

# Nomex® Essential Arc

Nomex® Essential Arc is engineered to provide arc flash protection for workers performing electrical tasks in the industrial manufacturing and transportation industries. Along with its mechanical properties, it also enhances the durability of the garments, which means less replacements.

Nomex® Essential Arc delivers reliable arc flash protection for industrial electricians.

## Protection



Arc flash protection along with heat and flame resistance



Better protection at longer exposures and higher temperatures



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



Resists tears and abrasion



Extremely durable and long-lasting protective solutions

## Hazards



Arc flash



Short-duration thermal exposure



Static electricity\*

## Color

Refer to fabric sample for true color representation.



Navy\*



Medium blue



Royal blue



Dark gray



Orange



Khaki

\*8 oz/yd<sup>2</sup> / 271 g/m<sup>2</sup> available only in navy.

## Weight

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

8 oz/yd<sup>2</sup> / 271 g/m<sup>2</sup>

## Fiber blend

Nomex®, Kevlar®, modacrylic, antistatic fiber

\*Static dissipation does not replace proper grounding in a potential Electro-Static Discharge (ESD) hazard.

## Certifications

Nomex® fabric solutions are certified to meet the listed standards.\*

ASTM F1506

NFPA 2112

CGSB 155.20

ISO 11612

IEC 61482-2

EN 1149

\*Certifications for the fabrics vary by region. Contact a DuPont representative for additional details.

# Nomex® Essential Arc

## Fabric protection performance

Property	Standard	Units/description	Nomex® Essential Arc	Nomex® Essential Arc
Fabric construction	—	—	Twill weave	Twill weave
Basis weight	—	oz/yd <sup>2</sup> (g/m <sup>2</sup> )	6.5 (220)	8.0 (271)
Arc Rating (Arc Thermal Performance Value [ATPV])	ASTM F1959 IEC 61482-1-1	cal/cm <sup>2</sup>	>8 (9.5-11)	>8 (9.9-12)
Energy Breakopen Threshold (EBT)	ASTM F1959 IEC 61482-1-1	cal/cm <sup>2</sup>	>18 (23-24)	>18 (22-23)
Thermal manikin	NFPA 2112	TPBI (%)	21	24
Box test	IEC 61482-1-2	Rating	Class 1	Class 1

## Typical physical properties (ASTM, NFPA)

Property	Standard	Units/description	Nomex® Essential Arc	Nomex® Essential Arc
Fabric construction	—	—	Twill weave	Twill weave
Basis weight	ASTM D3776	oz/yd <sup>2</sup>	6.5	8.0
Tensile strength (Grab test)	ASTM D5034	Warp (lbf) Weft (lbf)	169 118	167 147
Elmendorf tear	ASTM D1424	Warp (lbf) Weft (lbf)	13 11	9 9
Heat transfer performance (HTP)	NFPA 2112 Section 8.2	Spaced (cal/cm <sup>2</sup> ) Contact (cal/cm <sup>2</sup> )	10 9	14 10
Shrinkage after 5 home laundering cycles	AATCC 135	Warp (%) Weft (%)	<3 <3	<3 <3

## Typical physical properties (ISO, EN)

Property	Standard	Units/description	Nomex® Essential Arc	Nomex® Essential Arc
Fabric construction	—	—	Twill weave	Twill weave
Basis weight	ISO 3801	g/m <sup>2</sup>	220	271
Tensile strength	ISO 13934-1	Warp (N) Weft (N)	997 703	1074 947
Tear strength	ISO 13937-2	Warp (N) Weft (N)	23 25	22 23
Dimensional stability	ISO 5077	Warp (%) Weft (%)	<3 <3	<3 <3



For more information on Nomex® Essential Arc including pilling, colorfastness, and use and care, visit [nomex.com/fabrics](http://nomex.com/fabrics)

DuPont Personal Protection  
 @DuPontPPE

All fabrics in our portfolio are suitable to be used for arc flash protection as per NEC, NESC, NFPA 70E and OSHA requirements.

Product safety information is available upon request. All data are from certification tests. Data can vary among testing labs.

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.

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