

# Nomex<sup>®</sup> Essential Arc 650

Nomex<sup>®</sup> Essential Arc 650 is designed for naval use, providing built-in dual-hazard protection against flash fire and arc flash. This fabric offers excellent user comfort and abrasion resistance while protecting from Category 2 electrical hazards\* such as shipboard power generation and electrical distribution systems. Nomex<sup>®</sup> Essential Arc 650 meets current US Navy performance standards.

## Extreme protection



Inherent flame resistance



Better protection at longer exposures and higher temperatures



Inherent protection; can't be washed out or worn away



Fabric made of strong fibers resists tears and abrasion



Extremely durable and long-lasting protective solutions



Helps provide valuable escape time



Will not melt or drip



Arc flash protection along with flame resistance

## Hazards



Arc flash



Flash fire

## Color

Refer to fabric sample for true color representation.



Navy

## Weight

220 g/m<sup>2</sup> / 6.5 oz/yd<sup>2</sup>

## Fiber blend

Kevlar<sup>®</sup>, Nomex<sup>®</sup>, modacrylic, antistatic fiber

## Fabric construction

Twill weave

\*Fabric has minimum arc rating of 8 cal/cm<sup>2</sup>

## Typical physical properties (ISO, EN)

Property	Standard	Description	Value
Basis weight	ISO 3801	-	220 g/m <sup>2</sup>
Tensile strength	ISO 13934-1	Warp Weft	997 N 703 N
Tear strength	ISO 13937-2	Warp Weft	23 N 25 N

## Typical physical properties (ASTM)

Property	Standard	Description	Value
Basis weight	ASTM D3776	-	220 g/m <sup>2</sup> 6.5 oz/yd <sup>2</sup>
Tensile strength	ASTM D5034	Warp Weft	752 N (169 lbf) 525 N (118 lbf)
Elmendorf tear	ASTM D1424	Warp Weft	58 N (13 lbf) 49 N (11 lbf)

## Fabric protection performance

Property	Standard	Value
Arc rating (Arc thermal performance value [ATPV])	IEC 61482-1-1 (ASTM F1959)	>8 (9.5-11) cal/cm <sup>2</sup>
Energy break-open threshold (EBT)	IEC 61482-1-1 (ASTM F1959)	>18 (23-24) cal/cm <sup>2</sup>



[nomex.com/protective-uniforms](https://nomex.com/protective-uniforms)

DuPont Life Protection  
 @DuPontLifeProtection  
 @DuPontLifeProtection

Product safety information is available upon request.

This information corresponds to our current knowledge on the subject. It is offered solely to provide possible suggestions for your own experimentations. It is not intended, however, to substitute for any testing you may need to conduct to determine for yourself the suitability of our products for your particular purposes. This information may be subject to revision as new knowledge and experience becomes available. Since we cannot anticipate all variations in actual end-use conditions, DUPONT MAKES NO WARRANTIES AND ASSUMES NO LIABILITY IN CONNECTION WITH ANY USE OF THIS INFORMATION. Nothing in this publication is to be considered as a license to operate under or a recommendation to infringe any patent right.

DuPont™, the DuPont Oval Logo, and all trademarks and service marks denoted with ™, ® or © are owned by affiliates of DuPont de Nemours, Inc. unless otherwise noted. © 2020 DuPont. (06/20)