



*PROTECTIVE SOLUTIONS
FOR A CHANGING WORLD*

FULL LINE CATALOG



WELCOME TO NATIONAL SAFETY APPAREL

For over seventy-five years, our company has protected the American worker by providing quality products that are manufactured right here in the United States. Although it would be easy to ship our production off-shore in order to increase profits, we believe that **Made-in-America** stands for something very important. We will never lower our standards.

National Safety Apparel or NSA specializes in superior-quality, custom garments for the electrical, petro-chemical, high-heat, glass-cutting and cryogenic industries.

Our theme is **Protective Solutions for a Changing World** and it is at the heart of everything we do. By listening to the American worker, we create new garments and constantly upgrade styles that are safe, comfortable and just make sense.

We also partner with only the finest suppliers in the safety industry when selecting and evaluating new fabrics and technologies. Every product is warranted against defects in material and workmanship.

In this catalog, you will find many of our best-selling products. We also specialize in custom, made-to-order garments. And at NSA we guarantee fast, responsive service and delivery.

At National Safety Apparel, we foster an appreciation for people - both our customers and our employees. Certification to ISO 9001, with design demonstrates our commitment to quality. To our employees, we offer competitive wages and incentive bonuses. Through our OFI (Opportunity for Improvement) program, we allow our workforce to make suggestions that help to improve all processes within our company.

We hope you enjoy working with us as much as we enjoy the opportunity to serve your safety needs.

Sincerely,



Duane Siders
Vice President of Sales & Marketing
National Safety Apparel, Inc.





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WHAT IS IT?

Every day in this country, workers in electrical environments are exposed to hazards that can cause severe and even fatal injuries. This standard was created to help protect the people that work on or near electrical equipment. In one study, 80% of the severe and fatal injuries related to electricity are due to non-FR clothing igniting and continuing to burn during an arc flash incident.

NFPA 70E is not a law, but is a “voluntary consensus standard” referenced by the National Electrical Code (NEC) for safety requirements and has been cited by OSHA under the General Duty clause.

WHO’S AFFECTED?

It is important to note that NFPA 70E does not just apply to industrial companies. Within every organization there are a number of maintenance workers, electricians, machine operators, or HVAC personnel who are at risk of an electric arc flash and need FR clothing protection as specified by NFPA 70E. In fact, many industries where employees work on or near electrical equipment are affected by NFPA 70E.

HOW TO COMPLY?

There are several ways you can analyze an arc flash hazard.

One option is to have a hazard assessment done in accordance with 29 CFR 1910.132 (d) using computer software or IEEE 1584 arc calculations standards. There are many companies that specialize in performing an arc flash analysis.

Another option is to use the Hazard/Risk Category Classifications of Job Tasks found in the NFPA 70E-2009 booklet. Below is a table showing the Hazard Risk Category or HRC along with the minimum cal/cm² for each:

HRC (Level)	Arc Rating
0	N/A
1	4 cal/cm ² or more
2	8 cal/cm ² or more
3	25 cal/cm ² or more
4	40 cal/cm ² or more

A third option is to use the NFPA 70E-2009 booklet’s Table H.1 Simplified Two-Category, Flame Resistant Clothing System. This is a simplified approach to ensure adequate PPE for workers working on or around energized parts. The clothing listed suggests the minimum FR requirements of NFPA 70E-2009 Table 130.7 (C) and 130.7 (C) (11).

Once you have determined the Hazard Risk Category, select the appropriate FR garments for the job. NSA has garments that meet the single and multi-layer needs for all risk categories.

NSA CAN HELP!

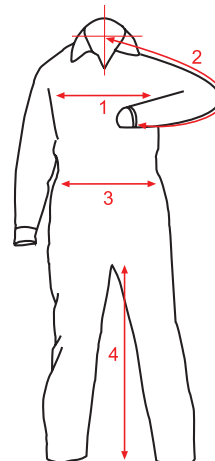
National Safety Apparel’s electrical apparel is available in a wide range of styles and materials at various levels of protection. At NSA, our area of expertise is in making USA-made specialty garments that are custom designed for your specific needs.

SIZE CHART AND CLEANING INSTRUCTIONS

HOW TO MEASURE

- Refer to the size chart for your particular garment.
- Measurements refer to body and not garment measurements.
- Call customer service if you need any assistance.

- 1. Chest:** Measure around the fullest part of the chest with arms down.
- 2. Sleeve:** With elbow slightly bent, measure from center of neck to elbow and down to the wrist bone.
- 3. Waist:** Measure around the natural waistline.
- 4. Inseam:** Measure from crotch seam down to bottom of leg.



C53 Work Shirts & C54 Knit Shirts

ALPHA SIZE	SM	MD	LG	XL	2X	3X
Chest	34-36	38-40	42-44	46-48	50-52	54-56
Neck	14-14½	15-15½	16-16½	17-17½	18-18½	19-19½
Regular Sleeve Length	32	33	34	35	36	37
Long Sleeve Length	33½	34½	35½	36½	37½	38½

C09 Lab Coat & C04 Coat

ALPHA SIZE	SM	MD	LG	XL	2X	3X
Chest	34-36	38-40	42-44	46-48	50-52	54-56

Note: Generous sizing

Lined & Unlined C88 Coverall

ALPHA SIZE	SM	MD	LG	XL	2X	3X
Chest	34-36	38-40	42-44	46-48	50-52	54-56
Short = 28" inseam	Regular = 30" inseam		Long = 32" inseam		X-Long = 34" inseam	

T30 Pants, J01 & J02 Jeans

WAIST	28	30	32	34	36	38	40	42	44+
	Short = 28" inseam		Regular = 30" inseam			Long = 32" inseam		X-Long = 34" inseam	

Note: Generous sizing for Jeans

Call customer service for larger size.

MATERIAL CLEANING AND CARE GUIDELINES

Proper cleaning and care of your NSA garments will ensure maximum effectiveness and long life. Following are laundering guidelines for some of our most popular materials. For further details, or for care instructions for materials not listed below, please contact your NSA sales professional.

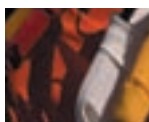


Machine-Wash Items

Many materials that NSA uses can be machine washed and dried. For

specific information on a particular fabric please contact your NSA representative for details. Detailed instructions can also be found on the care tag in the individual garments.

Materials: Indura®, Indura Ultra Soft®, Kevlar®, Nomex®, Protera™



Dry-Clean-Only Items

Professionally dry clean the

following materials although some shrinkage may still be possible:

Materials: Non-aluminized Carbon Kevlar®, Thermobest®

Use only Perchloroethylene detergent



Do-Not-Launder Items

Some materials can only be wiped clean with a soft sponge or cloth dampened with water and a mild soap. Let the fabric air dry after wiping.

Materials: Aluminized fabrics, fiberglass, leather, PVC, Silica, Weldguard

Call customer service about specific materials not listed.

ARC FLASH PROTECTION



LEVEL 2 KITS

Comprehensive Protection in a Convenient Package

NSA's Level 2 Kits are available in an ATPV Rating of 8, 12, and 20 cal/cm²

Level 2 Kits include:

- Garment(s) - See table below for garment options
- 11" Class 0 rubber insulating gloves
- 10" leather protectors
- Hard hat with arc rated faceshield & chin cup
- Safety glasses
- Faceshield unit bag
- Glove bag
- Gear bag



KIT2CVPR08 _ _ _



Level 2 Kit clothing comes standard in:

- Navy or Khaki Indura Ultra Soft®
- Khaki or Medium Blue Protera™



One item number gets you the whole kit! See below

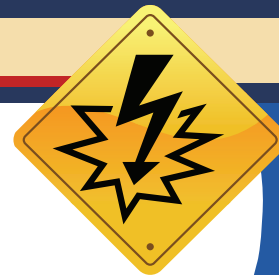
ITEM NUMBER	GARMENT SIZE	GLOVE SIZE	DESCRIPTION
KIT2CV08	--	--	Level 2 Kit with 8 cal/cm ² Indura Ultra Soft® Coverall
KIT2CVPR08	--	--	Level 2 Kit with 8 cal/cm ² Protera™ Coverall
KIT2CV12	--	--	Level 2 Kit with 12 cal/cm ² Indura Ultra Soft® Coverall
KIT2SC12	--	--	Level 2 Kit with 12 cal/cm ² Indura Ultra Soft® Short Coat & Bib Overall
KIT2LC12	--	--	Level 2 Kit with 12 cal/cm ² Indura Ultra Soft® Long Coat & Leggings
KIT2CV20	--	--	Level 2 Kit with 20 cal/cm ² Indura Ultra Soft® Coverall
KIT2SC20	--	--	Level 2 Kit with 20 cal/cm ² Indura Ultra Soft® Short Coat & Bib Overall

Level 2 garments available in sizes SM-3X with the rubber insulating gloves available in sizes 8, 9, 10, 11 and 12 (color of gloves can vary).

NOTE: To order kits without gloves add **NG** to end of part number.

NOTE: To order kits with balaclava add **B** to end of part number.

Arc Rating = Either ATPV or Ebt



LEVEL 4 KITS

Comprehensive Protection in a Convenient Package

NSA's Level 4 Kits are available in an ATPV Rating of 40 and 50 cal/cm²

Level 4 Kits include:

- Garment(s) - See table below for garment options
- 14" Class 2 rubber insulating gloves
- 12" leather protectors
- Arc hood unit with faceshield & hard hat
- Safety glasses
- Hood bag
- Glove bag
- Gear bag



KIT4SCPR40 _ _ _

COLOR CHART



Level 4 Kit clothing comes standard in:

- Navy or Khaki Indura Ultra Soft® (40 cal)
- Khaki Protera™/Nomex®/Kevlar® (40 cal)
- Royal Blue fabric of Nomex®/Kevlar® (50 cal)

One item number gets you the whole kit! See below

ITEM NUMBER	GARMENT SIZE	GLOVE SIZE	DESCRIPTION
KIT4SC40	--	--	Level 4 Kit with 40 cal/cm ² Indura Ultra Soft® Short Coat & Bib Overall
KIT4SCPR40	--	--	Level 4 Kit with 40 cal/cm ² Protera™/Nomex®/Kevlar® Short Coat & Bib Overall
KIT4LC40	--	--	Level 4 Kit with 40 cal/cm ² Indura Ultra Soft® Long Coat & Leggings
KIT4LCPR40	--	--	Level 4 Kit with 40 cal/cm ² Protera™/Nomex®/Kevlar® Long Coat & Leggings
KIT4SC50	--	--	Level 4 Kit with 50 cal/cm ² Nomex®/Kevlar® Short Coat & Bib Overall
KIT4LC50	--	--	Level 4 Kit with 50 cal/cm ² Nomex®/Kevlar® Long Coat & Leggings

Level 4 garments available in sizes SM-3X with the rubber insulating gloves available in sizes 8, 9, 10, 11 and 12 (color of gloves can vary).

NOTE: To order kits without gloves add **NG** to end of part number.

Arc Rating = Either ATPV or Ebt



FR KNIT SHIRTS



C54_ _LS

FR Long Sleeve T-Shirt

Our classic FR knit T-shirt is an NSA favorite. Can be worn as a stand alone garment or used to layer for added protection.

- Full cut provides unrestricted movement
- Smooth covered neck and shoulder seam for exceptional comfort
- Rib knit cuffs provide a secure fit
- Left breast pocket



C54_ _BSLS

FR Long Sleeve Henley

NSA's authentic FR knit henley is designed for comfort, a perfect complement to our FR jeans.

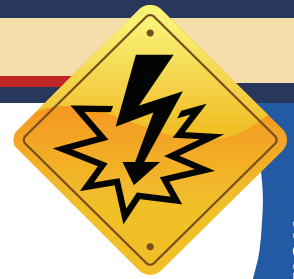
- Three button placket for casual styling
- Generous cut allows for unrestricted movement
- Smooth covered neck and shoulder seam for exceptional comfort
- Rib knit cuffs provide a secure fit
- Left breast pocket

KNIT FABRIC	HENLEY	T-SHIRT	MOCK TURTLENECK	TURTLENECK	POLO
6 oz. Indura Ultra Soft® 88% FR cotton, 12% high tenacity nylon ATPV = 10.9 cal/cm²	 	 	 	 	
6.25 oz. Pro-C FR™ Cotton 100% FR-treated cotton Ebt = 11 cal/cm²					
6.5 oz. Reliant 55% FR modacrylic, 45% long staple cotton Ebt = 9.8 cal/cm²					



Color chart does not represent fabric colors exactly
 Call our customer service department for other fabric and color availability.

Arc Rating = Either ATPV or Ebt



FR KNIT SHIRTS



C54_ _PSLSSC

FR Long Sleeve Polo

Our premium FR knit polo provides a dressed-up look in a casual shirt.

- Three button front closure for traditional styling
- Shirt collar
- Smooth covered neck and shoulder seam for exceptional comfort
- Rib knit cuffs provide a secure fit
- Left breast pocket

FR Long Sleeve Turtleneck

Our traditional FR knit turtleneck will keep you warm while providing you with extra protection.

- Full cut provides unrestrictive movement
- Smooth covered neck and shoulder seam for exceptional comfort
- Rib knit neck will keep you warm
- Rib knit cuffs provide a secure fit
- Choose mock or full neck styling



C54_ _TNL
(full neck)

C54_ _TN
(mock)



Fabric Description:

Indura Ultra Soft® - 88% cotton and 12% high tenacity nylon. Westex's innovative technology has led to the market proven guarantee of flame resistance for the life of the garment.

PRO-C FR™ - Single layer lightweight material that is 100% FR-treated cotton.

Reliant - 55% FR Modacrylic and 45% long staple cotton. The Modacrylic/cotton fiber blend provides protection along with comfort.

Arc Rating = Either ATPV or Ebt



FR WORKWEAR



C53_ _35

C53 FR Woven Work Shirt

NSA's deluxe button-down work shirt provides both comfort and durability.

- Two button-down breast pockets, one with a convenient pencil slot
- Generous cut allows for unrestrictive movement
- Placket front with button closure



Your complete solution for Level 2 compliance

T30_ _W_ _I

C53 FR Woven Shirt & T30 Work Pant

C53 comes standard in the following fabrics:

4.5 oz. Nomex® IIIA	ATPV = 4 cal
6.0 oz. Nomex® IIIA	ATPV = 5.7 cal
6.5 oz. Dupont® Protera™	ATPV = 8.5 cal
5.5 oz. Indura Ultra Soft®	ATPV = 6 cal
7.0 oz. Indura Ultra Soft®	ATPV = 8 cal

Available in a wide array of colors

T30 FR Work Pant

Our T30 work pant provides outstanding durability and great looks all in one.

