

15-25°C Performance Comparison PalletQuilt®, Silverskin and “The White Cover”

Q-TECHNICAL SERVICES TESTING PROGRAM

We specialize in design, operation, and performance validation initiatives that can properly inform and educate on the implementation of passive thermal protection systems to the supply chain as applied to specific cold chain risk profiles.

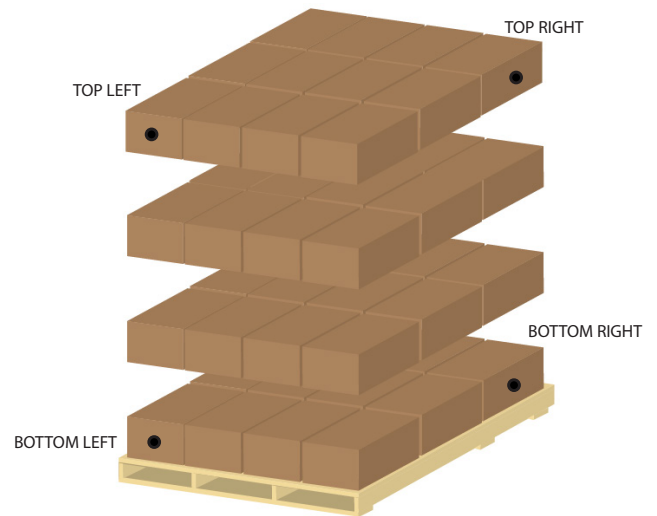
TEST METHOD

- Pallet Size: Four layers of cardboard boxes. Payload of 40 x 48 x 48.
- Test Mass: Plastic jugs containing water and a product mass to volume ratio of 23.1%.
- Product Conditioning: 20°C (± 1)
- Test Rational: Temperature probes, measuring at 5 minute intervals, were placed prior to conditioning and used throughout the test. To measure the worst case locations, probe placement on the surface of the boxes located on the outer corners of the pallet.

REQUIREMENTS

- Direct sun test for a minimum of 4 hours.
- Minimum ambient temperature of 35°C
- Cold test in a chamber set to -10°C

