Recently the UL STP (Standards Technical Panel) 1479 reviewed the UL 2079 test standard for construction joints specifically in regard to joint systems in which the firestop material when installed is not flush with the outer surface of the wall assembly utilizing a gasket type firestop rather than a traditional sealant or mineral wool and spray solution. This situation occurs mainly in head of wall conditions involving gypsum wall assemblies.

A common example is when the SpecSeal® Track Top Gasket (TTG) is applied over the steel top track and covers the legs of the top track. By design the TTG sits behind the inner layer of gypsum to allow 100% movement in both compression and extension and therefore is not flush with the outer wall surface. The thermocouples used to measure temperature on the wall and the joint assembly are applied to the assembly with 2” x 2” thermocouple pads. The previous version of UL 2079 did not allow for any modification of the thermocouple pad to allow it to be installed within the joint and directly against the firestop material (See Fig. 1). As you can see in the diagram the thermocouple measuring the temperature of the joint is installed flush with the outside surface of the wall assembly and not directly in contact with the firestop material.

After investigation the UL STP 1479 committee made the recommendation to modify the UL 2079 test standard 5th edition to allow the thermocouple pad to be altered to fit joint widths that are less than 2” in width and thermocouple placement into the joint directly against the firestop material (see Fig. 2). After extensive testing it was determined that the fire performance of the TTG was unaffected by this new thermocouple placement. Placing the thermocouple into the joint and closer to the fire side of the wall assembly, however, could in some cases affect the temperature rise when a wall assembly has no insulation present within the stud cavity. It is rare to find walls constructed today that do not have either mineral wool or fiberglass batt insulation installed for sound or other project requirements. However, in the situation where a wall is not required to be insulated per project specifications, STI developed a simple and cost effective solution to bring all of our TTG systems into compliance with the new UL 2079 requirements.

Adding a small strip of mineral wool in the cavity at the head of wall eliminates any temperature concerns which originally was the basis for the thermocouple placement investigation. All previous STI joint systems utilizing TTG are in full compliance with the new UL 2079 test standard 5th edition requirements. As a result of the standard change some manufacturers claim their systems did not require any alteration or additional material to comply. This is true in some cases, but those systems do not allow 100% movement under the previous or current UL 2079 thermocouple placement criteria. Movement capability is usually the main factor in deciding to utilize a gasket type material as the firestop solution. Gasket type solutions that do not offer a large percentage of movement typically have no advantage over a traditional mineral wool and sealant/spray solution. Please refer to the UL Fire Resistance Directory or our website at www.stifirestop.com for complete system details and information.