- Covered zipper-fly closure and non-metallic waist button
- Seven belt loops to provide a good fit
- Two front slash pockets and two welted rear pockets
- Bar tacks at key stress points for added durability
- Generous leg cut

T30 comes standard in the following fabrics:

6.0 oz. Nomex® IIIA	ATPV = 5.7 cal
8.0 oz. Dupont® Protera™	ATPV = 12.3 cal
9.0 oz. Indura Ultra Soft®	ATPV = 12 cal
11.0 oz. Indura Ultra Soft® Duck	ATPV = 12.7 cal



ATPV = 18.3 cal/cm²

J01DJ_ _W_ _I

J01 FR Jean

Our popular jean provides casual comfort and allows you to work in the most rugged conditions.

- Durable 14 oz. Indura® denim fabric offers a casual look
- Covered zipper-fly closure and bar tacks at stress point for added durability
- Two front pockets, two rear pockets and a side tool pocket
- Generous fit for ease of movement



TSP_ _

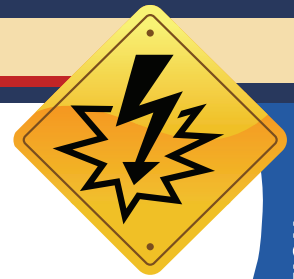
TSP FR Overpant

Constructed with Indura Ultra Soft®. FR Velcro waistband and generous cut in the legs. Loose fit allows for easy donning and doffing. Available in 8, 12 and 20 cal/cm².

- Elastic waistband with FR Velcro front closure
- Wide-cut legs with FR Velcro cuff closure
- Excellent layering piece for added protection

Also available in Dupont® Protera™

Arc Rating = Either ATPV or Ebt



FR WORKWEAR



C09_ _42LC

C09 FR Lab Coat

- Hidden snap closure down the front
- Exterior breast pocket and two front lower pockets
- Standard coat length is 42 inches

Workwear comes standard in the following fabrics:

4.5 oz. Nomex® IIIA	ATPV = 4 cal
6.0 oz. Nomex® IIIA	ATPV = 5.7 cal
6.5 oz. Dupont® Protera™	ATPV = 8.5 cal
8.0 oz. Dupont® Protera™	ATPV = 12.3 cal
5.5 oz. Indura Ultra Soft®	ATPV = 6 cal
7.0 oz. Indura Ultra Soft®	ATPV = 8 cal
9.0 oz. Indura Ultra Soft®	ATPV = 12 cal
13.0 oz. Indura Ultra Soft®	ATPV = 20 cal

Custom materials and colors available upon request



C88_ _32

C88 FR Coverall

- Heavy duty two-way covered zipper down the front for easy entry
- Two breast pockets with flaps and hidden snap closures, two rear pockets and two front slash pockets with pass-through slashes for access to inner-clothing
- All metal covered to ensure no contact with skin

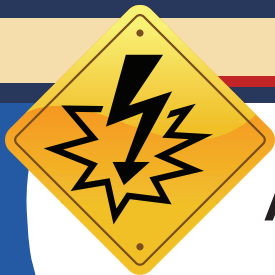
C45 FR Bib Overall

- Quick disconnect and easy adjustable shoulder straps for quick entry
- FR Velcro fly closure and plastic Vislon® zipper calf closure for easy boot entry
- Two slash pockets with pass-through slashes for access to inner-clothing
- Rear pockets



C45_ _RG

Arc Rating = Either ATPV or Ebt



ARC RATED HOODS, CAPS AND LINERS

FR KNIT HOODS – BALACLAVAS



H61RK

**Double layer
Carbon Kevlar®**
ATPV = 27 cal/cm²



H18CX

**Double layer
black CarbonX®**
ATPV = 23 cal/cm²



H61MH

**Double layer white
Nomex® Modacrylic**
ATPV = 15 cal/cm²



H11RY

**Navy blue Indura
Ultra Soft®**
ATPV = 12 cal/cm²

FR NOMEX® KNIT CAPS



HNC2OR



HNC2BK

Our soft FR 100% Nomex® knit caps provide excellent warmth as well as FR protection. One size fits most. FR Modacrylic hat also available.

ATPV = 35 cal/cm²

*Ask about
our custom
Nomex®
embroidery*

FR WINTER LINERS



H74UP11

**Navy Indura Ultra Soft® with
Red Sanded Indura® Lining**
ATPV = 32 cal/cm²



H74FL10

Nomex® Fleece
ATPV = 24 cal/cm²



H74NR12

**Nomex® IIIA Winter Liner
with Quilted Nomex® Lining**
ATPV = 48 cal/cm²

Arc Rating = Either ATPV or Ebt



FR FLEECE SWEATSHIRTS

Our premium FR sweatshirts are an NSA favorite. The rugged sweatshirts are designed to have more room in the hood, shoulders, chest and sleeves. Available in three different styles: classic crew, hooded pullover, and hooded full zipper. Sweatshirts can be worn as a stand alone garment, or as a layer piece for added protection.



C21__02

FR Crew Neck Sweatshirt

- Classic crew neck styling
- Ribbed collar and cuffs
- Generous fit
- Warm but not "weighty"



C21__03

FR Hooded Pullover Sweatshirt

- Rugged sweatshirt has a generous fit
- Drawstring hood to fit over standard hard hat
- Ribbed cuffs



C21__05

FR Hooded Sweatshirt with Zipper

- Premium front zipper closure with flap/covers zipper line completely
- FR Velcro tab closure at neckline for secure fit
- Drawstring hood to fit over standard hard hat
- Generous fit
- Ribbed cuffs



FR Nomex® Polar Fleece Hooded Sweatshirt

- Plastic Vislon® zipper closure
- Drawstring hood to fit over standard hard hat
- Available in Navy Blue and Black
- 7.6 oz. Nomex® Polar Fleece
Ebt = 24 cal/cm²



C23__05

Also available as a jacket without hood (C23__01)

FLEECE FABRIC	CREW	HOODED/PULLOVER	HOODED/ZIPPER
11 oz. Indura Ultra Soft® Ebt = 21 cal/cm ²	● ●	● ●	● ●
10 oz. Reliant Ebt = 18 cal/cm ²	● ●	● ●	● ●
14 oz. Reliant Ebt = 28 cal/cm ²	●	●	●

CHART COLOR KEY		
● Light Gray	● Navy Blue	● Orange

Color chart does not represent fabric colors exactly
Call our customer service department for other fabric and color availability.

Arc Rating = Either ATPV or Ebt



FR OUTERWEAR

ARC FLASH PROTECTION

FR Outerwear

C34 FR Lined Bomber Jacket

Constructed from 11 oz. Indura Ultra Soft® Brown Duck lined with FR Modaquilt®.

- Plastic Vislon® front closure
- 2 lower front pockets
- Snug fit
- ATPV = 47 cal/cm²

Also available in Nomex® IIIA and Navy Indura Ultra Soft®

**C34_ _MQ_ _30PS****C45 FR Lined Bib Overall**

Constructed from 11 oz. Indura Ultra Soft® Brown Duck lined with FR Modaquilt®.

- Quick disconnect shoulder straps
- FR Velcro fly closure and covered leg zipper with gusset
- Tool pocket on right leg
- ATPV = 47 cal/cm²

Also available in Nomex® IIIA and Navy Indura Ultra Soft®

**C45_ _MQ_ _RG****C18 FR Lined Parka Jacket**

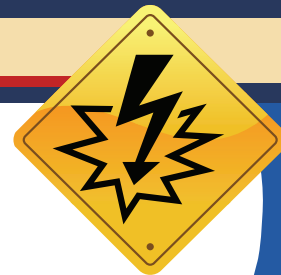
Constructed from 9 oz. Navy Indura Ultra Soft® with sewn on Parka hood. The jacket is completely lined with FR Modaquilt®.

- Covered metal zipper front closure with storm flap with FR Velcro
- Larger hood to fit over standard hard hat
- Large front pockets with flaps
- ATPV = 40 cal/cm²

Also available in Nomex® IIIA and Indura Ultra Soft® Brown Duck

**C18_ _MQ_ _3507**

Arc Rating = Either ATPV or Ebt



FR OUTERWEAR



C34 FR Lineman's Jacket

Constructed from 11 oz. Indura Ultra Soft® Brown Duck lined completely with red sanded Indura®.

- Covered zipper with FR Velcro tabs
- Pass through flap for fall protection
- Heavy duty cargo pockets
- Hidden knit wrist
- Generous elastic waistband
- ATPV = 39.9 cal/cm²

C34UMRS__3008

(with hood)

C34UMRS__3008NH

(no hood)



C55 FR Hooded Field Coat

Constructed with 9 oz. Navy Indura Ultra Soft® outer shell lined with red sanded Indura® for added comfort and protection.

- Plastic Vislon® front closure
- 2 lower front pockets
- Sporty styling
- Side elastic waistband
- ATPV = 32 cal/cm²

C55UPRS__30T



J02 FR Lined Jean

Our popular jean provides casual comfort and allows you to work in the most rugged conditions.

- Durable 14 oz. Indura® denim fabric offers a casual look
- 7 oz. red sanded Indura® lining for added warmth and protection
- Covered zipper-fly closure and bar tacks at stress point for added durability
- Two front slash pockets, two rear pockets and a side tool pocket
- Generous fit for ease of movement
- ATPV = 26.3 cal/cm²

J02DJRS__W__I

Arc Rating = Either ATPV or Ebt



LEVEL 2 AND LEVEL 3 ARC GUARD™ CLOTHING

LEVEL 2

8 cal/cm² – Indura Ultra Soft®
 8 cal/cm² – Protera™
 12 cal/cm² – Indura Ultra Soft®
 20 cal/cm² – Indura Ultra Soft®

LEVEL 3

25 cal/cm² – Indura Ultra Soft®
 37 cal/cm² – Caramel brown multi-layer
 Nomex®/Kevlar®

Level 2 and Level 3 clothing items are available in short coat/bib overall, long coat/legging or coverall styles.

For Kit
Options
refer to
page 6

COLOR CHART



NAVY



KHAKI



MEDIUM BLUE

Ask about other
color options.

LEVEL 2

Minimum Arc Rating for Level 2 = 8 cal/cm²

LEVEL 3

Minimum Arc Rating for Level 3 = 25 cal/cm²



C04UP_3203

32" Short Coat
shown with C45UP_30
bib overall
(12 cal garment)



C88UJ

8 cal Coverall



C04UTUK_3225

32" Short Coat



H16HAT10CALCAFS

Faceshield with Hard
Hat with Chin Cup



H65UTUKHH25

Hood with Faceshield,
Universal Hard Hat
Adapter



C04UTUK_4925

49" Long Coat
shown with
L05UTUK leggings

Arc Rating = Either ATPV or Ebt



LEVEL 4 ARC GUARD™ CLOTHING

LEVEL 4

40 cal/cm² – Navy Indura Ultra Soft®

40 cal/cm² – Khaki Protera™/Nomex®/Kevlar®

50 CAL

50 cal/cm² – Royal Blue Nomex®/Kevlar®

Level 4 clothing items are available in short coat/bib overall, long coat/legging or coverall styles.

COLOR CHART



NAVY



KHAKI



ROYAL BLUE

Ask about other color options.

For Kit Options refer to page 7

LEVEL 4

Minimum Arc Rating for Level 4 = 40 cal/cm²



C45LIQT __ 3240

Bib Overall with 32" inseam (40 cal garment)



C04LIQT __ 3240

32" Short Coat with Velcro. Also available with covered zipper.



C88NRQT __ 32

50 cal Coverall with 32" inseam



H65LIQTHH40

Hood with Faceshield, Universal Hard Hat Adapter



H65NRQTHH

Hood with Faceshield, Universal Hard Hat Adapter



C04NRQT __ 3203

32" Short Coat shown with C45NRQT __ 32 bib overall (50 cal garment)

Arc Rating = Either ATPV or Ebt



LEVEL 4 ARC GUARD™ CLOTHING

65 CAL

65 cal/cm² – Caramel brown multi-layer
Nomex®/Kevlar®

100 CAL

100 cal/cm² – Caramel brown multi-layer
Nomex®/Kevlar®

100 cal suits offer the highest protection from National Safety Apparel. Its 22 oz. seven layer construction of Nomex® and Kevlar® fabrics offer the ultimate in protection for workers that are exposed to extreme situations of Arc Fault exposures.

Level 4 clothing items are available in short coat/bib overall, or long coat/legging styles.

65 CAL

Minimum Arc Rating for Level 4 = 40 cal/cm²



C45KDQT_32

Bib Overall with
32" inseam



C04KDQT_3203

32" Short Coat



H65KDQTHH

Hood with Faceshield,
Universal Hard Hat
Adapter



C04KDQE_3203

32" Short Coat



H65KDQEHH

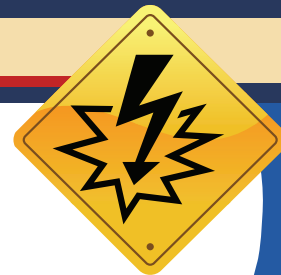
Hood with Faceshield,
Universal Hard Hat
Adapter



C04KDQE_3203

32" Short Coat shown
as a complete ensemble

Arc Rating = Either ATPV or Ebt



ARC FLASH AND CROSSVENT™ HOODS

The innovative NSA CrossVent™ Arc Flash Hood provides a gentle and quiet breeze that keeps you cool and your faceshield clear. The small (60mm) fans are quiet and battery powered. You also get the confidence of Arc Guard™ protection and compliance with ASTM F2178. CrossVent™ hoods are available in 12, 20, 25, 40, 50, 65 and 100 cal.



H65KDQTFAN

Arc Rating = 65 cal/cm²

Fans are battery powered.



Tested to
ASTM F2178



H65LIQTDKHH40

Arc Rating = 40 cal/cm²

40 cal Arc Flash Hood with FR Performance Wear Liner is designed with three major properties:

- **Odor & Hygiene Maintenance:** Inner layer fabric inhibits the growth of odor-causing bacteria and fungi that is typically present in moist, warm environments.
- **Moisture Management:** Wicks moisture away from the skin and transports it to the outside of the fabric.
- **Flame Resistance:** Material is flame resistant, no melt, no ignite performance with an extra layer of FR protection.

**FR
Performance
Wear Liner**

Note: CrossVent™ hoods with internal fans are NOT NIOSH approved and are NOT intended to be used as a respirator.

