



PROGRAM
EXECUTIVE
OFFICE
SOLDIER

FIRE RESISTANT ENVIRONMENTAL ENSEMBLE (FREE)

Project Manager Soldier Protection and Individual Equipment

Product Manager Soldier Clothing and Individual Equipment

<http://www.peosoldier.army.mil>

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Specifications

- **Weight:** 15.4 pounds (all layers combined)
- **Size:** Tops and bottoms: 15 sizes from X-small-short to XX-large-X-long
- **Color:** Universal Camouflage Pattern and Foliage Green 504. For Operation Enduring Freedom (OEF), selected components of FREE are being fielded in the OEF Camouflage Pattern and Tan 499, starting in August 2010

Program Status

In summer 2010, the first units are scheduled to receive FREE. The Army Elements Fleece, one of the layers of FREE, is already being fielded to Soldiers as a flame-resistant, cold-weather "bridge" between legacy items and FREE.



The Fire Resistant Environmental Ensemble (FREE) is a multi-layered, versatile, insulating system that is adaptable to varying operational and environmental conditions.

FREE is engineered for comfort and functionality in and out of aircraft and armored vehicles. It is a comprehensive clothing system from skin to outerwear, from head to toe, and is designed to be compatible with currently fielded personnel protective equipment. The duty service uniform is integrated as a fire-resistant layer of FREE. All components of the FREE system incorporate fire-resistant technologies to increase protection from flash fires.

The system's adaptability gives Soldiers more choices of protection, a crucial factor in responding to current threats while facing extreme climate conditions.



FIRE RESISTANT ENVIRONMENTAL ENSEMBLE (FREE)



1	2	3	4	5	6	7	8
Next to Skin Under Layer	Base Layer	Mid-weight Layer	Duty Service Uniform Layer	Light Weather Outer Layer (LWOL)	Intermediate Weather Outer Layer (IWOL)	Extreme Weather Outer Layer (EWOL)	Auxiliary Items
<ul style="list-style-type: none"> • T-shirt and Briefs • Flame-resistant (FR) tri-blend of FR rayon/wool/nylon material • Quick-drying, moisture-wicking • Lightweight and breathable 	<ul style="list-style-type: none"> • Long-sleeve top and drawers • Made from flame-resistant Nomex™/spandex mesh • Lightweight, moisture-wicking, breathable fabric • Excellent recovery properties • Provides comfort in hot climates • Can be worn under mid-weight layer for comfort in cold weather 	<ul style="list-style-type: none"> • Long-sleeve top and bottom • Quick-drying, high-loft, double-velour Nomex™/FR polyester fleece • Provides insulating value and breathability • Worn for added warmth over the base layers and under the duty uniform 	<ul style="list-style-type: none"> • Flame-resistant • Improved Combat Vehicle Crewman Uniform for combat vehicle crewmen • Army Aircrew Combat Uniform for aircrew members 	<ul style="list-style-type: none"> • Wind jacket and pants • Highly abrasion-resistant face fabric • Constructed with a fire-resistant nylon/Lycra™ blend • Flame-, wind-, and water-resistant • Breathable and durable • Provides lightweight weather protection and insulation for cool conditions • Fabric backed with a knit flame-resistant Nomex™ fabric 	<ul style="list-style-type: none"> • Fleece jacket, pants, and vest • Highly abrasion-resistant face fabric • Constructed with a flame-resistant nylon/cotton/Lycra blend • Flame-, wind-, and water-resistant • Breathable and durable • Fleece backing constructed from a Modacrylic/Nomex/Lycra fiber blend • Provides wet weather protection and insulation for cold conditions 	<ul style="list-style-type: none"> • Shell jacket and pants with fleece liner • Laminate flame-resistant fabric composed of FR rayon, para-aramid, nylon outer shell, PTFE membrane, and Nomex jersey backing • Waterproof, breathable, and lightweight • The outermost layer in the clothing system 	<ul style="list-style-type: none"> • FR gloves • FR socks • FR rigger belt

