Thermo-Man®, Meyrin, ETC

Thermal Protection Evaluation System

DuPont Protection Technologies Laboratory

Type of test:

Evaluation of garment ensemble for fire fighter application

Garment description:

NTI 112 Jacket and Trousers made of Nomex® Tough (FC) 195 g/m2
with GE membrane technology ePTFE bicomponent laminated with Nomex® spunlace
with liner made of Nomex®/Viscose FR quilted with a layer of Nomex® N-401 spunlace
total weight about 490 g/m², size 52
washed 5 times DIN EN 6330
test for NTI/Novotex-Isomat Schutzbekleidung GmbH

Exposure summary:

Exposure time	***8 second***
Acquisition time	***120 second***
Sample rate	***10 per second***
Heat flux density (nominal)	***2.0 cal/cm²/sec (84 k/W/m²)***
Number of burners & location	***12 burners around the manikin (knee/hip)***

Predicted body burns:

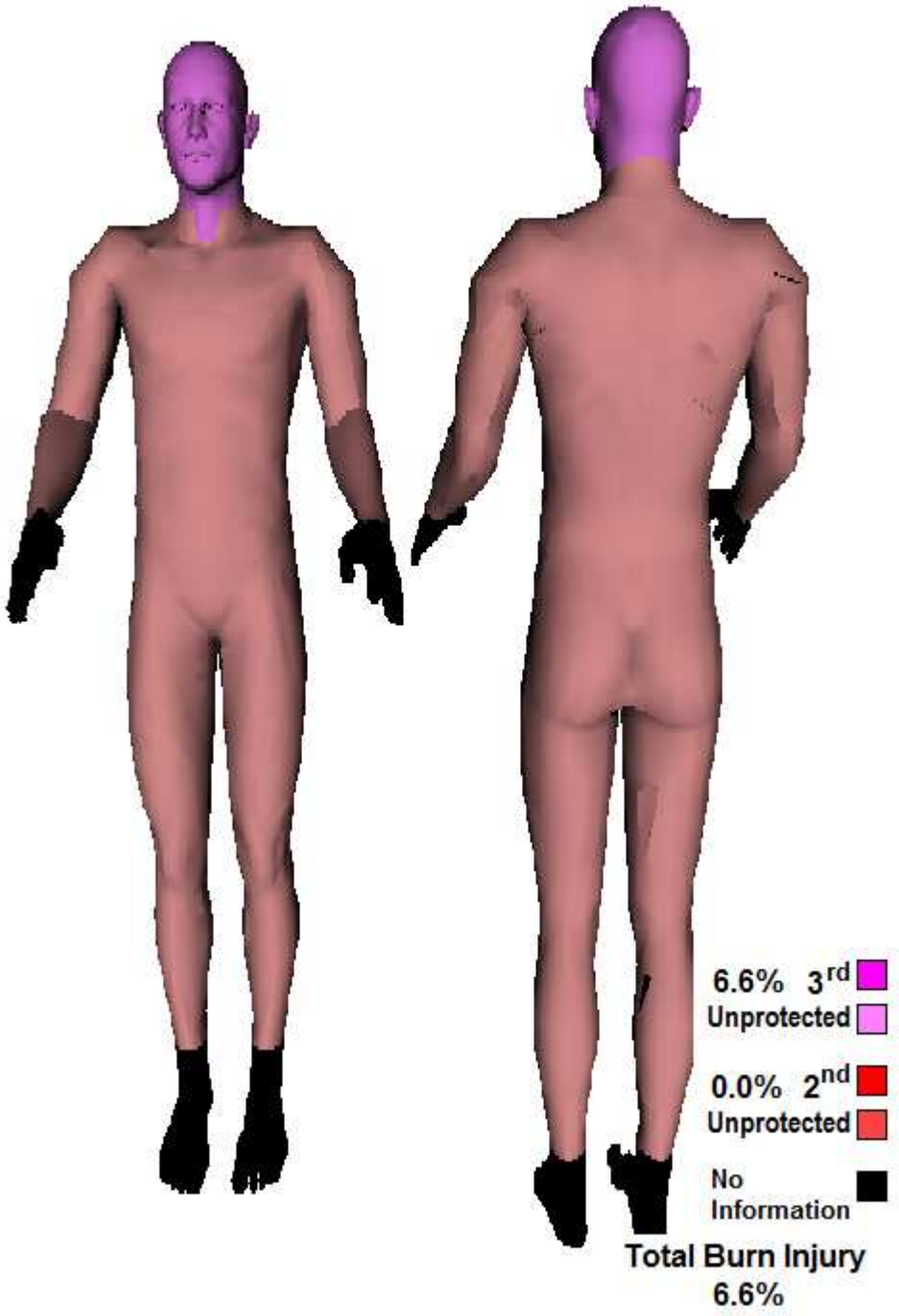
2nd. degree burns	***0%***
3rd. degree burns	***6.6%***
Total burns (including head)	***6.6%***