STANDARD ARC FLASH HOODS

Tested to ASTM F2178



12, 20, 40 cal/cm²



25, 40 cal/cm²



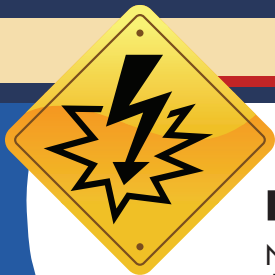
50 cal/cm²



65, 100 cal/cm²

Ask about other material and color options.

Arc Rating = Either ATPV or Ebt



FR FOOD PROCESSING

NSA's unique *no buttons, no pockets* FR food processing work apparel was created specifically for the food processing industry.

C56 FR Food Processing Shirt

- Folded placket with covered gripper snaps
- Generous cut allows for unrestrictive movement
- Gripper snaps on cuffs



C56_FS

H01 FR Hair Net and Beard Net



H01NYHN Hair Net
with
H01NYBN Beard Net

The hair net and beard net are made of lightweight Nomex® knit material for comfort and protection.

ATPV = 2.7 cal/cm²

C54 FR Knit Long Sleeve Food Processing Shirt

- Full cut provides unrestrictive movement
- Smooth covered neck and shoulder seam for exceptional comfort
- Rib knit cuffs provide a secure fit



C54_LSNP



C09_42LCFS

C09 FR Food Processing Lab Coat

- Folded placket with covered gripper snaps down the front
- Side pass through pockets
- Generous cut allows for unrestrictive movement
- Gripper snaps on cuffs
- Standard coat length is 42 inches

Ask about other material and color options.

Arc Rating = Either ATPV or Ebt



FR HI-VIS CLOTHING



Class 2 FR Mesh Vest

- 6 oz. Yellow FR Mod-acrylic/Kevlar® hi-vis mesh
- 2" FR reflective striping
- Available with plastic Vislon® front zipper(z) or FR Velcro(v) closure
- Inner left chest pocket
- ATPV = 5.1 cal/cm²

V00HA__2Z

ANSI 107 Class 2 Compliant



Class 3 FR Mesh Vest

- 6 oz. Yellow FR Mod-acrylic/Kevlar® hi-vis mesh
- 2" FR reflective striping
- Available with plastic Vislon® front zipper(z) or FR Velcro(v) closure
- Inner left chest pocket
- ATPV = 5.1 cal/cm²

V00HA__3V

ANSI 107 Class 3 Compliant



Class 2 FR Woven Vest

- 5.5 oz. Yellow FR Modacrylic hi-vis woven
- 2" FR reflective striping
- Available with plastic Vislon® front zipper(z) or FR Velcro(v) closure
- Inner left chest pocket
- Ebt = 5.5 cal/cm²

V00HV__2V

ANSI 107 Class 2 Compliant



FR Hi-Vis Vest w/FR Thermal Liner

- 6 oz. Vest lined with FR Modaquilt®
- 2" FR reflective striping
- Front zipper closure

C01HVMQ__ST

ANSI 107 Class 2 Compliant



FR Hooded Sweatshirt

- Pullover hooded style sweatshirt
- 2" FR reflective striping
- Drawstring hood to fit over standard hard hat
- Ebt = 21 cal/cm²

C21WI__03ST

Does not meet ANSI 107



FR Brown Duck Coat

- 11 oz. Indura Ultra Soft® Brown Duck
- 2" FR reflective striping
- Modaquilt® liner for added protection
- ATPV = 47 cal/cm²

C34UMMQ__30PSST

Does not meet ANSI 107

Arc Rating = Either ATPV or Ebt



FR UNDERGARMENTS



C54DK__LSNP

4 oz. FR Performance Wear T-Shirt

- **Odor & Hygiene Maintenance:** Inner layer fabric inhibits the growth of odor-causing bacteria and fungi that is typically present in moist, warm environments.
- **Moisture Management:** Wicks moisture away from the skin and transports it to the outside of the fabric.
- **Flame Resistance:** Material is flame resistant, no melt, no ignite performance with an extra layer of FR protection.



Offered in:

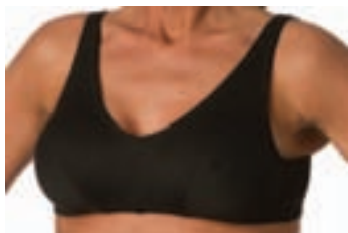
ATPV = 1.9 cal/cm²

Heathered Navy, Khaki and Olive Green

Layering Information

4.5 oz. Nomex® IIIA over FR Performance Wear
7 oz. Indura Ultra Soft® over FR Performance Wear
6.25 oz. Pro-C FR™ over FR Performance Wear

Ebt = 9.8
ATPV = 15.2
Ebt = 17.4



BRABG__

8 oz. Nomex® Arc Bra

ATPV = 8 cal/cm²

8 oz. Nomex® Arc Panty

ATPV = 8 cal/cm²



U40BG__

Mock
Turtleneck
U20WW



**Bottoms
U50WW**

Nomex® Waffle Weave Long Underwear

PART NUMBER	STYLE	ARC RATING/ Ebt
U50WW	Nomex® Waffle Weave - Bottom	4 cal/cm ²
U10WW	Nomex® Waffle Weave - Crewneck	4 cal/cm ²
U20WW	Nomex® Waffle Weave - Mock Turtleneck	4 cal/cm ²
U59RY	Navy Indura Ultra Soft® - Bottom	12 cal/cm ²
U10RY	Navy Indura Ultra Soft® - Crewneck	12 cal/cm ²
U20RY	Navy Indura Ultra Soft® - Mock Turtleneck	12 cal/cm ²
U59PI	Navy Pro-C FR™ - Bottom	11 cal/cm ²
U10PI	Navy Pro-C FR™ - Crewneck	11 cal/cm ²
U20PI	Navy Pro-C FR™ - Mock Turtleneck	11 cal/cm ²

Arc Rating = Either ATPV or Ebt



FR BALACLAVA & ARC GOGGLE COMBINATION

The Arc Goggle & Balaclava Combination is ideal for utility workers needing face protection from an electric arc. The Arc Goggle in combination with the Balaclava provides superior flexibility, outstanding visual light transmission (VLT) and exceptional comfort. The Arc Goggle & Balaclava Combination was tested in combination using the ASTM F2178 test method.

This combination is not approved for NFPA 70E-2009.



Arc Goggle
H08GGL

Hood
H62RK

Arc Goggle & Double Layer Carbon Kevlar® Balaclava Combination

ATPV = 27 cal/cm²



Arc Goggle
H10GGLNN

Hood
H49CX

High Energy Arc Goggle & Triple Layer Carbon X® Balaclava Combination

ATPV = 45.8 cal/cm²

MISCELLANEOUS ITEMS



IKITTOOL9

Insulated Tool Roll

The Insulated Tool Roll includes:

- 9" Linesman's Pliers
- 7 1/2" Diagonal Cutting Pliers
- 7" Needle Nose Pliers
- Combination Stripper and Crimper
- 3/16" x 4 1/2" Slotted Screwdriver, Cushion Grip
- 3/16" x 6" Slotted Screwdriver, Cushion Grip
- 1/4" x 6" Slotted Screwdriver, Cushion Grip
- #1 x 3" Phillips Screwdriver, Cushion Grip
- #2 x 4" Phillips Screwdriver, Cushion Grip

Faceshield Unit
H16HAT10CALCAFS



FR Navy Reliant Socks
LSOCK



FR Khaki Indura Ultra Soft® Doo Rag
H01UXDRLT (Knit)
H01TJDRML (Woven)



Arc Rating = Either ATPV or Ebt



ARC & FLAME RESISTANT RAINWEAR

Ideal for electrical workers, NSA's Arc Rated Hi-Visibility Rainwear offers protection from the elements, potential arc hazards and open flames.

NSA's rainwear meets ASTM F 1891, NFPA 70E, ANSI 107 and other appropriate specifications.



Arc H₂O 30" Length Jacket

This premium jacket is constructed with 10 oz. FR Polyurethane (PU) moisture barrier with a woven FR cotton weft knit fabric.

- Batwing pattern creating freedom of movement
- Tuck away roll-up hood in collar
- Covered zipper/snap closures
- FR Velcro tab wrist cuff adjusters
- Back ventilation system with FR mesh for increased airflow
- D-Ring opening for fall protection
- Two front pockets with Velcro closure
- Key stress points reinforced for durable construction
- Hi-vis reflective trim

Also available in a 48" length coat



PRODUCT COLOR CHART



FLUORESCENT
ORANGE

ATPV = 21.6 cal/cm²
EBTAS = 31.9 cal/cm²
HAF = 89%



FLUORESCENT
YELLOW

ATPV = 19 cal/cm²
EBTAS = 28 cal/cm²
HAF = 87%

Arc H₂O Bib Pant

- Quick release suspender system
- Snap fly closure
- FR Velcro tab leg cuff adjusters
- Hi-vis reflective trim

Also available in an elastic waist pant



Ask about other available Rainwear lines:

Arc Essential - Entry level arc and hi-visibility protective rainwear.

Arc Advance - Offers deluxe features and provides arc and hi-visibility protection. The unique material is formulated to create a lightweight supple feel.

Arc H₂O (shown) - Premium level hi-visibility protective rainwear offers deluxe features and has superior arc protection. The FR Polyurethane (PU) material is durable, flexible and will not become brittle as it ages.

Arc Extreme - The unique multi-layered trilaminate material offers arc protection and breathability. The Nomex® layers provide protection against momentary electrical arcs and open flames. The PTFE microporous moisture barrier is windproof, waterproof and breathable. The combined layers create an arc protective and breathable system that reduces worker heat stress.

Other rainwear materials and colors available upon request.

Arc Rating = Either ATPV or Ebt



HAND PROTECTION — GLOVES

NSA specializes in gloves for high-heat environments. We recognize the fact that all of our customers' applications are unique. Pictured here are some of our most widely used gloves - those made of Fiberglass, Thermobest™, Norbest™ and Kevbest™.



Pictured here from left to right are four of our most popular gloves:
 White Fiberglass **G51GLRV14**
 Thermobest™ **G64TCVB1405**
 Norbest™ 822 **G51PBRH14**
 Kevbest™ **G51KVLC14**

NSA | PRODUCT CONFIGURATOR SYSTEM

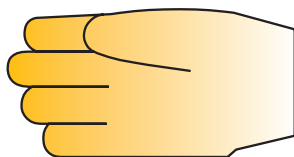
We are proud to present the NSA Product Configurator System that will guide you in customizing your order to meet your specific needs. Refer to the example below to create your own product code, and do not hesitate to contact NSA for assistance.

EXAMPLE PRODUCT CODE: **G51** **TC** **VB** **14**
 Step 1 Step 2 Step 3 Step 4

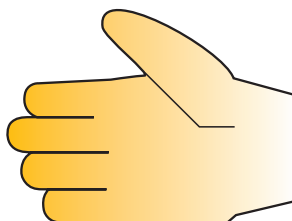
YOUR PRODUCT CODE: _____
 Step 1 Step 2 Step 3 Step 4

HIGH HEAT GLOVES

STEP 1: SELECT A STYLE



G51 Straight Thumb



G64 Winged Thumb; open-palm style

STEP 2: SELECT A BASIC CLOTH

TC, PB, PC and KV gloves come standard with an 8 oz. Kevbest™ cuff

GL Fiberglass (35 oz.) is ideal for high-heat, low-abrasion applications. This is one of NSA's best values.

Abrasion Resistance - 4; Maximum Temperature 800°F

TC Thermobest™ (22 oz.) is a Kevlar® blend, offering heat and abrasion resistance. It is an ideal choice for a wide variety of applications. Thermobest™ is NSA's most popular fabric.

Abrasion Resistance - 7; Maximum Temperature 800°F

PB Norbest™ 822 (22 oz.) is a unique PBI®/Kevlar® blend. It can be used in temperatures over 1000°F.

Abrasion Resistance - 6; Maximum Temperature 1300°F

PC Norbest™ 845 (45 oz.) is the heaviest PBI®/Kevlar® blend available. It can be used in extremely high temperatures and offers high durability.

Abrasion Resistance - 8; Maximum Temperature 2000°F

KV Kevbest™ (8 oz.) is made of 100 percent Kevlar® twill for superior cut and abrasion resistance.

Abrasion Resistance - 9; Maximum Temperature 650°F

Abrasion resistance is rated on a scale from 1 to 10, with 10 being the maximum.

STEP 3: SELECT A LINING

XX No lining

LC 12 oz. Cotton palm offering excellent comfort for lower-heat applications

VB 12 oz. Wool, offering good heat protection

RV 12 oz. Reversed wool (reversed for comfort)

VH 15 oz. Wool, offering superior heat protection

RH 15 oz. Reversed wool (reversed for comfort)

NL 9 oz. Nomex® felt, offering maximum heat protection

STEP 4: SELECT A LENGTH

14 14 inches

18 18 inches

OPTIONS

Upon ordering, you may request one or more of the following options:

- Wool palm patch for added protection
- Nomex® palm patch for maximum protection
- Aluminized back for radiant heat protection
- Leather palm and thumb for greater dexterity
- Economical Goldenbest fiberglass cuff (05)

Other base cloths, linings, lengths and options available upon request.



KEVLAR® TERRYBEST™ GLOVES

Terrybest™ and Carbon Kevlar® Terrybest™ are available in both 100 percent Kevlar® terrycloth and Carbon Kevlar® blend terrycloth. They provide excellent cut protection and the maximum dexterity available in a heat-protective glove. Also available in reverse to eliminate snagging, Terrybest™ offers superior heat resistance and can function in temperatures up to 1000°F (or 538°C). Carbon Kevlar® Terrybest™ offers heat protection up to 1600°F (871°C).

NSA | PRODUCT CONFIGURATOR SYSTEM

EXAMPLE PRODUCT CODE: **G44** **RT** **RF** **14**
Step 1 Step 2 Step 3 Step 4

YOUR PRODUCT CODE: _____
Step 1 Step 2 Step 3 Step 4

KEVLAR® TERRYBEST™ GLOVES

G51KTVF14
 Kevlar®



STEP 1: SELECT A STYLE

G44 Ambidextrous Regular – a tight-fitting glove for maximum dexterity
G43 Ambidextrous Large – a close-fitting glove for good dexterity
G45 Ambidextrous Jumbo – a more generous cut, allowing for heavier linings
G51 Straight Thumb
G64 Winged Thumb

G51RTVF14116
 Aluminized Back
 (For radiant heat)



STEP 2: SELECT A BASE CLOTH

KT and RT gloves come standard with an 8 oz. Kevbest™ cuff.
KT Kevlar® Terrybest™ (22 oz.)
RT Reversed Kevlar® Terrybest™ (22 oz.) is reversed to eliminate snagging.
AT Carbon Kevlar® Terrybest™ (26 oz.)

