Insulation Insights
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FIRWIN FAQ

Can I touch it? - Insulation surface temperatures

We are often asked how hot the outer surface of an insulation blanket gets, and whether it is touch-safe.

To properly answer this question, it is important to remember that metals conduct heat; fabrics do not. This means that a fabric surface can be "hotter" temperature-wise than a metal surface and still be touch-safe. However, until 1998, there was no formal differentiation made between metal and other types of surfaces. For both, 140ºF [60ºC] was the accepted standard.

The UL2200 Specification for Stationary Engine Generator Assemblies, issued in September 1998, was the first authority to actually quantify acceptable temperatures.

UL2200 Specification for Stationary Engine Generator Assemblies

Contact Surface	Metallic	Nonmetallic
Handles or knobs grasped for holding	50° C (122° F)	60° C (140° F)
Handles or knobs that are contacted but do not involve holding; other surfaces subject to contact and user maintenance	60° C (140° F)	85° C (185° F)
Surfaces subject to casual contact	70° C (158° F)	95° C (203° F)

As you can see from the above table, non-metallic surfaces, such as standard insulation blankets, can reach temperatures as high as 95° C (203° F) and still be considered safe for casual contact.

Although space considerations will sometimes limit the thickness of an insulation blanket, and thus allow for a higher than desired outer surface temperature, in general, all our industrial insulation blankets are designed to be touch-safe.