" THICKNESS (1.7 LB/SQ. FT.)

LENGTH	3 FOOT WIDE	4 FOOT WIDE	4 1/2 FOOT WIDE
8 FOOT	40.8 LB	54.4 LB	61.2 LB
10 FOOT	51 LB	68 LB	76.5 LB
12 FOOT	61.2 LB	81.6 LB	102 LB
14 FOOT	71.4 LB	95.2 LB	107.1 LB

WEIGHTS OF DRYWALL BOARDS- 5/8" THICKNESS (2.2 LB/SQ.FT.)

LENGTH	3 FOOT WIDE	4 FOOT WIDE	4 1/2 FOOT WIDE
8 FOOT	52.8 LB	70.4 LB	79.2 LB
10 FOOT	66 LB	88 LB	99 LB
12 FOOT	79.2 LB	105.6 LB	118.8 LB
14 FOOT	92.4 LB	123.2 LB	138.6 LB

WEIGHTS OF DRYWALL BOARDS- 1" THICKNESS (4 LB/SQ.FT.)

LENGTH	2 FOOT WIDE	3 FOOT WIDE	4 FOOT WIDE
8 FOOT	64 LB	96 LB	128 LB
10 FOOT	80 LB	120 LB	160 LB
12 FOOT	96 LB	144 LB	192 LB
14 FOOT	112 LB	168 LB	224 LB