STEP 3: SELECT A LINING

VF 8 oz. Wool palm
RF 8 oz. Reversed-wool palm (reversed for comfort)
NL 9 oz. Nomex® felt, offering maximum heat protection
SR 13 oz. Reversed Fonda wool

G44RTRF12
 Reversed Kevlar®
 Terrybest™



STEP 4: SELECT A LENGTH

12 12 inches
14 14 inches
18 18 inches

G51ATNL14
 Carbon Kevlar®



OPTIONS

Upon ordering, you may request one or more of the following options:

- Aluminized back for radiant heat protection (for G51 and G64) (116)
- Brown FR duck cuff for cost savings (010)
- Terrybest™ cuff for premium protection

Other linings, lengths and options available upon request.



LEATHER FOUNDRY GLOVES

Leather gloves provide excellent abrasion protection, making them ideal for foundry applications up to 450°F. Leather is the material of choice for many customers who rely on its dexterity and great value. For superior protection from radiant heat and molten metal splash, aluminum can be added to the back of our leather gloves.

NON-ALUMINIZED LEATHER GLOVES

DJXGSP365

This winged-thumb glove with leather back and palm is one of our best values. The 12-inch-long glove has a flame-proof cotton cuff, double-wool-lined palm and cotton-lined back.



DJXGSP25NL

This 100 percent leather, winged-thumb glove is NSA's all-purpose welding glove. It features a one-piece leather back, is cotton flannel lined and is 13 inches in length.

DJXG465

Another great value, this blue leather, wool-lined glove features a long riveted cuff for excellent arm coverage. It is 14.75 inches in length.



DJXG223

This 14-inch, winged-thumb leather welding glove features welted fingertips and a welted thumb for added strength, as well as a grommet at the cuff for easy hanging storage. A Velcro cuff closure secures the glove.

ALUMINIZED-BACK LEATHER GLOVES



DJXG395

Our most popular aluminized glove features an all-leather palm with an aluminized rayon back. The winged-thumb glove is wool lined and is 13 inches in length.

- **DJXG395CL** Our cotton-lined version of the pictured glove provides less heat protection, but greater comfort.
- **DJXGAR39516** For more arm coverage, this 16-inch version features three extra inches of our comfortable cotton-lined cuff.
- **DJXG395SLKKWOOE** For protection from sparks and falling slag, this version features a Kevlar® knit wristband.



DJXGSP382

For maximum molten metal splash protection, this leather glove is backed with aluminized Carbon Kevlar®. Aluminized leather forefinger and thumb patches provide extra protection in heavy-wear areas. This 13-inch, wool-lined glove also features a leather crotch strap.



DJXG1788DBWL

This superior puncture- and abrasion-resistant glove features a leather palm and aluminized leather back. It is wool-sack lined and is 13 inches in length.

- **DJXG1788DBWLSP** This version features extra palm insulation for enhanced protection.
- **DJXG8DBWTSN** Glove and **P89KA001** Patch – This combination of the above-pictured glove with added snaps and a removable aluminized patch is economical, as the removable patch is less expensive to replace than an entire glove. These items are sold separately.



DJXG705165XL

This 16.5-inch glove features a thermal leather palm — along with a leather palm patch — for increased heat protection and longer life. The glove has a two-piece aluminized rayon back and thumb, a wool-lined palm and a cotton-lined cuff. A Velcro cuff closure secures the glove.

Contact NSA to custom order leather gloves not featured on this page.



MITTENS

NSA mittens are ideal for applications that demand superior hand protection – but do not require a high amount of manual dexterity. Refer to The NSA Product Configurator System below to create your product code.



EXAMPLE PRODUCT CODE: M11 TC RV 13
Step 1 Step 2 Step 3 Step 4

YOUR PRODUCT CODE: _____
Step 1 Step 2 Step 3 Step 4

MITTENS

STEP 1: SELECT A STYLE



M11

This standard, reversible mitten is our most popular mitten style.



M60

This generously cut mitten provides ample room for extra layers of protection and heavy linings.



M62

This non-reversible, one-finger mitten allows for better index finger dexterity. Because of the one-finger cut, covers are not compatible with this mitten style.

STEP 2: SELECT A BASE CLOTH

(Refer to abrasion and temperature ratings on page 25)

- HM** Leather is ideal for moderate-heat, high-abrasion applications. This is a heavy-weight, pearl-colored split leather.
- GL** Fiberglass (35 oz.) is ideal for high-heat, low-abrasion applications. This is one of NSA's best values.
- TC** Thermobest™ (22 oz.) is a Kevlar® blend, offering heat and abrasion resistance. It is NSA's most popular mitten base cloth.
- ZP** Zetex Plus™ (40 oz.) is a coated, high-temperature fiberglass cloth with high durability.
- WH** White hi-temp coated fiberglass specifically for investment casting.
- PB** Norbest™ 822 (22 oz.) is a unique PBI®/Kevlar® blend that offers superior heat protection.
- PC** Norbest™ 845 (45 oz.) is the heaviest PBI®/Kevlar® blend available. It offers maximum heat protection.

STEP 3: SELECT A LINING

- XX** No lining
- VB** 12 oz. Wool, offering good heat protection
- RV** 12 oz. Reversed wool (reversed for comfort)
- VH** 15 oz. Wool, offering superior heat protection
- RH** 15 oz. Reversed wool (reversed for comfort)
- NL** 9 oz. Nomex® felt, offering maximum heat protection

STEP 4: SELECT A LENGTH

- 11** 11 inches
- 13** 13 inches
- 18** 18 inches

OPTIONS

- Upon ordering, you may request one or more of the following options:
- Double-layered, wool felt palm patch for added heat protection
 - Double-layered, Nomex® felt palm patch for maximum heat protection
 - Lining of a second base cloth for added heat protection
 - Thumb patch for increased heat protection



SPECIALTY MITTENS FOR HOT GLASS APPLICATIONS

NSA has been providing heat-protective specialty mittens to the glass industry since the company's founding. Featured on this page are our three most popular, most effective hot glass handling mittens. In addition, you will find coordinating mitten covers that provide added heat protection for the hands and that extend the life of the mittens.



M25TCRW1101

A great value, this Thermobest™ mitten features a Thermobest™ patch and thumb tape for added heat protection where it counts. Extra wool and felt insulation on the palm and thumb provide added heat protection, and the wool lining is reversed for comfort. The standard length is 11 inches.



M25TCLW12001

This deluxe 22 oz. Thermobest™ mitten features a 14 oz. ballistic Kevlar® patch and thumb tape, providing excellent heat protection in critical areas. It is insulated with a double-layered Nomex® palm patch and is wool lined for added thermal protection. The standard length is 12 inches.



M25KTLW10001

Our 22 oz. Kevlar® Terrybest™ glass handling mitten is our most dexterous mitten. It comes with a ballistic Kevlar® patch and thumb tape on the outside and heavy-duty insulation on the inside. It is fully wool lined for added thermal protection. The standard length is 10 inches.



M09TCXX09

This standard 22 oz. Thermobest™ slipover mitten cover — provides added protection to the M25TC mittens featured on this page. It features an open top and thumb, and is unlined. The length is 9 inches.



MITTEN COVERS

Mitten covers are available for M11 - and M60-style mittens. In addition, NSA features the M80 open-finger mitten cover, which is a general-purpose cover for standard mittens and gloves. Typically made without liners, NSA covers fit over the finger portion of the mitten. Covers not only extend the life of the mitten, but also are less expensive to replace. The standard length for an NSA cover is 10 inches.



EXAMPLE PRODUCT CODE: **M10** **TC** **XX** **10**
Step 1 Step 2 Step 3 Step 4

YOUR PRODUCT CODE: _____
Step 1 Step 2 Step 3 Step 4

MITTEN COVERS

STEP 1: SELECT A STYLE



M10

Cover for M11
Mitten

M59

Cover for M60
Mitten

M80

General-purpose, open-top cover for a variety of NSA gloves and mittens (most commonly paired with the G51 glove)

STEP 2: SELECT A MATERIAL

(Refer to chart on page 28 for material descriptions)

HM	Leather
GL	Fiberglass (35 oz.)
TC	Thermobest™ (22 oz.)
ZP	Zetex Plus™ (40 oz.)
PB	Norbest™ 822 (22 oz. PBI/Kevlar®)
PC	Norbest™ 845 (45 oz. PBI/Kevlar®)
WH	White High Temp Fyberbest®

PRODUCT SPOTLIGHT



Investment Casting Mitten and Cover

NSA manufactures a specially designed mitten and mitten cover for the investment casting industry — in which protection from extreme heat is needed for picking up hot molds and castings. The 13-inch mitten (**M60WHGH13012**) features an external White High Temp Fyberbest™ patch over a Thermobest™ base cloth, as well as a double-layered Nomex® palm patch and heavy wool lining. The standard, 10-inch White High Temp Fyberbest® cover (**M59WHXX10**) fits over the mitten, increasing thermal protection and extending the life of the mitten.



HAND PADS AND FINGER COTS

NSA offers a wide variety of square and rectangular hand pads for applications that require extra heat protection for the hands. Hand pads are easy to use and are made of flexible materials, allowing for a good grip on hot items. Because they are double-sided, hand pads have a longer life than non-ambidextrous gloves or mittens. In addition to square and rectangular hand pads, NSA offers a variety of customized heat-protective pads, finger guards and finger cots.



EXAMPLE PRODUCT CODE: **P02** **TC** **8I** **8I**
Step 1 Step 2 Step 3

YOUR PRODUCT CODE: **P02** **TC** **8I** **8I**
Step 1 Step 2 Step 3

HAND PADS



The **P85RT001** is made of reversed Kevlar® Terrybest™ and features one layer of felt insulation. A rounded top eliminates the added bulk of square corners. With eight rows of quilting, this hand pad features a hand strap to keep it in place. The standard size is 7 by 9½ inches.



The **P87HM001** is a rounded, leather hand pad with a hand strap. The standard size is 7 by 9½ inches.



The **DJXG76150A** is a leather hand pad with thumb. It features a steel-stapled palm patch and steel-stapled seams for added cut protection. A leather back strap holds the pad in place. The standard size is 6 by 9 inches.



P02
 This hand pad, available in a variety of sizes of squares and rectangles, features a double-layered wool felt lining.

STEP 1: SELECT A BASE CLOTH

HM Leather is ideal when abrasion protection is needed. This is a heavy-weight, pearl-colored split leather.

KV Kevbest™ (8 oz.) also offers high abrasion protection, but offers better heat protection than split leather.

TC Thermobest™ (22 oz.) is a Kevlar® blend, offering heat and abrasion resistance.

KT Kevlar® Terrybest™ (22 oz.) provides superior protection for high-heat, high-abrasion applications.

RT Reversed Kevlar® Terrybest™ (22 oz.) is reversed to prevent snagging.

STEP 2: SELECT A WIDTH

6I 6 inches

8I 8 inches

10I 10 inches

12I 12 inches

STEP 3: SELECT A LENGTH

6I 6 inches

8I 8 inches

10I 10 inches

12I 12 inches

Other materials, widths, lengths and lining options available upon request.

FINGER COTS



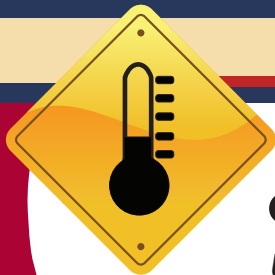
The **DJXG74750** is a leather finger guard for the thumb and first and second fingers. An elastic band at the back and at the wrist hold the guard in place. One size fits all.



The **DJXG70350A** leather finger cot features a one-piece, elastic back strap.



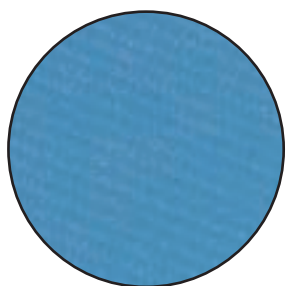
The **DJXG70350** leather finger cot features two elastic back straps for increased flexibility of the finger.



CRYOGEN SAFETY APPAREL

Ultra-cold protection

National Safety Apparel, Inc. – a market leader in protective gloves and apparel – introduces gloves and aprons for protection against cryogenic liquids and other ultra-cold environments. NSA's gloves are available in water-resistant and waterproof versions and have been tested to EN 511 (European Standard for Protective Gloves Against Cold) and other test methods such as the IFTH (Lyon, France) reference method for immersion in Liquid Nitrogen – ZL0102 (waterproof style only). Aprons are made with the same waterproof material as the gloves and provide full frontal splash protection.



With our Cryogen SaferGrip gloves, you get all the protection and performance of our standard Cryogen Waterproof gloves, plus a specially designed SaferGrip silicone-coated material in the palm for enhanced grip and durability. Inquire about SaferGrip gloves today.

Cryogen Safety Size Chart

Water-resistant gloves	Waterproof gloves	Waterproof SaferGrip gloves	Aprons
G99CRBE__ _R	G99CRBE__ _P	G99CRSG__ _P	A02CR24I_ _IC
Wrist length (WR) (12")	Wrist length (WR) (12")		36" length
Mid-arm length (MA) (14-15")	Mid-arm length (MA) (14-15")	Mid-arm length (MA) (14-15")	42" length
Elbow length (EL) (17-18")	Elbow length (EL) (17-18")	Elbow length (EL) (17-18")	48" length
Shoulder length (SH) (26-27")	Shoulder length (SH) (26-27")	Shoulder length (SH) (26-27")	54" length
Standard sizes include SM (8), MD (9), LG (10), XL (11)			
Product code spaces indicate style and size codes for gloves and length for aprons			

Note: Gloves and aprons are not for immersion in liquid cryogens.

Custom Designs available - call for a quote



FEATURED ALUMINIZED PRODUCTS

Protect yourself with greater visibility reflective striping aluminized coats, hoods and leggings. These products are designed with FR hi-vis striping from front to back allowing visibility against complex backgrounds.

HI-VIS ALUMINIZED COATS, HOODS AND LEGGINGS



Aluminized Hood

The aluminized hood is designed to protect the head from any injuries against heat, sparks, and molten metal splatter.