Test observations:

After-flame / After-Glow time	***102 second***
Smoke intensity	***Heavy smoke***
Other observations	***None***

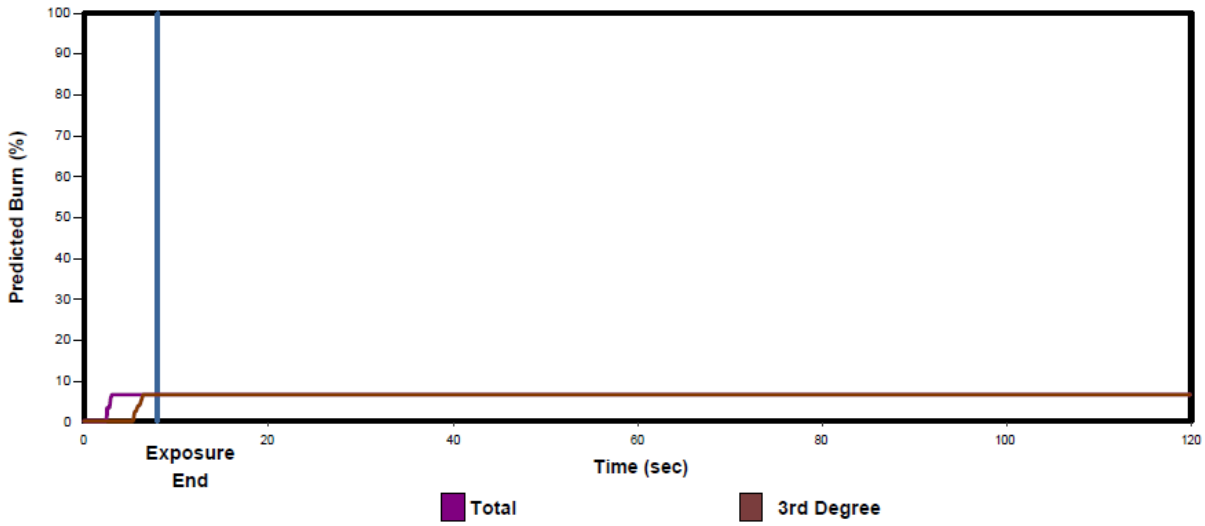
Predicted Burn Injury (graphical picture)

Test File: E_20130813_084



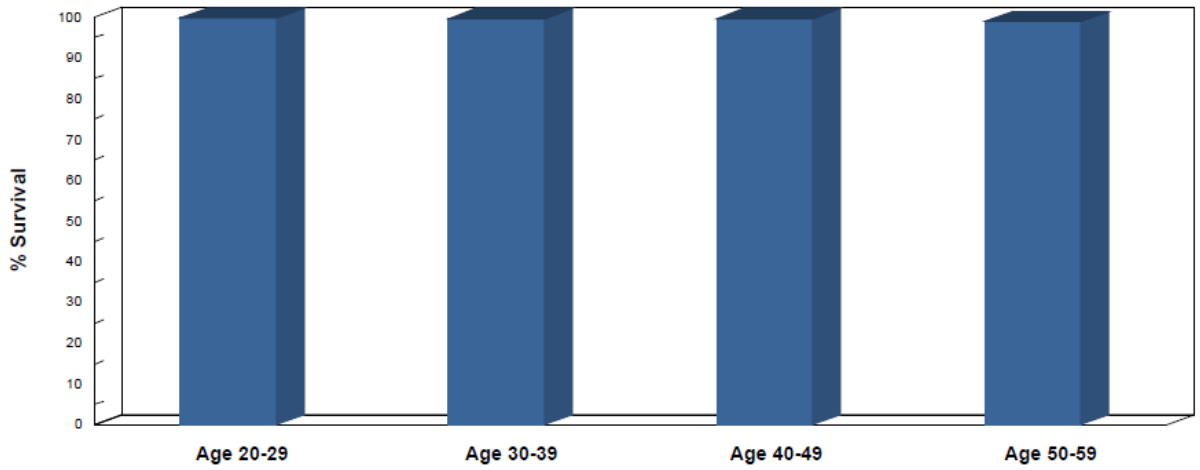
Predicted Burn Injury versus Time

Test File: E_20130813_084



Predicted Burn Injury Survival Test Data

Test File: E_20130813_084



Based on American Burn Association, National Burn Repository® 2012, Data Version 8.0

Result interpretation & comments:

Thermo-Man® results are using the new predicted burn injury model published in ASTM F1930-13.
This new predicted burn injury model will be implemented during the current revision of ISO 13506:2008.

