

## Fire-Rated Composite Slabs



FORMLOK composite slabs may be used to meet hourly fire ratings. The type and thickness of concrete specified will determine whether fireproofing will be required on the underside of the FORMLOK deck. Typically 2½ in. of concrete over the top of the deck is required for fire ratings with fireproofing on the underside of the deck. Refer to the specific UL assembly, or use the fireproofing manufacturer's data to determine fireproofing thickness required to meet a specific hourly rating.

Table 1 summarizes the thickness of concrete required over the top of the FORMLOK deck to achieve restrained unprotected hourly ratings with no fireproofing on the underside of the deck. See specific UL assemblies for unrestrained hourly ratings.

**Table 1: Unprotected Fire Resistance Rating  
Concrete Thickness over FORMLOK Deck**

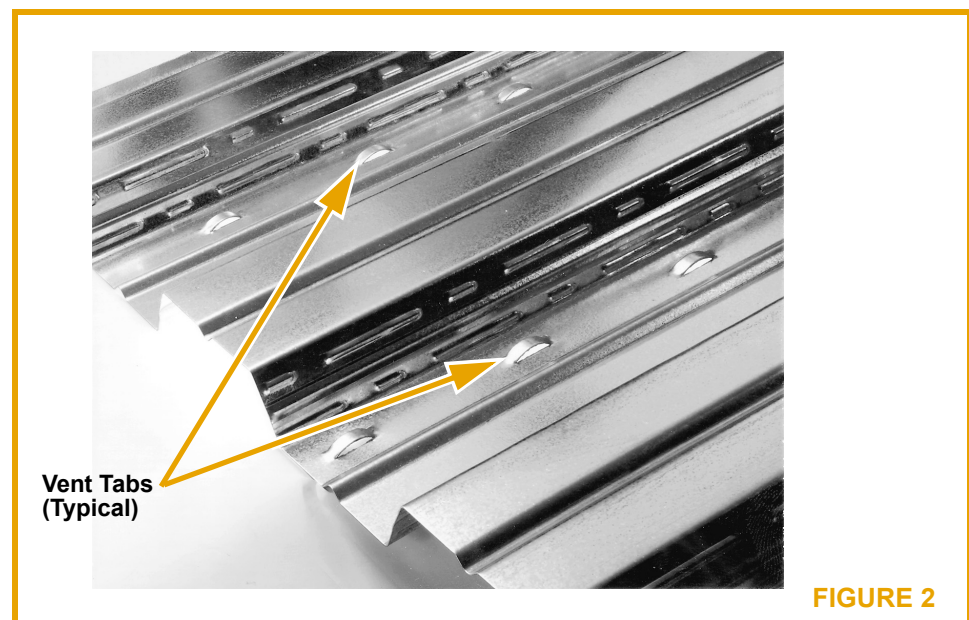
Restrained Assembly Rating	Normal Weight (in.)	Light Weight (in.)
1 Hour	3½	2½
2 Hour	4½	3¼
3 Hour	5¼	4⅝

Refer to Table 9 on pages 32–33 for a listing of UL fire-rated assemblies utilizing FORMLOK profiles. Refer to the particular UL assembly being considered for full details of construction, including specific information about concrete thickness, strength requirements, and span limitations.

## Venting Floor Deck

Factory vent tabs are available as an option for FORMLOK deck as shown in Figure 2. The structural performance and fire rating of the FORMLOK composite slab are not affected by the venting.

The drying performance of concrete cast on steel deck can be expected to be similar to that of a slab cast on grade over a vapor barrier. The nominal venting provided by vent tabs will not significantly affect concrete drying. Vent tabs should only be specified based on the requirements of the materials installed over the slab. Leakage will occur during concrete placement with vented deck.



**FIGURE 2**