Aluminized Coat

The aluminized coat offers protection against heat, sparks and molten metal splatter. The hi-vis coat is offered in a variety of materials, styles & lengths. It's constructed to provide comfort, freedom of movement and protection that you need to work productively.

Aluminized Leggings

The aluminized leggings offer leg protection against heat, sparks and molten metal splatter.

LIGHTWEIGHT ALUMINIZED CARBON X® RAYON FLEECE COAT

The plain Carbon X® twill backing is designed to reduce heat stress by allowing air to circulate and perspiration to evaporate for a cooler, more comfortable work atmosphere. The aluminized Carbon X® Rayon coat allows for more freedom of movement and protection while in a working environment.

- Aluminized Carbon X® Rayon fleece front with plain Carbon X® twill backing
- The back features a convenient back flap and under-arm grommets for increased airflow
- Easy snap front with leather pull tabs
- Split sleeve with snaps for easy fastening
- Stand up collar for improved protection

C22AJ_48134





ALUMINIZED COATS AND PANTS

NSA features the four coat styles and one pants style pictured below. After selecting a style, use the Molten Iron Test Chart on page 35 to determine the most appropriate material for your application. Refer to chart for available sizes, lengths, and options for NSA aluminized coats and pants.



C17

Our standard coat features an aluminized front and back and snap closures. Options include a screen back or green sateen back.



C22

Our deluxe coat with snap closures and aluminized front and back features a back flap and under-arm eyelets for ventilation, as well as a split sleeve with snaps for easy fastening.



C47

This surgeon-style coat features an open back, an adjustable neck and waist tie straps.



C75

This half jacket with snap closures at the front comes standard with snaps for an attachable bib.



T45

These standard, aluminized overpants feature reinforced seat seams, belt loops and a snap closure.



COATS

EXAMPLE PRODUCT CODE: **C17** **NJ** **LG** **45**
Step 1 Step 2 Step 3 Step 4

YOUR PRODUCT CODE: _____
Step 1 Step 2 Step 3 Step 4

PANTS

EXAMPLE PRODUCT CODE: **T45** **NL** **XL** **32I**
Step 1 Step 2 Step 3 Step 4A

YOUR PRODUCT CODE: _____
Step 1 Step 2 Step 3 Step 4A

ALUMINIZED COATS AND PANTS

STEP 1: SELECT A STYLE

C17	Standard Coat
C22	Deluxe Coat with Ventilation
C47	Surgeon-Style Coat
C75	Half Jacket
T45	Overpants
T49	Deluxe Overpants (tapered/form-fitting)

STEP 2: SELECT A MATERIAL

(Refer to chart below right)

CZ	Plain Carbon X® (10 oz.)
NI	Plain Carbon Kevlar® (11 oz.)
NF	Plain Carbon Kevlar® (16 oz.)
AM	Aluminized Carbon Kevlar® (7 oz.) (not recommended for molten metal splash)
PF	Aluminized PBI®/Kevlar® (7 oz.) (not recommended for molten metal splash)
NB	Aluminized Carbon Kevlar® (9 oz.)
AJ	Aluminized Carbon X® Rayon (12.5 oz.)
NJ	Aluminized Carbon Kevlar® (13 oz.)
FA	Aluminized Fiberglass (16 oz.)
AS	Aluminized Acrysil (16 oz.)
NL	Aluminized Carbon Kevlar® (19 oz.)
RB	Aluminized Rayon (19 oz.)
TA	Aluminized Thermobest™ (19 oz.)

STEP 3: SELECT A SIZE

SM	Small	(40/42 chest; 33 sleeve; 32/34 waist)
MD	Medium	(44/46 chest; 34 sleeve; 36/38 waist)
LG	Large	(48/50 chest; 35 sleeve; 40/42 waist)
XL	Extra Large	(52/54 chest; 36 sleeve; 44/46 waist)
2X	Two-Extra Large	(56/58 chest; 37 sleeve; 48/50 waist)
3X	Three-Extra Large	(60/62 chest; 38 sleeve; 52/54 waist)

Note: Measure to fit over clothing

STEP 4: SELECT A COAT LENGTH

15	15 inches (half jacket)
30	30 inches
35	35 inches
40	40 inches
45	45 inches
50	50 inches

STEP 4A: SELECT AN OVERPANTS INSEAM LENGTH

29I	29 inches
32I	32 inches
34I	34 inches

OPTIONS

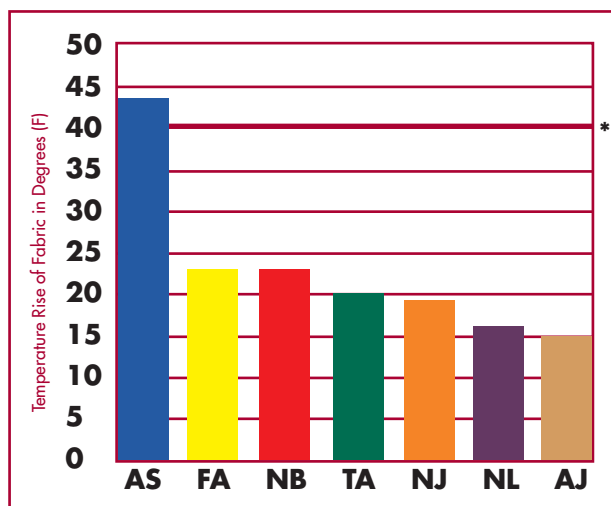
Upon ordering, you may request a change in the standard features. Options include Velcro, snap and zipper closures; zero, one or two breast pockets; zero, one or two back pants pockets; and zero or two front slash pockets.

Other popular options on these items include the following:

- Screen back for ventilation for C17 and C22 coats
- Green sateen back for C17 and C22 coats
- Velcro or leather pull-tab front closures for coats
- Sateen or wool-lined stand-up collar for coats
- Sateen or aluminum shirt-style collar for coats
- Snap-on bib for C75 (sold separately)

Other sizes, lengths, inseams and options available upon request.

MOLTEN IRON TEST CHART



16 oz. Aluminized Acrysil (AS):	44
16 oz. Aluminized Fiberglass (FA):	23
9 oz. Aluminized Carbon Kevlar® (NB):	23
19 oz. Aluminized Thermobest™ (TA):	20
13 oz. Aluminized Carbon Kevlar® (NJ):	19
19 oz. Aluminized Carbon Kevlar® (NL):	16
12.5 oz. Aluminized Carbon X® Rayon (AJ):	15

Testing was performed by an independent research facility using ASTM test method F 955. Two pounds of molten iron heated to 2850°F were poured from a height of 18 inches onto the fabric, which was positioned at a 70 degree angle. The temperature transfer was recorded using a calorimeter. Each material was tested three times by two calorimeters, yielding six readings per material. The maximum temperature rise reflected in the above chart represents the average maximum temperature rise taken from the six readings for each material type.

* Note: Extreme pain and second-degree burns occur when the temperature rise is over 40°F.



ALUMINIZED PROXIMITY AND APPROACH SUITS

Aluminized proximity suits are designed for extreme radiant heat conditions, where exposure to hot liquids or steam is possible. Our proximity suits feature a unique, quilted Nomex® and Neoprene®-coated polycotton liner, which serves as an excellent vapor barrier and heat insulator.

Aluminized approach suits are designed for ambient temperatures of no greater than 200°F with additional radiant heat protection. NSA approach suits, while providing approximately 95 percent heat reflectivity, are unlined. The standard hard-hat style, fiberglass-shell headgear features a 7- by 11-inch panoramic window and a gold-film-covered window shield that locks on with an aluminum bracket.

NSA

 PRODUCT
CONFIGURATOR
SYSTEM

TWO AND THREE-PIECE SUIT

EXAMPLE PRODUCT CODE: **C46** **KA** **LG**
Step 1 Step 2 Step 3

YOUR PRODUCT CODE: _____
Step 1 Step 2 Step 3

ONE-PIECE SUIT

EXAMPLE PRODUCT CODE: **C48** **PF** **LL**
Step 1 Step 2 Step 3A

YOUR PRODUCT CODE: _____
Step 1 Step 2 Step 3A

ALUMINIZED SUITS

STEP 1: SELECT A STYLE

C46 Three-Piece Suit

C48 One-Piece Suit

C82 Two-Piece Suit

STEP 2: SELECT A BASE CLOTH

PF Aluminized PBI®/Kevlar® (7 oz.)

KA Aluminized Kevbest™ (10 oz.)

FA Aluminized Fiberglass (16 oz.)

STEP 3: SELECT A TWO- OR THREE-PIECE SUIT SIZE

(Specify boot size upon ordering. Standard inseam is 29 inches.)

Coat and pant sizes can be different for C46 suit.)

Pants

SM	Small	(40/42 chest; 33 sleeve; 32/34 waist)
MD	Medium	(44/46 chest; 34 sleeve; 36/38 waist)
LG	Large	(48/50 chest; 35 sleeve; 40/42 waist)
XL	Extra Large	(52/54 chest; 36 sleeve; 44/46 waist)
2X	Two-Extra Large	(56/58 chest; 36 sleeve; 48/50 waist)
3X	Three-Extra Large	(60/62 chest; 37½ sleeve; 52/54 waist)

Note: Measure to fit over clothing.

STEP 3A: SELECT A ONE-PIECE SUIT SIZE

(Specify boot size upon ordering.)

SL Short (5'4" to 5'8")

RL Regular (5'9" to 6'1")

LL Long (6'2" to 6'6")

OPTIONS

Upon ordering, you may request one or more of the following options:

- Lined with quilted Nomex®/Neoprene® (Proximity Suits)
- Unlined (Approach Suits)
- Pouch: This lightweight back pouch provides protection for a self-contained air tank.

Other sizes and options available upon request.

C46

Three-Piece Suit—
This suit is made up of pants, a 36-inch coat and an aluminized hood. Gloves and overshoes also are included.



C48

One-Piece Suit—
This suit also comes with gloves and overshoes. (Pictured here with pouch option)

C82

Two-Piece Suit—
This is a coverall-style suit with an aluminized hood, gloves and overshoes.





WOOL CLOTHING

NSA's seasonal lineup of secondary protective clothing is designed primarily with workers' comfort in mind. Our wools are inherently flame retardant and keep the body warm even in the most frigid temperatures.



COATS

EXAMPLE PRODUCT CODE: **C09** **WL** **LG** **30**
Step 1 Step 2 Step 3 Step 4

YOUR PRODUCT CODE: _____
Step 1 Step 2 Step 3 Step 4

PANTS

EXAMPLE PRODUCT CODE: **T45** **WN** **LG** **32I**
Step 1 Step 2 Step 3 Step 4A

YOUR PRODUCT CODE: _____
Step 1 Step 2 Step 3 Step 4A



C09

Basic box-sleeve coat with single breast pocket, front snaps and shirt collar



T45

Wool overpants with one back patch pocket, snap fly and waist closures

WOOL CLOTHING

STEP 1: SELECT A STYLE

T45 Overpants
C09 Box-Sleeve Coat

STEP 2: SELECT A MATERIAL

WL Navy Wool (32 oz./ly)
WN Gray Wool (32 oz./ly)

STEP 3: SELECT A SIZE

SM	Small	(40/42 chest; 35 sleeve; 32/34 waist)
MD	Medium	(44/46 chest; 36 sleeve; 36/38 waist)
LG	Large	(48/50 chest; 37 sleeve; 40/42 waist)
XL	Extra Large	(52/54 chest; 38 sleeve; 44/46 waist)
2X	Two-Extra Large	(56/58 chest; 38 sleeve; 48/50 waist)
3X	Three-Extra Large	(60/62 chest; 39 sleeve; 52/54 waist)

STEP 4: SELECT A COAT LENGTH

30	30 inches
35	35 inches
40	40 inches
45	45 inches
50	50 inches

STEP 4A: SELECT A PANT INSEAM LENGTH

29I	29 inches
32I	32 inches
34I	34 inches

OPTIONS

Upon ordering, you may request a change in the standard features, which are listed in the photo captions above. Options include button, Velcro, snap and zipper closures; zero, one or two breast pockets; zero, one or two back pants pockets; and zero or two front slash pants pockets.

Other sizes, lengths, inseams and options available upon request.



HEAT / THERMAL PROTECTION

ALUMINUM INDUSTRY CLOTHING

NSA provides secondary protective clothing to several specific industries. Those in the aluminum industry rely on our apparel to protect their employees from the adherent qualities of splashed aluminum. Pictured below are our most popular coats, shirts, pants and coveralls for these applications.



COATS & SHIRTS

EXAMPLE PRODUCT CODE: **C09** **WZ** **LG** **45**
Step 1 Step 2 Step 3 Step 4

YOUR PRODUCT CODE: _____
Step 1 Step 2 Step 3 Step 4

PANTS, OVERPANTS & COVERALL

EXAMPLE PRODUCT CODE: **T30** **VJ** **LG** **32I**
Step 1 Step 2 Step 3 Step 4A

YOUR PRODUCT CODE: _____
Step 1 Step 2 Step 3 Step 4A

ALUMINUM CLOTHING

STEP 1: SELECT A STYLE

C56

Our deluxe shirt features two breast pockets, front gripper snaps and adjustable sleeve snap closures



C82

Our standard aluminum industry coverall is one of our most popular products. It features a front zipper closure.



C09

Box-Sleeve Coat

T30

These popular deluxe pants have back patch pockets, two front slash pockets, a zipper fly and a button waist closure.

STEP 2: SELECT A MATERIAL

Aluminum Industry Materials

- VI** FR9B Vinex™ (6 oz.) is a light blue polyvinyl/rayon blend, designed for workers exposed to molten aluminum (for shirts, coats and coveralls).
- OB** Oasis™ 7.5 oz. material for premium protection against molten metal, radiant heat, flame and other smelting hazards.
- VJ** FR9B Vinex™ (8.5 oz.) is a navy-colored polyvinyl/rayon blend (for all styles).
- OP** Oasis™ 10 oz. navy blue material
- DM** Banox AL® (14 oz.) This indigo denim is ideal for pants, overpants and coveralls.
- WZ** Zirpro Wool (16 oz.) is a heavy FR treated wool (for coats, pants, overpants and coveralls).