Pictures / Film:

See E_20130813_084.mpg

Responsible technicians	DPT Laboratory Manager
Marco Mazzolini	Andre Capt

Disclaimer:

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Predicted body burns:

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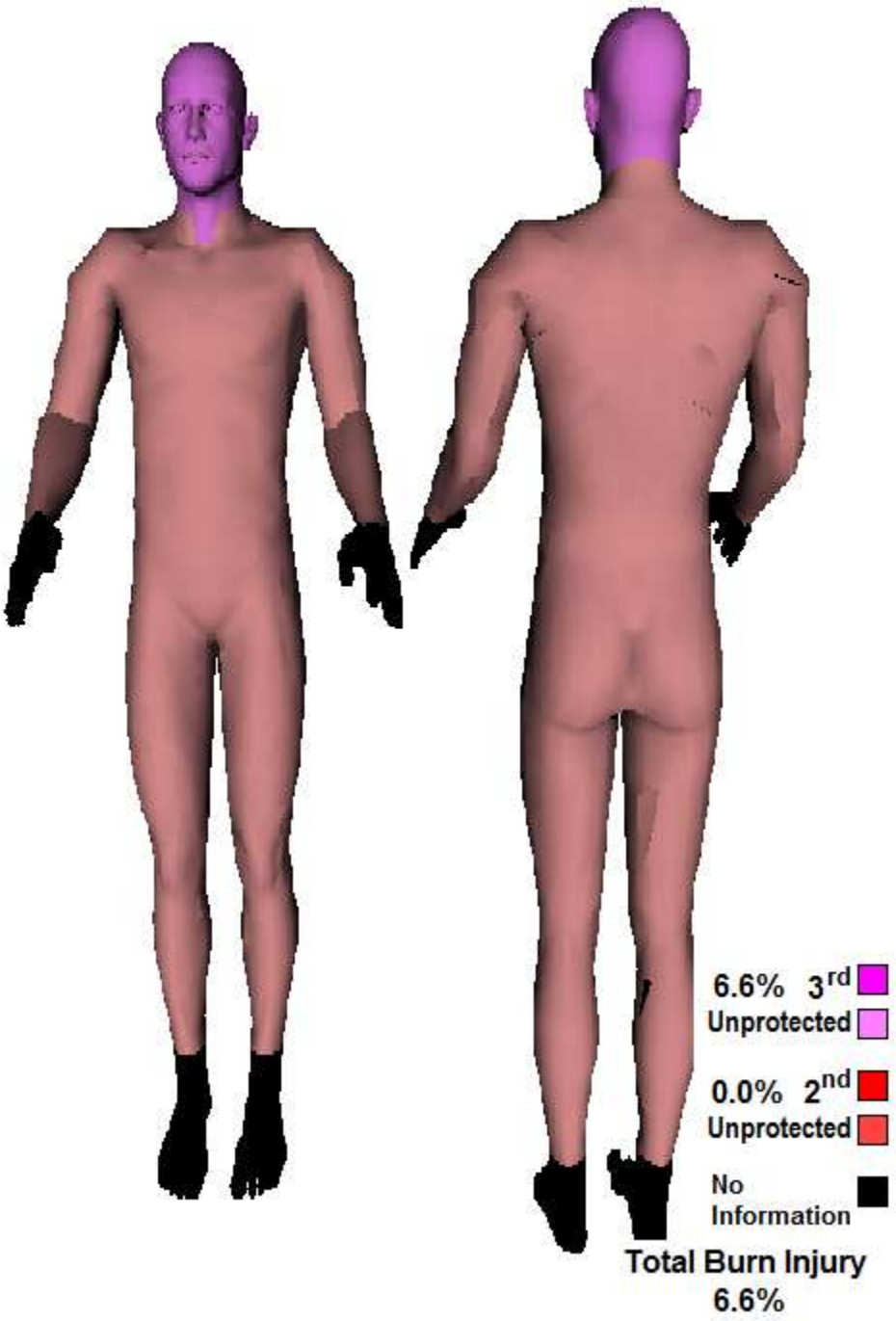
3rd. degree burns	***6.6%***
Total burns (including head)	***6.6%***

Test observations:

