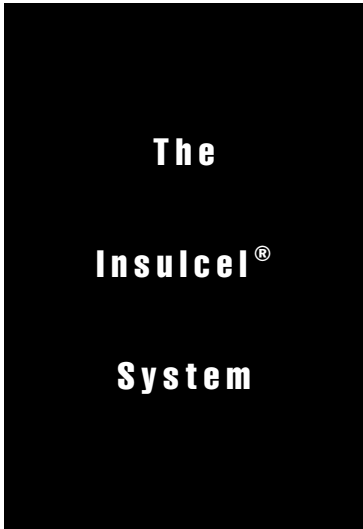


DOWNWARD LOADING PROPERTIES FOR CORRUGATED METAL DESIGNS

Data Sheet SI-910



The composite action of the Insulcel System and galvanized, corrugated metal decking gives the Insulcel system much better downward load carrying capacity than metal deck alone. Results of test programs conducted at independent test laboratories are shown below for three Insulcel designs.

Metal Deck Gauge & Span	Insulcel Insulating Concrete Over Corrugated Metal			Insulcel Insulating Concrete & 2" Insulperm Over Corrugated Metal			Insulcel Insulating Concrete & 4" Insulperm Over Corrugated Metal		
	Live Load for \geq L/240 (psf)	Ultimate Load (psf)	Safety Factor	Live Load for \geq L/240 (psf)	Ultimate Load (psf)	Safety Factor	Live Load for \geq L/240 (psf)	Ultimate Load (psf)	Safety Factor
26 ga. Metal 15/16" Profile On 6'0" O.C. Span	100	220	7.3	155	160	5.3	210	220	7.3

Notes:

1. Details of construction for the three roof decks are:
 - a. Insulcel Lightweight Insulating Concrete over corrugated metal -- 2 inches of Insulcel Lightweight Insulating Concrete is placed over the top of the corrugations of the galvanized metal decking.
 - b. Insulcel Lightweight Insulating Concrete and 2 inches Insulperm over corrugated metal -- Insulcel Lightweight Insulating Concrete slurry coat is used to fill the flutes of the galvanized metal decking and is placed to a depth of 1/8 inch over the top of the metal deck. Insulperm is embedded in this slurry coat while it is still wet, and a final layer of 2 inches of Insulcel Lightweight Insulating Concrete is placed over the Insulperm.
 - c. Insulcel Lightweight Insulating Concrete and 4 inches Insulperm over corrugated metal -- the details of construction are the same as in 1b.
2. Safety factor is based on a design live load of 30 psf.
3. Test results shown are for a two span condition.
4. Welding patterns were conventional with washers.

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