STEP 3: SELECT A SIZE

- SM** Small (40/42 chest; 33 sleeve; 32/34 waist)
- MD** Medium (44/46 chest; 34 sleeve; 36/38 waist)
- LG** Large (48/50 chest; 35 sleeve; 40/42 waist)
- XL** Extra Large (52/54 chest; 36 sleeve; 44/46 waist)
- 2X** Two-Extra Large (56/58 chest; 36 sleeve; 48/50 waist)
- 3X** Three-Extra Large (60/62 chest; 37½ sleeve; 52/54 waist)

STEP 4: SELECT A COAT OR SHIRT LENGTH

- 30** 30 inches
- 35** 35 inches
- 40** 40 inches
- 45** 45 inches
- 50** 50 inches

STEP 4A: SELECT A PANT OR COVERALL INSEAM LENGTH

- 29I** 29 inches
- 32I** 32 inches

OPTIONS

Upon ordering, you may request a change in the standard features. Options include button, Velcro, snap and zipper closures; zero, one or two breast pockets; zero, one or two back pants pockets; and zero or two front slash pants pockets.

Other sizes, lengths, inseams and options available upon request.



WELDING CLOTHING AND WELDING SLEEVES

NSA provides protective clothing for welding applications. Materials commonly used in the welding industry are featured here for their superior abrasion and wear resistance.

WELDING CLOTHING



C07

This basic, box-sleeve coat features a single breast pocket, front snaps and a shirt-style collar.



C75

This half jacket features front snaps, a shirt-style collar, and includes a detachable bib.

Welding Clothing Material Chart

PART NUMBER	DESCRIPTION
DPHJ2830	30" Long 12 oz. FR Green Twill Coat (import)
DGWT_32I	12 oz. FR Green Twill Pants (32" inseam) (import)
C07_30BG	30" Long Premium 12 oz. Indura Whipcord Coat (Arc Rating ATPV = 12.9 cal/cm ²) (photo above)
C07TW_30	30" Long 8.5 oz. Tuffweld Coat (photo above)
C75_15	Half-Jacket: Available in 8.5 oz. Tuffweld®, 9 oz. Green Sateen or 12 oz. Green Twill (comes with attachable bib)
A06_17I19I	Replacement bib: Available in 8.5 oz. Tuffweld®, 9 oz. Green Sateen or 12 oz. Green Twill
T10_32I	Pants (32" inseam): Available in 8.5 oz. Tuffweld®, 12 oz. Indura Whipcord or 12 oz. Green Twill

WELDING SLEEVES



S02 Sleeve Pictured here with three different options



00 Blue elastic



01 Blue elastic and Kevlar® Knit Wrist



02 Sewn-in Elastic

EXAMPLE PRODUCT CODE: **S02** **TW** **LG** **01**
Step 1 Step 2 Step 3

YOUR PRODUCT CODE: **S02**
Step 1 Step 2 Step 3

STEP 1: SELECT A MATERIAL

GR FR 7A Green Sateen (9 oz.) is the most common material used in the welding industry.

GW FR 7A Ranger Twill (12.5 oz.) provides more protection than 9 oz. Green Sateen.

TW Tuffweld® (8.5 oz.) is an aramid/rayon blend, offering superior protection.

STEP 2: SELECT A SIZE

RG 18 inches in length with blue elastic on both ends (00); 20 inches with blue elastic and Kevlar® knit wrist (01); and 16 inches with sewn-in elastic (02)

LG 21 inches in length with blue elastic on both ends (00); 23 inches with blue elastic and Kevlar® knit wrist (01); and 19 inches with sewn-in elastic (02)

STEP 3: OPTIONS

00 Blue elastic on both ends

01 Blue elastic and Kevlar® knit wrist

02 Sewn-in elastic

Other sizes and options available upon request.



SPATS, LEGGINGS AND CHAPS

NSA offers a full spectrum of leg protection apparel — from spats for the ankle and foot to chaps for full leg and foot coverage. Our leg protective items are available in a variety of materials to meet the varying heat-protective needs of our customers. Use The NSA Product Configurator System on page 41 to order the six styles pictured below.



L09

Leather Spats with arctic buckle closure along length of back and blue elastic band option



L09

Aluminized Spats with Velcro closure along length of back



L05

Standard Leggings with Velcro closure along length of back



L62

Spring-steel Leggings (pictured with no additional closure)



L40

Standard waist chaps



L38

Hip-high chaps with leather straps to attach to belt





SPATS, LEGGINGS AND CHAPS



CHAPS

EXAMPLE PRODUCT CODE: **L40** **NL** **NL** **38I**
Step 1 Step 2 Step 3 Step 4A

YOUR PRODUCT CODE: _____
Step 1 Step 2 Step 3 Step 4A

SPATS AND LEGGINGS

EXAMPLE PRODUCT CODE: **L05** **NJ** **NJ** **LG** **SF** **FS**
Step 1 Step 2 Step 3 Step 4 Step 5 Step 6

YOUR PRODUCT CODE: _____
Step 1 Step 2 Step 3 Step 4 Step 5 Step 6

SPATS, LEGGINGS AND CHAPS

STEP 1: SELECT A STYLE

L09	Spats
L05	Standard Leggings
L62	Spring-Steel-Framed Leggings
L40	Standard Waist Chaps
L38	Hip-High Chaps

STEP 2: SELECT A MATERIAL

HM	Leather is ideal for moderate-heat, high-abrasion applications.
RB	Aluminized Rayon (19 oz.) offers good heat protection and is a good value.
TA	Aluminized Thermobest™ (19 oz.) provides excellent heat protection and is a good value.
NJ	Aluminized Carbon Kevlar® (13 oz.) provides superior heat protection.
NL	Aluminized Carbon Kevlar® (19 oz.) provides maximum heat protection.

STEP 3: SELECT A FOOT FLAP

Leather spats, leggings and chaps are compatible with the LF or VT flaps below; aluminized spats, leggings and chaps are compatible with matching aluminum or any leather flaps.

HM	Leather
VT	Premium-grain, hard leather for a solid layer of protection
RB	Aluminized Rayon (19 oz.) for RB spat, legging or chap
TA	Aluminized Thermobest™ (19 oz.) for TA spat, legging or chap
NJ	Aluminized Carbon Kevlar® (13 oz.) for NJ spat, legging or chap
NL	Aluminized Carbon Kevlar® (19 oz.) for NL spat, legging or chap
XX	No flap (most commonly for chaps)

STEP 4: SELECT A SIZE (SPATS AND LEGGINGS)

RG	Regular	(20" diameter)
LG	Large	(22" diameter)
XL	Extra Large	(24" diameter)

STEP 4A: SELECT AN OUTSEAM LENGTH (CHAPS ONLY)

30I	30 inches	36I	36 inches
32I	32 inches	38I	38 inches
34I	34 inches	40I	40 inches

STEP 5: CLOSURE OPTIONS FOR SPATS AND LEGGINGS

VC	Velcro closure (standard)
SC	Snap closures along length of back
SF	Steel stay down length of legging or spat to hold it in place
RS	Spring-steel framed leggings with no additional closure (L62 only)
AB	Arctic buckle closures (spats only)

STEP 6: FLAP FASTENER OPTIONS

SS	Snap-on leather instep strap (standard)
LS	Adjustable instep buckle strap
FS	Soft steel framework sewn into flap (conforms to most shoes)
FB	Bike clip sewn into flap (snaps into place)
XX	No flap fastener

OTHER OPTIONS:

Blue elastic band at top (spats and leggings only) (EE)



ALUMINIZED HOODS AND FACE PROTECTION

NSA PRODUCT CONFIGURATOR SYSTEM

EXAMPLE PRODUCT CODE: **H58** **RA** **RH**
Step 1 Step 2 Step 3

YOUR PRODUCT CODE: _____
Step 1 Step 2 Step 3

HOODS

STEP 1: SELECT A STYLE

H27 Economy Hood

H58 Fitted Hood

H15 Flip Hood (not shown)

STEP 2: SELECT A MATERIAL

RA Aluminized Rayon (16 oz.)

RB Aluminized Rayon (19 oz.)

FA Aluminized Fiberglass (16 oz.)

KA Aluminized Kevbest™ (10 oz.)

TA Aluminized Thermobest™ (19 oz.)

TB Aluminized Thermobest™ (24 oz.)

PF Aluminized PBI®/Kevlar® (7 oz.)

AM Aluminized Carbon Kevlar® (7 oz.)

NB Aluminized Carbon Kevlar® (9 oz.)

NJ Aluminized Carbon Kevlar® (13 oz.)

NL Aluminized Carbon Kevlar® (19 oz.)

STEP 3: OPTIONS

Upon ordering, please select one of the following options:

RH Ratchet headgear without gold film cover for lower-temperature applications

RG Ratchet headgear with exterior gold film cover

RX Ratchet headgear with exterior gold film cover, along with air ring attachment for auxiliary air source (air source not included)

HQ Universal attachments for hard hat

HG Universal attachments for hard hat and exterior gold film cover

HS Universal attachment for hard hat and screen in back for added airflow

HN Universal attachment for hard hat and exterior gold film cover, along with our unique quilted Nomex® and Neoprene®-coated polycotton liner, which serves as an excellent vapor barrier and heat insulator

**** The polycast acrylic face shield also is sold separately as IZWW.**

**** The exterior gold film cover also is sold separately as X04GE007I011I.**



H27
Economy hood



H58
Fitted, heat protective hood with optional gold film cover



The H04XX002 polycast acrylic faceshield and aluminum hard hat adapter fits onto any standard hard hat.



KNITTED HOODS AND ADDITIONAL ITEMS

KNITTED HOODS

Our knitted hoods and dickies are ideal for use in moderately high-heat environments. They provide more flexibility and visibility than aluminized hoods, as well as increased breathability. Descriptions of our most popular knitted materials are as follows:

Kevlar®: This 6 oz. material offers excellent heat and flame resistance, as well as high durability. It provides the best molten splash protection of the listed knitted materials.

Nomex®: This 6 oz. material provides good heat and flame resistance, comfort and excellent absorbency. Nomex® is the most popular of the knitted materials.

PBI®/Rayon: This 6 oz. material is made of 80 percent flame-retardant Rayon and 20 percent PBI®. It offers comfort, absorbency and superior heat resistance.

CARBON X®: This 6 oz. material provides excellent heat and flame resistance. Offers breathability with a soft comfortable finish.

Nomex®/Rayon: This 6 oz. material is made of 80 percent flame-retardant Rayon and 20 percent Nomex®. It offers the best value of these knitted materials.



H41NK

This specialty hood features a triple-knit white Nomex® face and a single-knit Nomex® bib. Designed with holes for eye exposure only, this hood is ideal for extreme heat applications.



H18CX

The double layer black Carbon X® hood provides comfortable and durable protection.



H01KK016

Featuring a turtleneck-style collar, this Kevlar® dickey with 12-inch bib offers neck and upper torso protection.



H31NK

Our most popular knitted hood features double-knit white Nomex® on top and a single-layered knit Nomex® bib for added neck protection. Also available in PBI®/Rayon (H31PK), Kevlar® (H31KK), Carbon X® (H31CX) and Nomex®/Rayon (H31LK).

Other knitted hoods available upon request.



ADDITIONAL ITEMS

NSA also features additional heat-protective hoods for a variety of applications. After selecting a style from the pictures below, select a material to complete your product code.



H74 Tally Hood

Pictured in ranger twill, this tally hood with bib features a Velcro closure.

YOUR PRODUCT CODE: H74_ _001

Insert Material Code



H01 Neck Protector

Pictured in flame-resistant Green Sateen, this flap attaches to a standard hard hat with elastic attachment. (For a Velcro attachment, indicate 043 instead of 003 in the product code below.)

YOUR PRODUCT CODE: H01_ _003

Insert Material Code

MATERIAL CODES:

GR	FR 7A Green Sateen (9 oz.)
GW	FR 7A Ranger Twill (12.5 oz.)
RA	Aluminized Rayon (16 oz.)
RB	Aluminized Rayon (19 oz.)
KA	Aluminized Kevlar® (10 oz.)
FA	Aluminized Fiberglass (16 oz.)
PF	Aluminized PBI®/Kevlar® (7 oz.)
AM	Aluminized Carbon Kevlar® (7 oz.)
NB	Aluminized Carbon Kevlar® (9 oz.)
NJ	Aluminized Carbon Kevlar® (13 oz.)
NL	Aluminized Carbon Kevlar® (19 oz.)



ALUMINIZED SLEEVES

NSA manufactures sleeves for heat and splash protection. The knit and woven sleeves on the following pages provide basic protection against heat and sparks. The aluminized sleeves featured below offer maximum protection against heat and molten splash.



EXAMPLE PRODUCT CODE: **S02** **NJ** **18I**
 Step 1 Step 2

YOUR PRODUCT CODE: **S02** _____
 Step 1 Step 2



S02

This standard sleeve (14-, 16- and 18-inch sleeves) features a snap wrist closure and open top.



S02

The full-arm version (21-, 23- and 25-inch sleeves) features a snap wrist closure and cross-over leather shoulder strap.

ALUMINIZED SLEEVES

STEP 1: SELECT A MATERIAL

RB Aluminized Rayon (19 oz.)

AS Aluminized Acrysil (16 oz.)

NB Aluminized Carbon Kevlar® (9 oz.)

NJ Aluminized Carbon Kevlar® (13 oz.)

NL Aluminized Carbon Kevlar® (19 oz.)

RA Aluminized Rayon (16 oz.)

FA Aluminized Fiberglass (16 oz.)

OPTIONS

Upon ordering, you may request one or more of the following options:

- Blue elastic at both ends
- Blue elastic on top and Kevlar® knit wrist
- Sewn-in elastic closure at both ends

Other materials, lengths and options available upon request.

STEP 2: SELECT A LENGTH

14I 14 inches

16I 16 inches

18I 18 inches

21I 21 inches

23I 23 inches

25I 25 inches



KEVLAR® KNIT SLEEVES

This standard, two-ply knit sleeve with or without a thumbhole pulls on easily, stays in place and stretches for a comfortable fit. Usually worn to the elbow or the middle of the upper arm, this item is available in four standard lengths – 10, 12, 14 and 18 inches.

Options include:

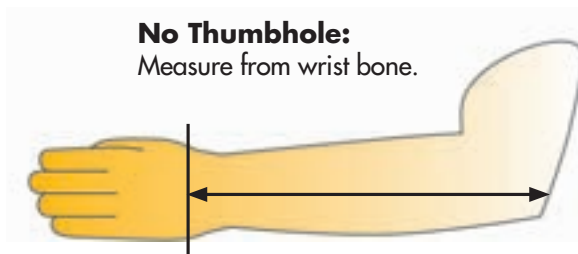
- Velcro closure at top of sleeve for longer (14- and 18-inch) versions
- Bartacked fingers to secure bottom of sleeve (Other lengths and options available upon request.)