TEMP RECORDER PLACEMENT



SET-UP PICTURES



Risk
Low



Commodity Profile
15-25°C



Allowable Excursions
2-30°C



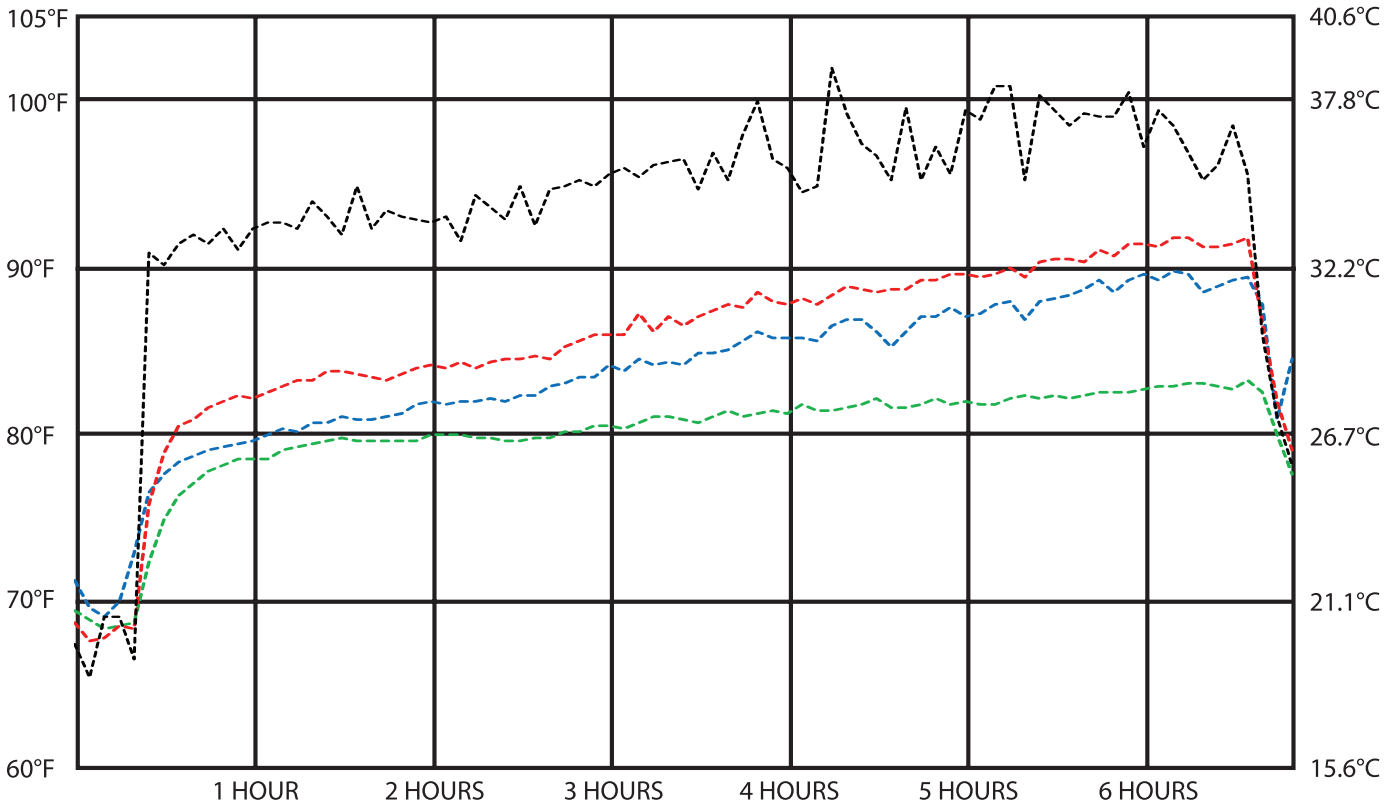
Length
4-8 Hours

PalletQuilt® by QProducts and Services®

Tel: 708-331-0094 Email: sales@qsales.com

**“When You Buy a Q Product,
You Buy a Company”**

SUNLIGHT TEST PERFORMANCE



■■■■ PALLETQUILT® SURFACE
 ■■■■ WHITE COVER SURFACE
 ■■■■ SILVERSKIN® SURFACE
 ■■■■ AMBIENT

MAXIMUM PRODUCT TEMPERATURE ANALYSIS

	HOUR 1	HOUR 2	HOUR 3	HOUR 4	HOUR 5	HOUR 6
PALLETQUILT®	20.9	22.4	23.3	24.1	24.7	25.2
WHITE COVER	21.1	22.5	23.5	24.4	25.1	25.8
degrees warmer than PALLETQUILT®	.2	.1	.2	.3	.4	.6
SILVERSKIN®	20.9	22.6	23.8	24.8	25.6	26.4
degrees warmer than PALLETQUILT®	0	.2	.5	.7	.9	1.2

MAXIMUM SURFACE TEMPERATURE ANALYSIS

	HOUR 1	HOUR 2	HOUR 3	HOUR 4	HOUR 5	HOUR 6
PALLETQUILT®	20.9	22.4	23.3	24.1	24.7	25.2
WHITE COVER	21.1	22.5	23.5	24.4	25.1	25.8
degrees warmer than PALLETQUILT®	.2	.1	.2	.3	.4	.6
SILVERSKIN®	20.9	22.6	23.8	24.8	25.6	26.4
degrees warmer than PALLETQUILT®	0	.2	.5	.7	.9	1.2



