

## Superwool® Plus Tank Car Blanket

Datasheet Code US: 7-14-261



### Product Description

Superwool Plus Tank Car Blanket is produced from high quality Superwool Plus fibers. These fibers are air-layered into a continuous mat and mechanically needled for added tensile strength and surface integrity. Superwool Plus incorporates advanced fiberization technology to reduce non-fibrous “shot”, and this increased fiber content improves the thermal efficiency, strength, vibration resistance, and handling characteristics versus more traditional RCF fibers.

Superwool Plus Tank Car Blanket is tested per 49 CFR Part 179 Appendix B for acceptance as a thermal protection system on class DOT 105J, 111J (CPC 1232), 112J, 112T, 114J, 114T and 117 tank cars. Contact Morgan Advanced Materials for DOT Approvals.

Chemical Analysis, %, weight basis after firing	
Silica, SiO <sub>2</sub>	62 - 68
Calcium oxide = Magnesium oxide, CaO + MgO	29 - 39
Other	<1
Leachable Chlorides	trace

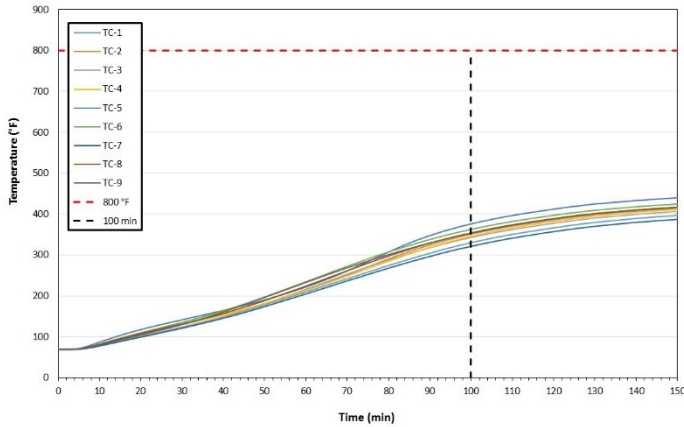
### Features

- Tested per CFR 49 Part 179 Appendix B for 100 minute pool fire and 30 minute torch fire requirements
- Tested under pool fires conditions for 150 minutes 50% beyond DOT test requirements
- High melting point and mechanical stability in pool and torch fire environments
- PHMSA Approval Letter for systems excepted from further testing
- Low bio-persistence for safer installation and removal
- Very low shrinkage during severe fire exposures
- Improved vibration resistance versus typical ceramic fibers
- No organic binders, therefore no degradation nor off-gassing during service or fire conditions
- Lightweight with low thermal conductivity and heat storage
- High tensile strengths for excellent handleability
- Highly flexible; easily cut and fabricated
- Blanket length provided to suit single wrap around diameter of vessel

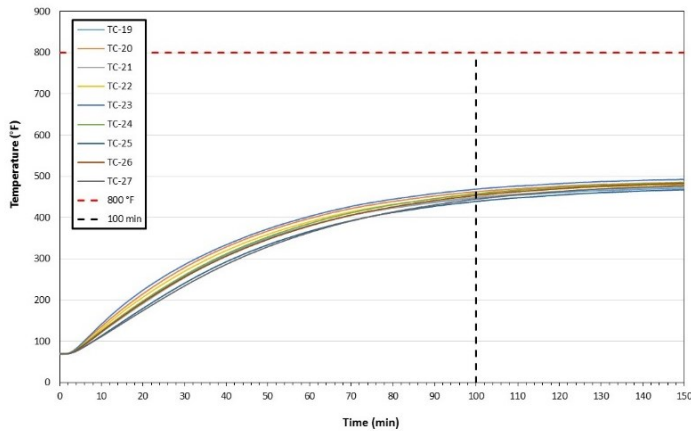
### Physical Properties

Color	white
Continuous Use Temperature, °F (°C)	1832 (1000)
Classification Temperature, °F (°C)	2192 (1200)
<b>Thermal Conductivity, BTU·in/hr·ft<sup>2</sup>·°F (W/m·K), per ASTM C201, measured density is 4 pcf</b>	
@ 500°F (260°C)	0.48 (0.07)
@ 1000°F (538°C)	1.00 (0.14)
@ 1500°F (816°C)	1.87 (0.27)
@ 1800°F (982°C)	2.55 (0.37)
@ 2000°F (1093°C)	3.07 (0.44)

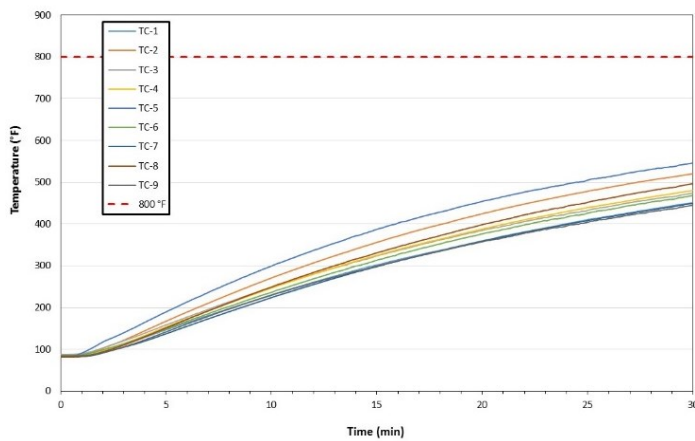
## Superwool® Plus Tank Car Blanket



**Pool fire - System 1 with 1/2" (13mm) Superwool Plus and 3.5" Fiberglass**



**Pool fire - System 3 with 1/2" (13mm) Superwool Plus only**



**Torch test - System 1 with 1/2" (13mm) Superwool Plus**

The values given herein are typical average values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice. Therefore, the data contained herein should not be used for specification purposes. Check with your Morgan Advanced Materials office to obtain current information.