

Hot Weather Requirements

- 1. Building Dimensions and Layout:** The length of the walls constructed with CONFORM® will increase in hot weather. The contractor should contact the designer to determine if the field conditions have been incorporated into the dimensioned drawings or production drawings prior to proceeding with the foundation layout or the building construction. Typically, the length of walls increases by 10 mm per 10 metres (0.48" per 40 feet) for each 15°C (27°F) increase in temperature. Refer to Construction Bulletin No. 001, Building Layout and Foundation Dimensions.
- 2. Storage of Material:** When daily temperatures are consistently over 30°C (86°F), the material should be stored in the shade or covered with loose tarps on top that provide shade but do not restrict air flow. Material must not be tightly wrapped or stored in closed containers, since this will increase temperatures and increase deformation of the components. All components must be stored in flat straight piles with continuous support. Components will have a tendency to deform if they are stored with uneven or insufficient support.
- 3. Stacking of Material:** The height that material can be stored in hot climates must be reduced in order to avoid deformation of the components at the bottom of a pile. When daily temperatures are consistently over 30°C (86°F), the maximum recommended height is 1000 mm (3'-4") which is equivalent to 8 rows of boxes or 4 rows of panels P232.
- 4. Concrete Slump:** The concrete placed in walls using CONFORM® should be provided for hot weather in accordance with the requirements of CAN/CSA A23.1 or ACI 318. In order to maintain the workability of the concrete, typically, the concrete slump is increased during hot weather due to the rapid rate of evaporation.
- 5. Rate of Concrete Placement:** The use of higher slump concrete in hot weather means that there is more water in the mixture and the hydraulic pressure from the concrete is increased. The concrete should be placed in lifts of 1.5 m to 2.0 m (5'-0" to 6'-8") and/or placed at a slower rate, in order to minimize the hydraulic pressure. In addition, at each side of doors and openings and in each leg of walls at corners and intersections, the concrete should be placed to half the height and allowed to set prior to filling the walls, full height.
- 6. Additional Bracing:** The higher slump used in hot weather can cause an increase in lateral hydraulic pressures and in turn can cause lateral movements of the walls during concrete placement. Additional bracing is recommended at corners, openings, intersections and other wall locations where the concrete pressure is from one side only.
- 7. Bowing of Component Face:** The higher slump used in hot weather can cause additional bowing of the face of the CONFORM®, especially at box connectors and corner boxes. A reduction in the height of the concrete lifts and/or a slower rate of placement will reduce the bowing and provide a flatter wall surface. In addition, any uncured components or uncured cells that are filled with concrete should be provided with 12 mm (.4725") diameter holes at 333 mm (13") on centre to relieve the hydraulic pressure into the surrounding wall.
- 8. Cooling of Walls:** The inside of the walls should be sprayed with water just prior to placing concrete. This will cool the walls to prevent rapid evaporation of moisture from the concrete and will lubricate the surface of the wall to increase the workability and flow of the concrete in the components.