

SAFETY FIRST

June 2004

UNDERGARMENT PROTECTION

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Spandex/Polyester or Polyester Products worn under Firesuits

Spandex/polyester-blended or polyester products have become increasingly popular with a large number of athletes because of comfort and moisture wicking abilities. **Simpson does not recommend the use of any spandex/polyester or polyester product underneath a firesuit.**

The use of polyester, nylon or spandex blends underneath firesuits or other flame resistant protective apparel is not recommended. These materials do not require direct flame exposure to cause melting or sticking to unprotected skin. The National Fire Protection Association, NFPA, recently issued guidelines around materials worn under turnout gear. They should be made of materials that do not melt, drip, separate, or burn when exposed to high temperatures. Polyester, nylon, and spandex blends would not pass and can increase severity of burn injuries.

Summary Points

- Simpson recommends the use of CarbonX[®] or Nomex[®] underwear underneath the firesuit because of the improvement to Thermal Protection.
- **Simpson does not recommend the use of any spandex/polyester or polyester product underneath a firesuit.**

When exposed directly to flame, spandex/polyester can become a fuel source and will not self extinguish. The “stop-drop-and-roll” method to extinguish the fire may cause the melted beads of polyester to imbed into the skin. We are told by the medical community that surgical intervention is usually required to remove polymers that have solidified on the skin (with accompanying skin grafts to follow).

Simpson recommends the use of CarbonX[®] or Nomex[®] underwear underneath the firesuit because of the improvement of Thermal Protection Performance (TPP) by up to 50%. Other acceptable undergarment materials include 100% cotton, 100% wool or silk, but flame resistant materials offer greater protection.

Since 1959...

Simpson Performance Products has led the motorsports industry in safety innovation. We continually elevate safety standards through our dedication to continuous development, refinement and testing. The Simpson Envelope of Safety reflects the highest standard of safety available.