S00KN18I

No Thumbhole:

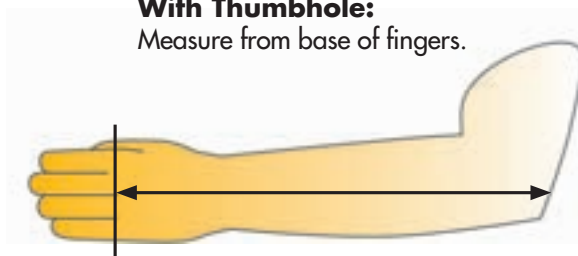
Measure from wrist bone.



S00KN12I03

With Thumbhole:

Measure from base of fingers.



WOVEN SLEEVES

NSA PRODUCT CONFIGURATOR SYSTEM

EXAMPLE PRODUCT CODE: **S02** **GR** **RG** **00**
Step 1 Step 2 Step 3

YOUR PRODUCT CODE:

Step 1 Step 2 Step 3

WOVEN SLEEVES

S02 Sleeve

Pictured here with three different options



00 Blue elastic



01 Blue elastic and Kevlar® knit wrist



02 Sewn-in elastic

STEP 1: SELECT A MATERIAL

GR FR 7A Green Sateen (9 oz.) is the most common material used in the welding industry.

GW FR 7A Ranger Twill (12.5 oz.) provides more protection than cotton sateen.

KV 100 percent 8 oz. Kevlar® twill for superior cut and abrasion resistance.

STEP 2: SELECT A SIZE

RG 18 inches in length with blue elastic on both ends (00); 20 inches with blue elastic and Kevlar® knit wrist (01); and 16 inches with sewn-in elastic (02)

LG 21 inches in length with blue elastic on both ends (00); 23 inches with blue elastic and Kevlar® knit wrist (01); and 19 inches with sewn-in elastic (02)

STEP 3: OPTIONS

00 Blue elastic on both ends

01 Blue elastic and Kevlar® knit wrist

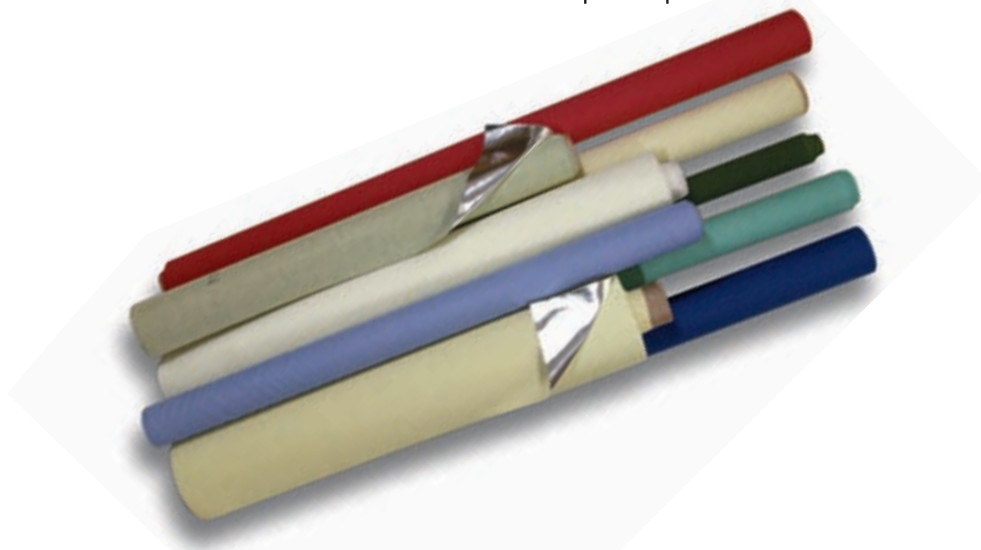
02 Sewn-in elastic

Other sizes and options available upon request.



ROLL CLOTH

NSA offers a variety of fabrics to meet your safety requirements. Listed below are our most popular aluminized and non-aluminized fabrics. Do not hesitate to contact NSA for assistance. Swatches are available upon request.



ALUMINIZED MATERIALS FOR RADIANT HEAT PROTECTION

(Radiant heat comes from a flame or heat source, whereas ambient heat represents room temperature.)

LA	Aluminized Leather
RA	Aluminized Rayon (16 oz.)
RB	Aluminized Rayon (19 oz.)
FF	Aluminized Fiberglass (11 oz.)
FA	Aluminized Fiberglass (16 oz.)
TA	Aluminized Thermobest™ (19 oz.)
TB	Aluminized Thermobest™ (24 oz.)
AM	Aluminized Carbon Kevlar® (7 oz.)
NB	Aluminized Carbon Kevlar® (9 oz.)
NJ	Aluminized Carbon Kevlar® (13 oz.)
NL	Aluminized Carbon Kevlar® (19 oz.)
PF	Aluminized PBI®/Kevlar® (7 oz.)
KA	Aluminized Kevbest™ (10 oz.)

NON-ALUMINIZED MATERIALS*

EXTREMELY HIGH HEAT - UP TO 3000°F

SL Silica (18 oz.)

SQ Silica (36 oz.)

HIGH HEAT - FOR A VARIETY OF CLOTHING AND CURTAIN REQUIREMENTS - RANGE FROM 1000°F TO 1800°F

VH Blue High Temp Fyberbest® (36 oz.)

VP Blue High Temp Fyberbest® (26 oz.)

WH White High Temp Fyberbest® (40 oz.)

PC Norbest™ 845 (45 oz.)

PD Norbest™ 830 (30 oz.)

PB Norbest™ 822 (22 oz.)

RU Silva fiberglass (26 oz.)

GL Fiberglass (35 oz.)

FH Fiberglass (26 oz.)

WG Weldguard (32 oz.)

MODERATE HEAT - RANGE FROM 650°F TO 900°F

NF Carbon Kevlar® (16 oz.)

TC Thermobest™ (22 oz.)

KT Kevlar® Terrybest™ (22 oz.)

KN Knitted Kevlar® (3-inch-wide tubing)

KV Kevlar® Twill (8 oz.)

LOW HEAT - USED IN TEMPERATURES BELOW 500°F

FN Neoprene®-Coated Fiberglass

DB Brown FR Duck (15 oz.)

GW FR 7A Ranger Twill (12.5 oz.)

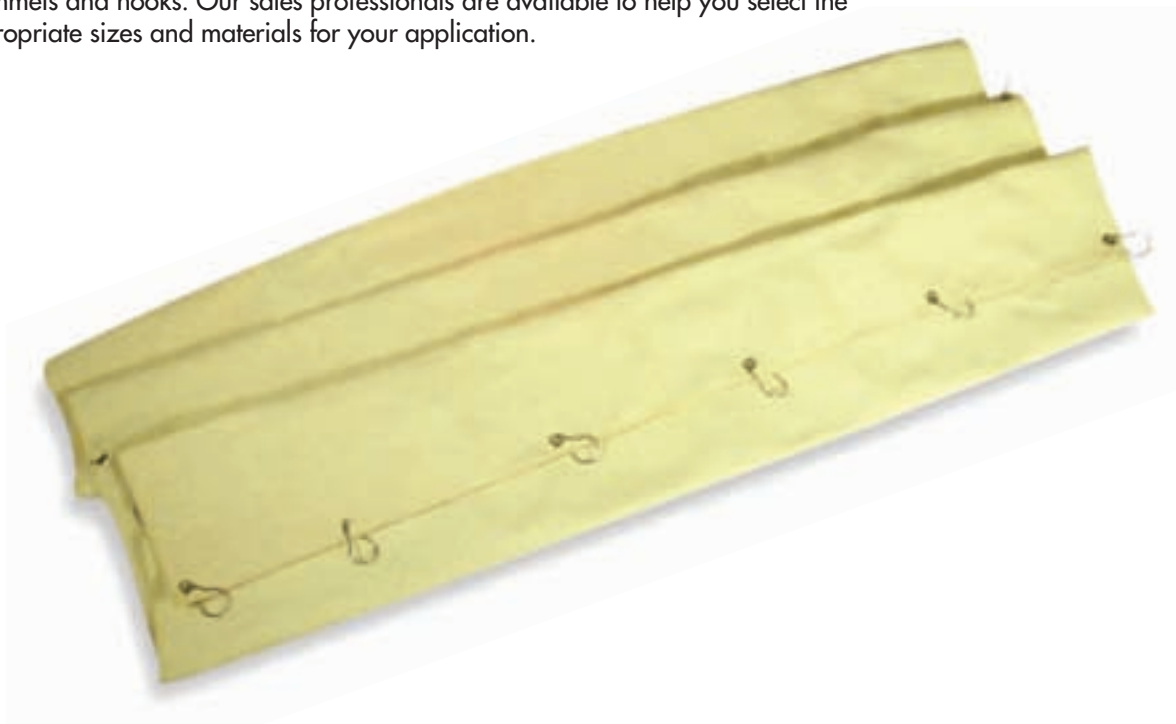
GR FR 7A Green Sateen (9 oz.)

* Material choice should not be based solely on temperature range. When selecting a material, the application, as well as the duration of use – and many other factors, must also be considered. Please contact your sales professional to discuss your specific material requirements.



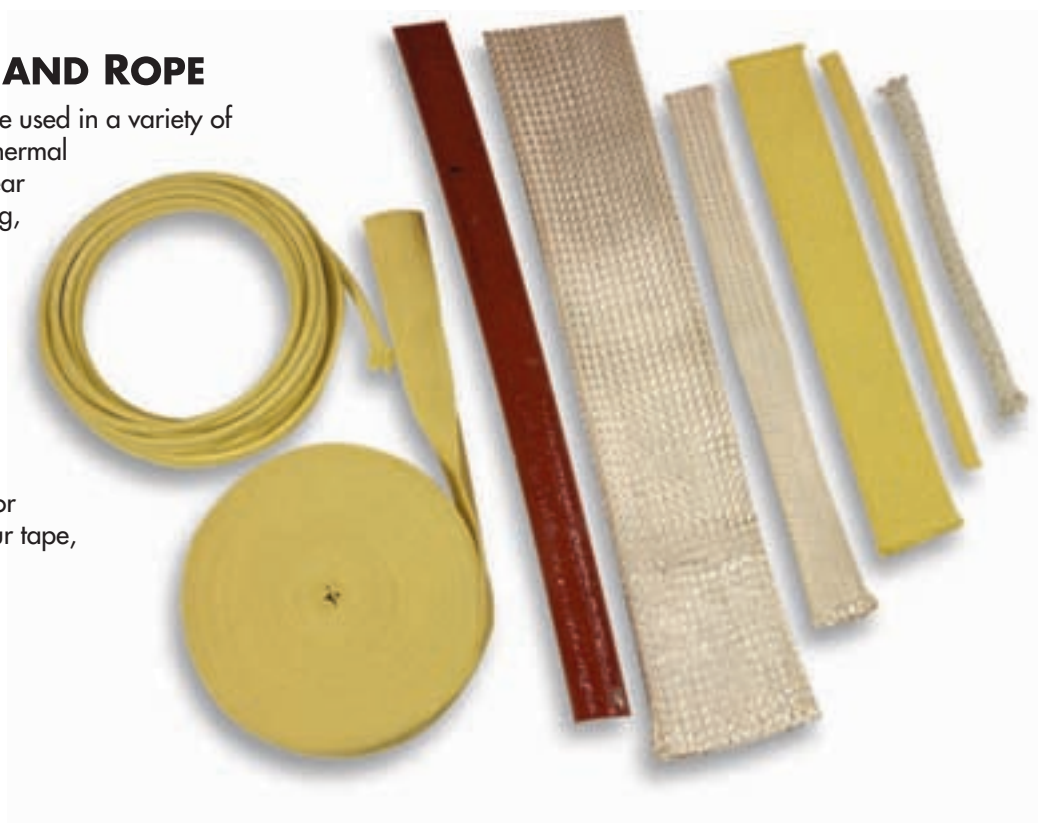
CURTAINS AND BLANKETS

NSA curtains and blankets are made to meet your specifications. Available in a variety of heat- and abrasion-resistant materials, these items are highly effective in protecting nearby equipment and shielding workers from flying sparks and slag. When ordering, specify size and material – and for curtains, indicate spacing of grommets and hooks. Our sales professionals are available to help you select the appropriate sizes and materials for your application.



TAPE, TUBING AND ROPE

Tape, tubing and rope are used in a variety of applications, providing thermal protection and added wear resistance for metal tubing, pipes, hose lines and cables. Popular materials include Thermobest™, fiberglass, Kevlar® and silica. Coated, woven, braided and adhesive-backed products are available. Contact your NSA sales professional for assistance in meeting your tape, tubing and rope needs.





WRISTLETS

Our standard wristlet provides superior cut protection from wrist to elbow. Use The NSA Product Configurator System below to order wristlets either with or without a thumbhole.



EXAMPLE PRODUCT CODE: S01 KV 8I LG
Step 1 Step 2 Step 3 Step 4

YOUR PRODUCT CODE: _____
Step 1 Step 2 Step 3 Step 4

WRISTLETS

STEP 1: SELECT A STYLE



S01
Standard Wristlet



S04
Standard Wristlet with Thumbhole (shown with optional Thermobest™ patch)

STEP 2: SELECT A MATERIAL

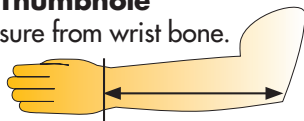
- KX** Kevlar® Armor (8 oz.) offers superior cut protection and durability.
- KV** Kevbest™ (8 oz.) offers good cut protection and superior durability.
- KY** Kevlar® Mesh (9 oz.) provides good cut protection and added comfort.
- MZ** Standard White Nylon Mesh offers good cut protection at a great value.
- MC** Standard Black Nylon Mesh also is a great value.
- HM** Leather is ideal when abrasion protection is needed. This is a moderately heavy-weight, pearl-colored split leather.

STEP 3: SELECT A WRISTLET LENGTH

- 7I** 7 inches
- 8I** 8 inches
- 9I** 9 inches

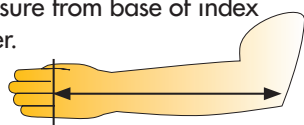
No Thumbhole

Measure from wrist bone.



With Thumbhole

Measure from base of index finger.



STEP 4: SELECT A CIRCUMFERENCE

Measure circumference at wrist and top of forearm.