Risk
Low



Commodity Profile
15-25°C



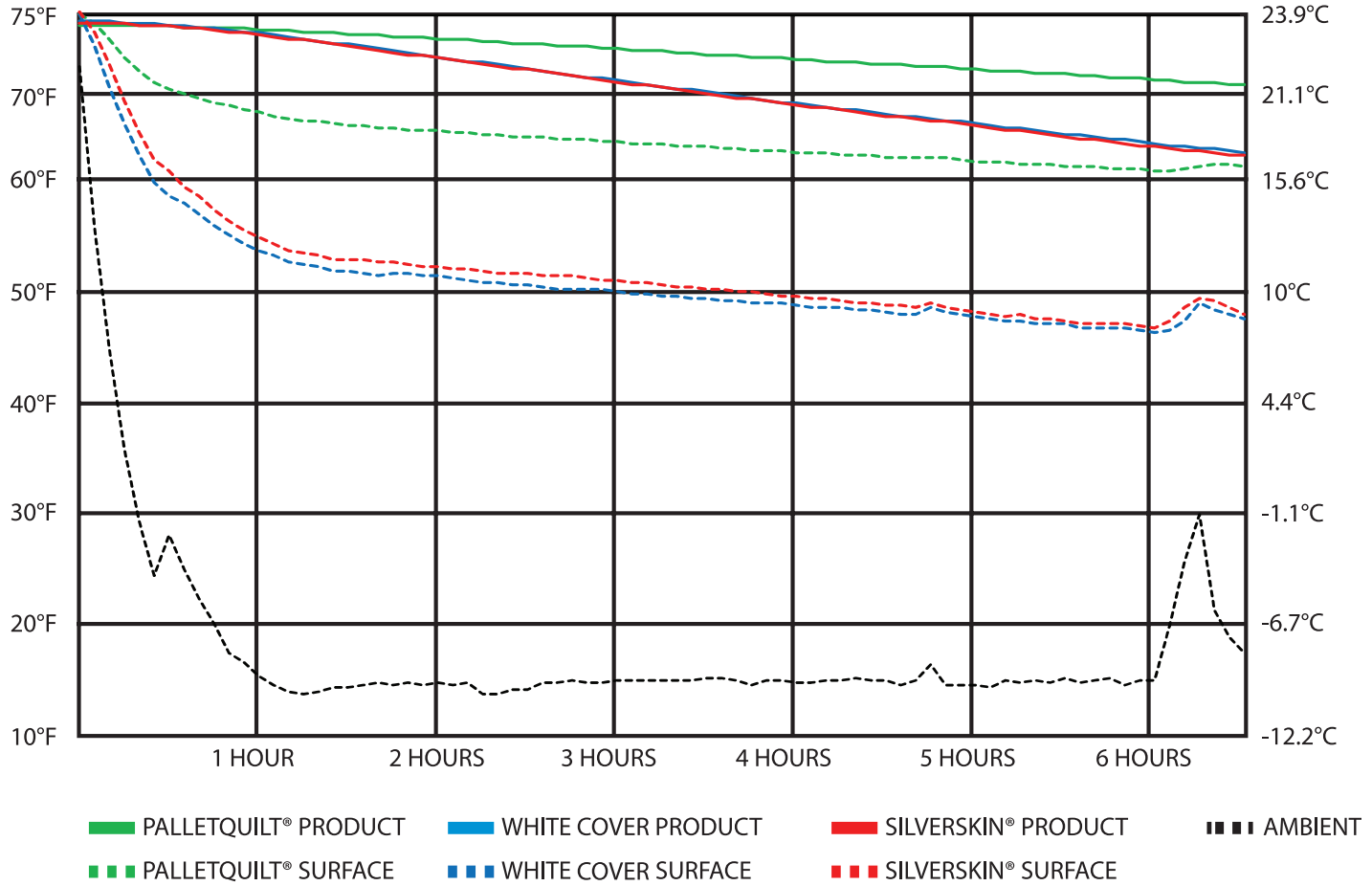
Allowable Excursions
2-30°C



Length
4-8 Hours

15-25°C Performance Comparison

COLD TEST PERFORMANCE



■ PALLETQUILT® PRODUCT ■ WHITE COVER PRODUCT ■ SILVERSKIN® PRODUCT AMBIENT
■ PALLETQUILT® SURFACE ■ WHITE COVER SURFACE ■ SILVERSKIN® SURFACE

MINIMUM PRODUCT TEMPERATURE ANALYSIS

	HOUR 1	HOUR 2	HOUR 3	HOUR 4	HOUR 5	HOUR 6
PALLETQUILT®	19.2	18.8	18.3	17.9	17.4	17
WHITE COVER	19	18	17	15.9	15.1	14.2
degrees warmer than PALLETQUILT®	.2	.8	1.3	2	2.3	2.8
SILVERSKIN®	19	18	16.9	15.9	15	14
degrees warmer than PALLETQUILT®	.2	.8	1.4	2	2.4	3

MINIMUM SURFACE TEMPERATURE ANALYSIS

	HOUR 1	HOUR 2	HOUR 3	HOUR 4	HOUR 5	HOUR 6
PALLETQUILT®	15.9	14.8	14.3	13.8	13.5	13
WHITE COVER	10.1	8.3	7.7	7.1	6.6	6
SILVERSKIN®	10.3	8.7	8.1	7.4	6.8	6.1



Risk
Low



Commodity Profile
15-25°C



Allowable Excursions
2-30°C



Length
4-8 Hours