



Construction No. 458 TGKX.458 Roof Deck Constructions

[Page Bottom](#)

Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

Roof Deck Constructions

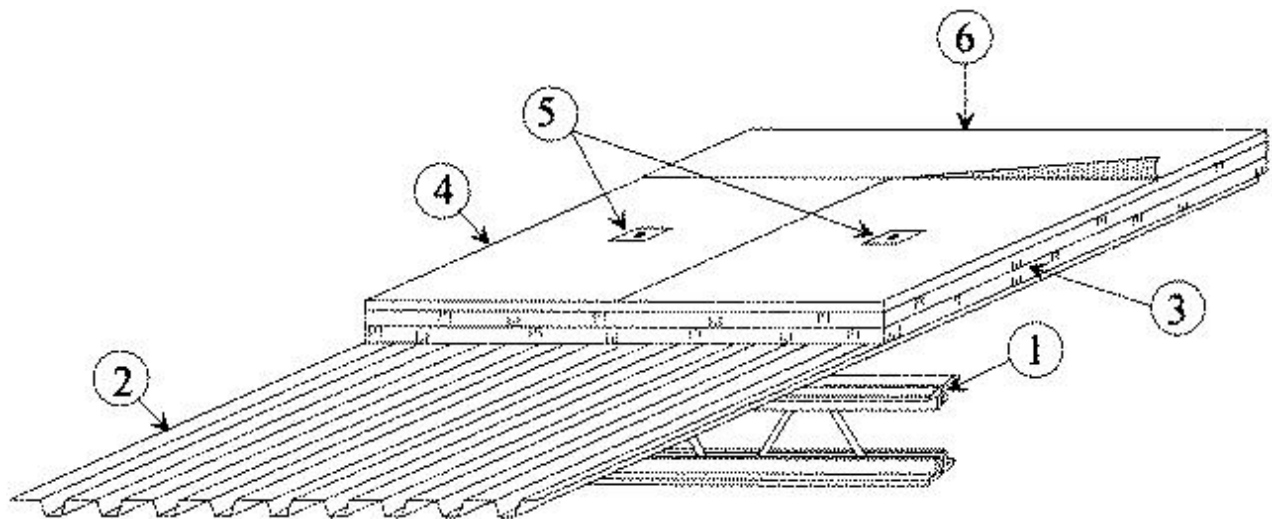
[See General Information for Roof Deck Constructions](#)

Construction No. 458

June 08, 2015

Uplift-Not Investigated

Fire-Classified



1. **Supports** — Structural steel or other materials acceptable to authorities having jurisdiction.
2. **Steel Deck** — No. 22 MSG min, 1-1/2 in. deep unperforated coated steel, fluted on 6 in. centers. Welded or mechanically fastened to supports in accordance with deck manufacturer's recommendations.
3. **Rigid polystyrene insulation**, — EPS, loose laid or mechanically fastened in one or more layers, Classified by UL, under the Roof Deck Construction category "Foamed Plastic" as an alternate, to any Classified polystyrene foamed plastic insulation board (EPS) can be used. See **Foamed Plastic (BRYX)** category in the Building Materials Directory or (TGFU) category in the Roofing Materials and Systems Directory. Total thickness and density of insulation not to exceed an equivalent of 10 in. at 1 PCF density. Example: an equivalent combination would be 8 in. at a 1.25 PCF density.
- 3A. **Building Unit*** — In lieu of Item 3, Rigid Foamed Plastic With Vented Roof Deck — Vented Nail-base roof deck products which are Classified by UL - Roofing Materials and Systems Directory, **Roof Deck Construction, Building Units (TIAR)** intended to provide ventilation between the nailed decking and a foamed plastic insulated steel deck construction. The nail-base deck consists of 7/16-in. thick (min) oriented strand board (OSB) or 15/32-in. thick (min) plywood.

4. **Barrier Board* (Optional)** — A min 3/4 in. perlite, 1/2 in. wood fiber, 1/2 in. gypsum board or G-P Gypsum 1/4 in. DensDeck ® cover board or min. 1/4 in. Owens Corning Specialty & Foam Products "Strataguard", minimum 1/4 in. thick United States Gypsum Co. SECUROCK® Roof Board (Type FRX-G) or minimum 1/4 in thick **SECUROCK® Glass-Mat Roof Board (Type SGMRX)** or min. 1/4 in. thick CertainTeed Gypsum Inc "GlasRoc" or minimum 1/4 in. National Gypsum "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" placed over the insulation. Required when a single ply membrane is mechanically fastened or fully adhered without slip sheet or other cover product over EPS as a Classified roofing system under TGFU.

5. **Fasteners (Optional)** — Fasteners used to attach foamed plastic and cover board to steel deck. Fasteners are self-drilling, self-tapping roof insulation screws with insulation plates.

6. **Roof Covering*** — A max 0.08 in. thick loose laid (ballasted), mechanically fastened or adhered membrane roof covering Classified by UL as **Membrane for Roofing Systems (TGFU)** as described in the Roofing Materials and Systems Directory.

6A. **Metal Roof Deck Panels*** — (Not shown) — In addition to or in lieu of Item 6, the roof covering may consist of a mechanically fastened metal roof deck panel assembly. See **Metal Roof Deck Panels (TJPV)** as described in the Roofing Materials and Systems Directory.

6B. **Roof Covering*** — In lieu of Item 6, a modified bitumen membrane roof covering over Barrier Board (Item 4) Classified as **Membrane for Roofing Systems (TGFU)**. Foamed Plastic insulation (Item 3) limited to 6 in. thickness.

6C. **Roof Covering**** — In lieu of Item 6 and in combination with Item 3A; asphalt shingles, fiber-cement tile and metal (or wood) shingles or shakes; an underlayment (optional) and/or vapor barrier (optional) Classified as **Prepared Roofing Accessories (TGDY)**. Roof covering to be installed as specified by manufacturer.

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2015-06-08

[Questions?](#)

[Print this page](#)

[Terms of Use](#)

[Page Top](#)

© 2015 UL LLC

When the UL Leaf Mark is on the product, or when the word "Environment" is included in the UL Mark, please search the [UL Environment database](#) for additional information regarding this product's certification.

The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL's Follow-Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL's Follow-Up Service. Always look for the Mark on the product.

UL permits the reproduction of the material contained in the Online Certification Directory subject to the following conditions: 1. The Guide Information, Assemblies, Constructions, Designs, Systems, and/or Certifications (files) must be presented in their entirety and in a non-misleading manner, without any manipulation of the data (or drawings). 2. The statement "Reprinted from the Online Certifications Directory with permission from UL" must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "© 2015 UL LLC".