Forearm measurements for wristlet lengths

		7I	8I	9I
SM	8½-inch Wrist	13½	14	14½
LG	10½-inch Wrist	14½	15	15½
XL	11-inch Wrist	15½	16	16½

OPTIONS

Upon ordering, you may request one or more of the following options:

- Reinforced webbing for added strength is available with our nylon mesh wristlets.
- A Thermobest™ patch for added strength and cut protection is available with our Kevlar® wristlets.
- Staple reinforcements for added strength and cut protection are available with our leather wristlets.

Other lengths, circumferences and options available upon request.

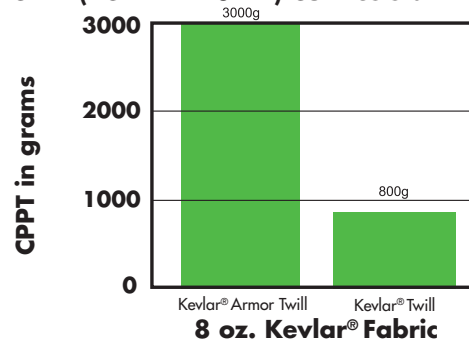
PRODUCT SPOTLIGHT

Introducing Kevlar® Armor

Kevlar® Armor Technology provides superior cut protection without compromising comfort in critical environments where the potential for cuts and slashes are high.

Protective apparel made with **Kevlar® Armor Technology** offers significantly more cut protection than many of the leading industry cut protection fabrics.

CPPT (ASTM 1790-97) Cut Resistant Test



* Cut testing performed using the ASTM 1790-97 test method.



SLEEVES

Our sleeves provide superior cut protection from wrist to shoulder, and are available in a wide variety of styles. Use the following NSA Product Configurator Systems to order our knit, twill and shoulder cap sleeves.



EXAMPLE PRODUCT CODE: **S00** **KN** **18I** **03**
Step 1 Step 2 Step 3

YOUR PRODUCT CODE: **S00**
Step 1 Step 2 Step 3

EXAMPLE PRODUCT CODE: **S02** **KV** **RG** **02**
Step 1 Step 2 Step 3

YOUR PRODUCT CODE: **S02**
Step 1 Step 2 Step 3

KNIT SLEEVES

S00

This standard knit sleeve pulls on easily, stays in place and stretches for a comfortable fit.



STEP 1: SELECT A MATERIAL

KN Two-Ply Kevlar® Knit provides excellent cut protection.

CK One-Ply Kevlar® Knit/One-Ply Cotton Knit provides excellent cut protection and added comfort.

STEP 2: SELECT A SLEEVE LENGTH

10I 10 inches

12I 12 inches

14I 14 inches

18I 18 inches

STEP 3: SELECT THUMBHOLE OPTION

03 Thumbhole

OPTIONS

Upon ordering, you may request one or more of the following options:

- Velcro closure at top of sleeve for 14- and 18-inch versions (VC)
- Bartacked fingers to secure bottom of sleeve (BF)

TWILL SLEEVES

S02

NSA's standard twill sleeve pulls on easily and stays in place with blue elastic bands on both ends. (Usually worn to top of arm, as shown.)



STEP 1: SELECT A MATERIAL

KX Kevlar® Armor (8 oz.) provides superior cut protection and durability.

KS Kevlar®/Cotton provides good cut protection with added comfort.

KV Kevbest™ (8 oz.) provides good cut protection and durability.

KY Kevlar® Mesh (9 oz.) provides good cut protection and added comfort.

GR FR 7A Green Sateen (9 oz.) provides base cut protection.

STEP 2: SELECT A SIZE

RG 18 inches in length with blue elastic on both ends (00); 20 inches with blue elastic and Kevlar® knit wrist (01); and 16 inches with sewn-in elastic (02)

LG 21 inches in length with blue elastic on both ends (00); 23 inches with blue elastic and Kevlar® knit wrist (01); and 19 inches with sewn-in elastic (02)

STEP 3: OPTIONS

00 Blue elastic on both ends

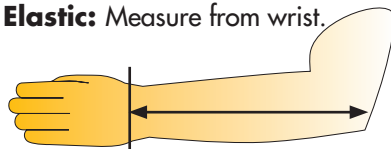
01 Blue elastic and Kevlar® knit wrist

02 Sewn-in elastic

Other lengths and options available upon request.

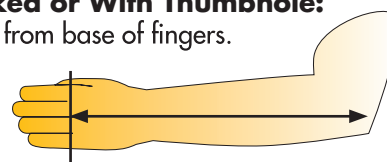
Measurement Guidelines for Knit and Twill Sleeves

Elastic: Measure from wrist.



Bartacked or With Thumbhole:

Measure from base of fingers.





SHOULDER CAP SLEEVES

Measurement Guidelines for Shoulder Cap Sleeves

Measure from wrist bone to shoulder.



EXAMPLE PRODUCT CODE: S30 KV 29I
Step 1 Step 2 Step 3

YOUR PRODUCT CODE: _____
Step 1 Step 2 Step 3

SHOULDER CAP SLEEVES

STEP 1: SELECT A STYLE



S30

This sleeve is eyeleted for additional cut and abrasion resistance. In addition, the eyelets provide comfort, due to increased airflow. This item features a snap wrist closure and two 9-inch alligator clips to hold the sleeves together.



S31

Our sleeve without eyelets also features a snap wrist closure and two 9-inch alligator clips.

STEP 2: SELECT A MATERIAL

KX	Kevlar® Armor (8 oz.) (compatible only with the S31, as it cannot be eyeleted)
KV	Kevbest™ (8 oz.)
KY	Kevlar® Mesh (9 oz.) (compatible only with the S31, as it cannot be eyeleted)
CT	White Denim Cotton
GR	FR 7A Green Sateen (9 oz.)
MZ	Standard White Nylon Mesh (compatible only with the S31)

STEP 3: SELECT A SLEEVE LENGTH (Measure to shoulder)

21I	21 inches
23I	23 inches
25I	25 inches
27I	27 inches
29I	29 inches
31I	31 inches

OPTIONS

Upon ordering, you may request one or more of the following options:

- Omit alligator clips
- 14-inch alligator clips
- Reinforced webbing on nylon sleeves

Other lengths and options available upon request.



Nine and fourteen-inch alligator clips to hold sleeves together also are sold separately as **X0609I** and **X06014I**, respectively.



EYELETED JACKETS

NSA offers a variety of products that provide full- or partial-body protection for those in the glass industry. Upon ordering, you may request one or more of the following options: Items include jackets, chaps, leggings and aprons. Most of these body protective garments can be eyeleted to provide extra cut and abrasion resistance. The eyelets allow for an increase in air circulation, and they also increase the comfort of the garment.



EXAMPLE PRODUCT CODE: C32KV LG
Step 1 Step 2

YOUR PRODUCT CODE: _____
Step 1 Step 2

JACKETS



C32KV_001

Our 8 oz. Kevlar® eyeleted half jacket with snap closures is often paired with an optional snap-on bib. (A06KV18I)

C35KV_001

This 8 oz. Kevlar® eyeleted Eisenhower-style jacket features a front zipper closure.

STEP 1: SELECT A STYLE, left

STEP 2: SELECT A SIZE

	C32KV_001	C35KV_001
SM Small	(38/40 chest; 27 sleeve)	(48 chest; 29 sleeve)
MD Medium	(42/44 chest; 31 sleeve)	(50 chest; 31 sleeve)
LG Large	(44/46 chest; 35 sleeve)	(52 chest; 33 sleeve)
XL Extra Large	(48/50 chest; 39 sleeve)	(54 chest; 35 sleeve)
2X Two-Extra Large	(52/54 chest; 39 sleeve)	(56 chest; 37 sleeve)
3X Three-Extra Large	(56/58 chest; 39 sleeve)	(58 chest; 39 sleeve)

OPTIONS

Upon ordering, you may request one or more of the following options:

- Reversed eyelets (smooth side facing in)
- No eyelets
- With A06KV18I, an 8 oz. eyeleted Kevlar® 18-inch snap-on bib for the C32KV half jacket (sold separately)

Other sizes and options available upon request.

PRODUCT SPOTLIGHT



A popular cut protection uniform choice among NSA customers is our open-backed, surgeon-style jacket, the **C28KV** (pictured at left). This 8 oz. Kevbest™ coat is eyeleted and features a wide Velcro closure at the back of the neck. A series of snaps allows for fitting adjustments.

SM Small	(38 chest; 31 sleeve)
MD Medium	(42 chest; 33 sleeve)
LG Large	(46 chest; 33 sleeve)
XL Extra Large	(50 chest; 36 sleeve)
2X Two-Extra Large	(56 chest; 36 sleeve)
3X Three-Extra Large	(62 chest; 39 sleeve)

Custom sleeve lengths are available for all jacket sizes.

Refer to The Product Configurator on page 52 for size specifications on the split-leg apron. The apron patch comes standard at 16 x 18 inches.

This jacket is most often paired with our 22 oz. Thermobest™ **A03TC24I26I01** split-leg apron and **A06TC16I18I** apron patch, (both pictured here). For the **C28KV** surgeon-style jacket, choose from the following sizes:



CHAPS, LEGGINGS AND APRONS

CHAPS AND LEGGINGS

**L63TCVT02**

Our standard eyeleted legging is made of 22 oz. Thermobest™. Providing added protection from the knee down, this legging comes with a veg tan foot flare for added foot protection (19.5 inches wide).

**L49TC3401**

This popular chap features a 22 oz. Thermobest™ waist and 8 oz. Kevbest™ legs for added protection in the thigh area, and Velcro closure in back of leg. This item also comes with a 24- by 16-inch snap-on apron patch. Replacement patches are sold separately as A06TC16I24I. Pictured here is a 34-inch chap, as indicated in the product code. Other commonly ordered lengths include 32, 36, 38 and 40 inches. Tailor your product code to include the proper outseam length when ordering.

APRONS



A01 Waist apron with leather strap



A02 Full bib apron with leather straps



A03 Split-leg waist apron with leather strap closure in back and elastic closures around legs



A04 Split-leg bib apron with leather straps

STEP 1: SELECT A STYLE

(from choices above)

STEP 2: SELECT A MATERIAL

KX Kevlar® Armor provides superior cut protection

KV Kevbest™ twill provides excellent cut protection.

TC Thermobest™ provides good cut protection.

HM Leather is ideal when abrasion protection is needed. This is a moderately heavy-weight, pearl-colored split leather.

STEP 3: SELECT A WIDTH

20I 20 inches

24I 24 inches

STEP 4: SELECT A LENGTH

18I 18 inches (for waist style)

24I 24 inches (for waist style)

30I 30 inches (for waist and bib style)

36I 36 inches (for bib style)

42I 42 inches (for bib style)

OPTIONS

Upon ordering, you may request one or more of the following options:

- Velcro strips for the optional apron patch (A06TC16I18I), which is sold separately
- Quick disconnect waist closure
- Quick disconnect leg closures for A03 and A04 split-leg aprons
- Velcro leg closures for A03 and A04 split-leg aprons

Other widths, lengths and options available upon request.



EXAMPLE PRODUCT CODE: **A02** **KV** **24I** **36I**
Step 1 Step 2 Step 3 Step 4

YOUR PRODUCT CODE: _____
Step 1 Step 2 Step 3 Step 4



PVC CHEMICAL SPLASH PROTECTION

16 oz. Green PVC Chemical Splash Protective Hood

H30GV001

This shoulder-length green PVC and clear vinyl hood fits over any standard hard hat. It features adjustable arm straps that hold the garment in place.



H57GV001

This deluxe PVC hood features a fiberglass shell and fitted shoulder. Ratchet headgear ensures a good fit, and the adjustable arm straps hold the garment in place.

Other PVC clothing available upon request.

CHEMICAL PROTECTION

PVC Chemical Splash Protection



BELLOW BOOTS AND PROTECTIVE COVERS

In addition to providing safety apparel for high-heat environments and glass-cutting applications, NSA is an industry leader in manufacturing machine covers and bellows that protect against chemicals, oil and dirt.

Our custom covers

- extend machine life,
- minimize repairs on equipment, therefore reducing production downtime and maintenance costs, and
- maximize the effectiveness of the machine.

The NSA protective cover product line includes cylinder rod boots, screw jack covers, square and rectangular covers and protective covers for robotic and automated components. Available in a wide variety of materials and a full range of custom shapes and sizes, NSA covers are carefully manufactured to meet each customer's specific needs.

Call NSA for additional information or visit us at www.nsamfg.com



Bellows



Robot cover

MATERIALS CHARACTERISTICS REVIEW

Material	Resistance to Molten Splash	Resistance to Flame	Resistance to Abrasion	Resistance to Oil	Resistance to Hydraulic Fluid (silicates)	Resistance to Aging
Neoprene® - Coated Nylon	N/A	<div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>
Silicone - Coated Fiberglass	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>
Aluminized Fiberglass	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div></div>
Aluminized Carbon Kevlar®	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>
KEY: <div> <div>Excellent</div> <div>Very Good</div> <div>Good</div> <div>Fair</div> <div>Poor</div> </div>						
Note: The materials listed above are the most commonly used for protective covers Information on other fabrics and coatings is available upon request						

WARRANTY

National Safety Apparel, Inc. (NSA) guarantees all of the products manufactured by it to be free from defects in material and workmanship. This guarantee applies for 90 days from date of original purchase of each product when used for the application for which it was intended and when warnings, use and care instructions are followed. With respect to any products not manufactured by NSA, NSA gives no warranty, and only the warranty, if any, provided by the manufacturer of such products will apply. In the event of a breach of the foregoing warranty, NSA's only obligation shall be to replace such quantity of the product proven to be defective. The foregoing constitutes the exclusive remedy of the buyer or user of NSA's products, and NSA's sole obligation, for claims based upon defects in or nonconformity of NSA's products. This warranty is exclusive and in lieu of all other warranties, whether oral, written, express, implied or statutory. No Implied or Statutory Warranties of Merchant Ability or Fitness for Particular Purpose Will Apply. NSA shall not be liable for any loss or damage, direct, indirect, incidental or consequential, arising out of the use of - or the inability to use - the product. Before using, users shall determine the suitability of the product for the intended use, and users assume all risk and liability whatsoever in connection therewith. Therefore, users should make careful analysis of the use for which these products are purchased. It will be the users' responsibility to determine whether these products will adequately provide protection in the environment in which they are to be used. NSA cannot anticipate all conditions under which this information and its products, or the products of other manufacturers in combination with its products, may be used. Users are advised to make their own tests to determine the suitability of each product, or product combination, for their own purposes.



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