



TC-417 Usage on Soffits and Parking Garage Ceilings

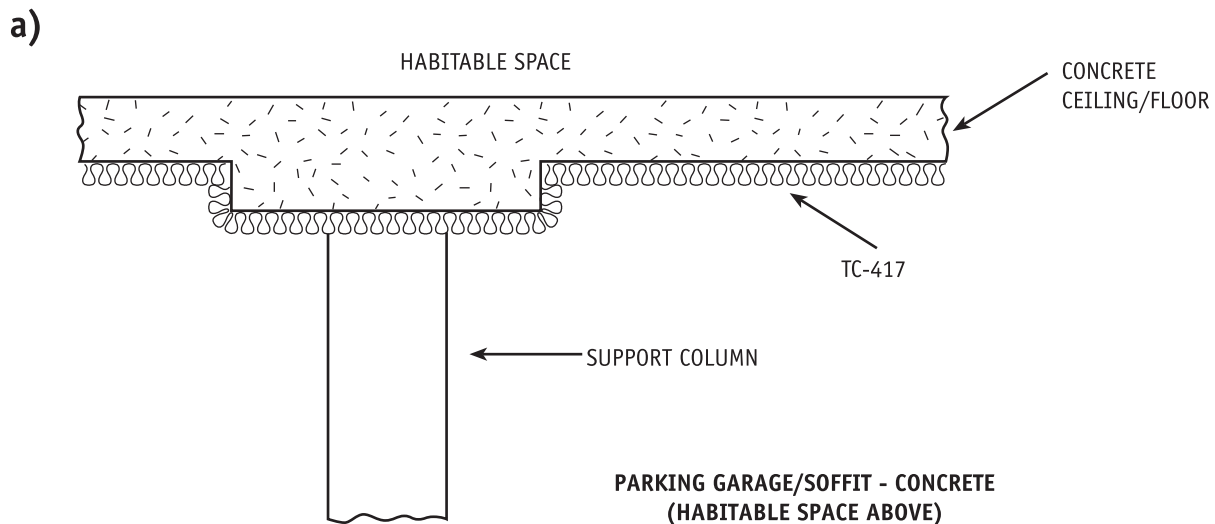
In relatively temperate and somewhat warmer climates, parking garages under habitable space are rarely completely closed in and fully conditioned. They are sometimes devoid of complete exterior walls with pillars being used to support the upper structure, and utilizing grillwork entry gates rather than doors.

Concrete parking garage ceilings/soffits (see diagram a)) provide a strong challenge to the design professional intent on insulating them effectively. Their surface is often penetrated by service pipes and ducts, which run tight, or in close proximity to, the ceiling surface. In addition, they are broken by frequent columns and beams needed to support the building.

Given the foregoing, the most practical method of insulating them is by the use of a high efficiency spray-in-place thermal material. **TC-417** is ideal for the purpose.

When in place it provides a **monolithic** blanket, that is **non-combustible**, has a **Class 1 flame spread rating** and has the highest R (RSI) value (**R = 4.17/inch; RSI = 0.73/25mm**) of the sprayed fibre products. In addition, **TC-417** can be applied to a thickness of 5"/125mm to an horizontal surface producing a **rating > R20/RSI 3.46**.

In fact, **TC-417** works very effectively with any complex substrate.



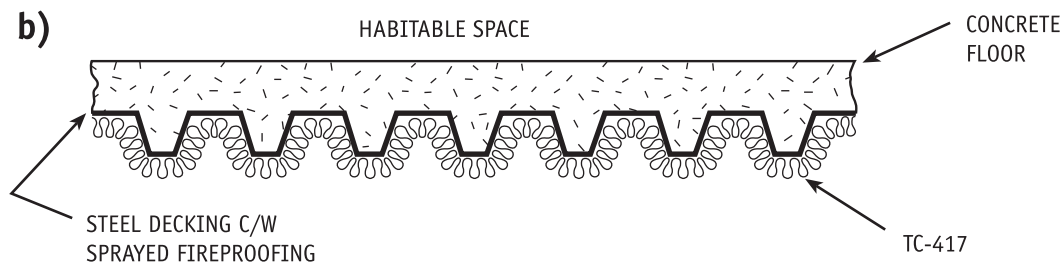
Note: **TC-417** is equally effective when used on waffle ceilings and all pre cast profiles.

Generally speaking, parking garage ceiling/soffits comprised of steel decking with concrete topping produce a greater insulation challenge (diagram b):

- The corrugated profile of the decking provides a difficult surface to cover;
- The underside of the steel decking must be treated with fireproofing to achieve the desired rating. As the deck becomes a 'fire rated' assembly, it cannot, theoretically, be covered by any insulating material that might compromise the rating;

- Addition of fireproofing to the decking does not improve the profile, so it remains virtually impossible to insulate effectively except by use of a spray product.

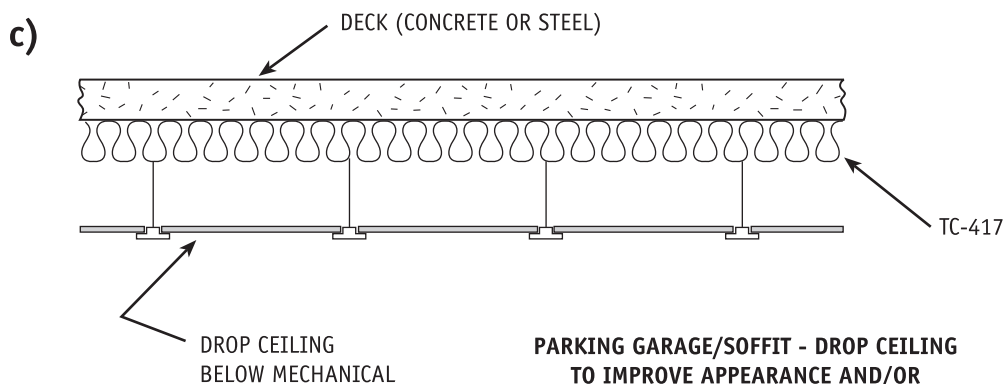
Again, **TC-417** which eliminates voids at the substrate and forms a monolithic, non-combustible installation is the sensible choice.



**PARKING GARAGE/SOFFIT - STEEL - FIRE RATED ASSEMBLY
(HABITABLE SPACE ABOVE)**

In some garage and soffit applications, a drop ceiling may be desirable to protect the piping, ductwork, etc., and insulation from damage, or for esthetic reasons (diagram c).

Provision of a drop ceiling, either permanent or removable, does **not** impair the performance of **TC-417**.



**PARKING GARAGE/SOFFIT - DROP CEILING
TO IMPROVE APPEARANCE AND/OR
PROTECT INSULATION**

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