After-flame / After-Glow time	***>120 second***
Smoke intensity	***Heavy smoke***
Other observations	***None***

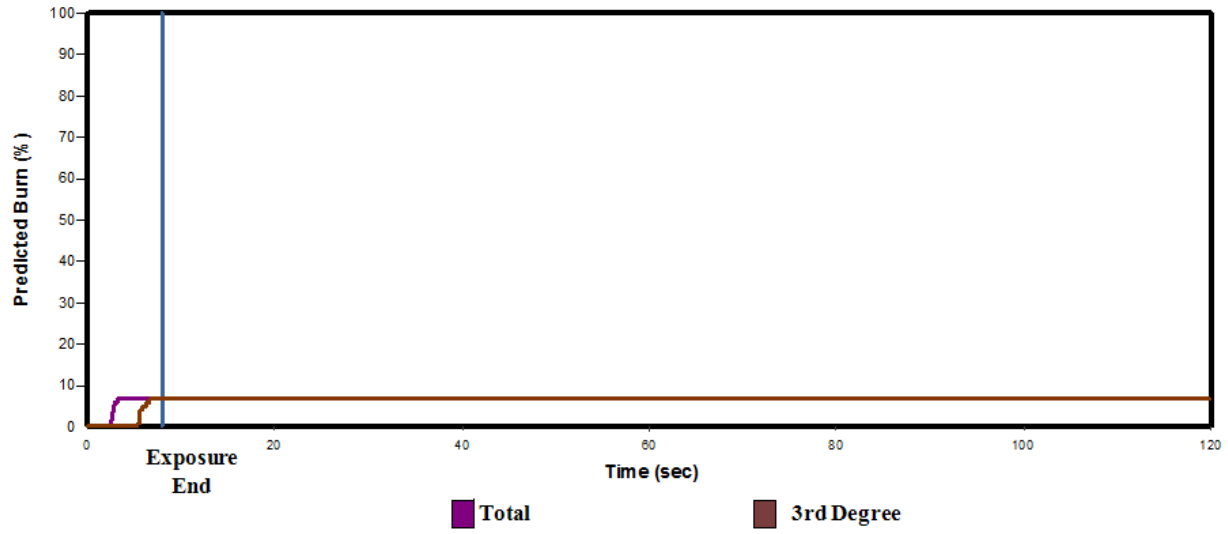
Predicted Burn Injury (graphical picture)

Test File: E_20130820_097



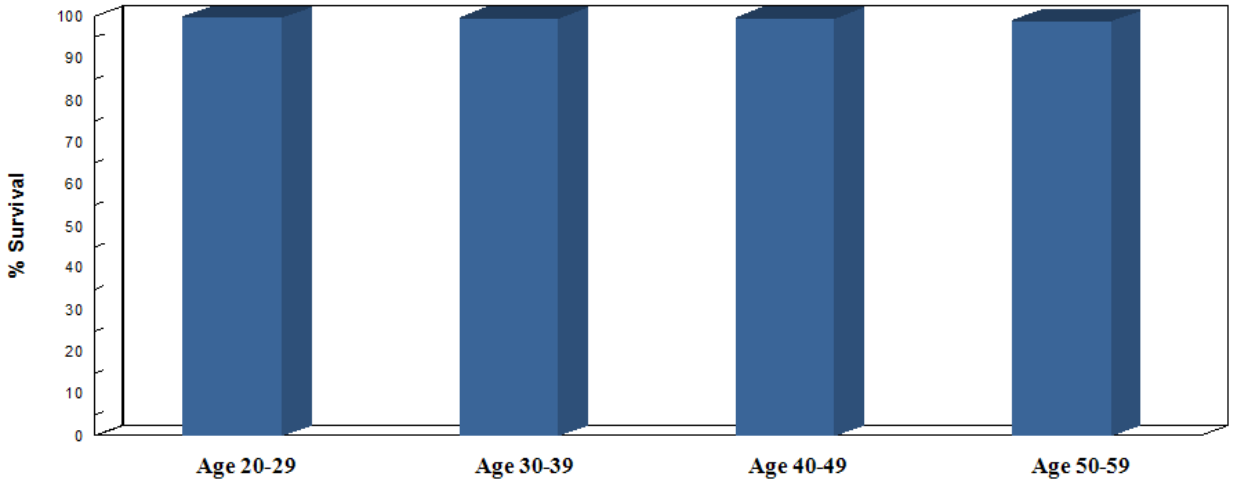
Predicted Burn Injury versus Time

Test File: E_20130820_097



Predicted Burn Injury Survival Test Data

Test File: E_20130820_097



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