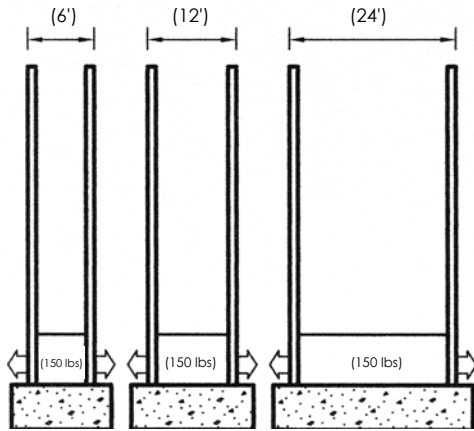


## GENERAL & TECH INFO

### Points To Remember

Fluid or plastic concrete exerts the same side pressure on forms regardless of their width.

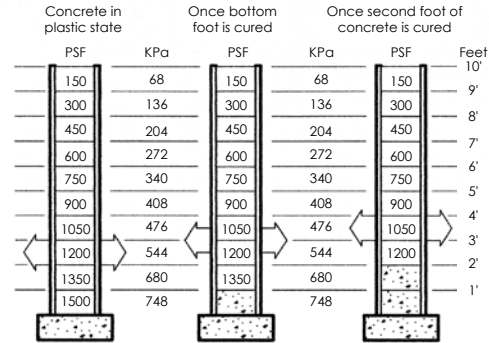


Plastic concrete exerts the same pressure on forms regardless of their width.

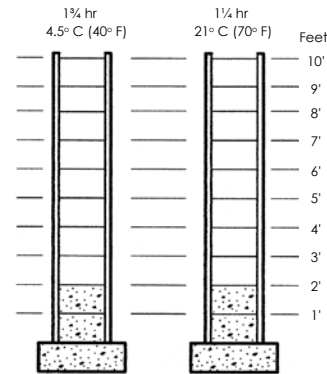
As you add more fluid or plastic concrete to forms, the pressure will build up toward the bottom at about the rate of 150 pounds per foot of depth. This will be true as long as all concrete remains in a plastic state.

**Example:** Eight feet of fluid or plastic concrete bears on the bottom foot of forms with a pressure of 8x150 pounds or 1200 pounds per square foot.

Feet	PSF	KPa
10'	150	68
9'	300	136
8'	450	204
7'	600	272
6'	750	340
5'	900	408
4'	1050	476
3'	1200	544
2'	1350	680
1'	1500	748



As concrete hardens, lateral pressure on forms decreases.



Concrete cures and gains strength faster with an increase in temperature.

Example: At 21° C (70° F), concrete sets in approximately 1 1/4 hour. At 4.5° C (40° F) concrete will set up in about 1 1/4 hour.

### Slab Formwork Design Loads

The loadings used in the designs of slab formwork consists of a dead load and a live load. The weight of the formwork plus the concrete is considered dead load while the live load is made up of the with of workers, equipment, material storage and other like items which is supported by the formwork. The tables below tabulate design loads based on the concrete weight for the thickness indicated, and includes 10 pounds per square foot for the weight of forms and a live load of 50 to 75 pounds per square foot as indicated. A live load of 75 pound per square foot is generally used when motorized carts are used to transport concrete during the placing operation.

#### Slab Formwork Design Load for Uniform Slab Thickness

(Includes 50 psf Live Load)

Pounds per Square Foot for Indicated Thickness

2"	4"	6"	8"	10"	12"	14"	16"	18"	20"
100	110	135	160	185	210	235	260	285	310

(Includes 75 psf Live Load)

Pounds per Square Foot for Indicated Thickness

2"	4"	6"	8"	10"	12"	14"	16"	18"	20"
125*	135	160	185	210	235	260	285	310	335

**Note:** Chart is based on a concrete weight of 150 pounds per cubic foot.

\* ACI 347 recommends a minimum 100 psf for form design or 125 psf if motorized carts are used.

For a complete explanation of general objectives in formwork design, planning, materials and accessories, loads and pressures, design tables and much more, it is recommended that a copy of ACI publication SP-4 "Formwork for Concrete" be obtained. The current edition is available from American Concrete Institute, PO Box 9094, Farmington Hills, MI 48333.