

# PROTECTIVE APPAREL

Safety apparel are your final line of defence in hazardous situations. These shirts, pants and coveralls are specially-designed to keep out a variety of dangerous workplace occurrences, such as chemicals and heat.

This catalogue is your ultimate guide to our premium selection of apparel. Choose wisely based on the hazards you need defence from, as every material has different defensive properties. When in doubt, we at PDS International are just one email or live chat away.

- Flame Resistant FR Clothing
- Chemical Resistant Coverall (Reusable/Disposable)
- Chemical Resistant Apron
- Cleanroom Coverall
- Disposable Coverall
- Vinyl Apron and Sleeve
- Cotton Work Attire\
- · Gas Tight Suit

- Cold Storage Workwear
- Cryogenic Apron
- Arc Flash & FR Suits
- Steam & Hot Liquid Resistant Arc Flash Suits
- Safety Raincoat
- Safety Vest
- FR Reusable Cloth Mask



# **FLAME-RESISTANT WORKWEAR**

#### **WORKSafe® Flame-Resistant (FR) Workwear**

When flammable materials are handled, processed, stored or present in the workplace, hazards such as flash fires and explosions may occur due to accidental ignition. In various industries such as petrochemical and oil drilling, workers are at risk of fire accidents which may cause severe or even fatal burns. WORKSafe® FR Workwear can help prevent fatal burn injuries by creating a fire resistant barrier that minimises and extinguishes the flames.

#### All WORKSafe® FR Workwear are:

- · CE Category II certified and marked
- Tested and certified as a complete garment under EN ISO 11612:2015

All WORKSafe® FR Workwear are made of quality FR fabrics and key accessories that are tested to EN ISO 11612 standards. In addition, only nickel-free buttons are used in WORKSafe® FR clothing, together with shorter stitches, double-stitching at all seams and bar-tacking at stress areas for enhanced durability.

#### When selecting FR Workwear, you should look for:

- Excellent fabric integrity it should not melt and should provide the user with a barrier or insulating layer against exposure to flame
- Antistatic properties the fabric should not act as an ignition source via static electricity
- Global safety standards e.g. NFPA 2112:2012, EN ISO 11612:2015 - both the fabric and full garment should be properly tested
- Flame resistant key accessories e.g. threads, zippers, reflective strips, pocket linings

#### · Comfort:

- Fit and mobility FR Workwear should allow for maximum body movement and dissipation of thermal heat in event of flash fire
- Softness and weight FR Workwear should be soft and lightweight
- Highly breathable FR Workwear should be highly breathable and designed to help wearers feel cool and dry

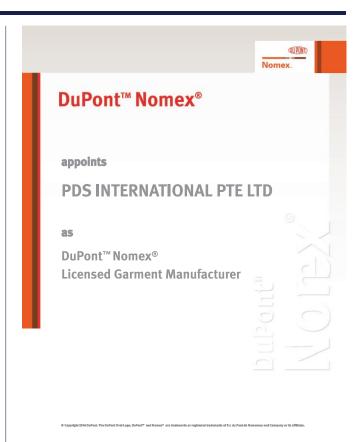
# Difference between Flame Resistant and Flame Retardant Materials:



Flame Resistant: Aramid fibers (aromatic polyamides) that are naturally flame resistant without any chemical treatment or process. These fibers have slower flaming combustion and self-extinguish when exposed to a flame of short duration during testing. Flame resistant materials do not melt, drip, burn nor support combustion in air. Its properties cannot be altered through cleaning and it's generally strongly abrasion resistant.



Flame Retardant: Fibers that have undergone a chemical treatment so that the material is rendered flame resistant. The flame retardancy of the fibers deteriorate over time due to repeated washing and laundering.



PDS International Pte Ltd is an official licensed garment manufacturer of **DuPont™ Nomex®**. Be sure you have the authentic product! Check that you have a sewn-on **Nomex®** brand tag complete with usage and care instructions.

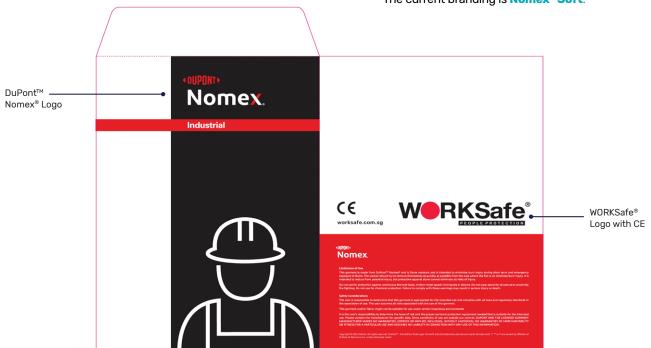
# WORKSAFE® DUPONT<sup>TM</sup> NOMEX® SOFT

### **PRODUCT PACKAGING**

(DuPont™ Nomex® Poly Bag)

### **PLEASE NOTE:**

This fabric was previously branded as Nomex® IIIA. The current branding is Nomex® Soft.



#### The Flame Resistant Materials we use:

Nomex® Soft: A meta-aramid fiber manufactured by DuPont™. It has a blend of 93% NOMEX®, 5% Keylar®, and 2% P140 (static dissipative fiber). NOMEX® III A, as a fabric, has been tested to NFPA 2112 and NFPA 70E HRC 1 arc rating (USA) as well as EN ISO 11612 (Europe) standards.

There's only one **DuPont™ Nomex®** brand fiber. That's why for over 30 years, industrial workers and the people who protect them have demanded a genuine product. Fires are unpredictable and even a split-second can make all the difference. DuPont™ Nomex® brand fabrics and garments are subjected to rigorous testing in a variety of conditions by DuPont™ scientists and engineers who know and support the latest OSHA and NFPA standards; who constantly innovate, finding new ways to help safeguard your workers from fire and electric arc hazards; who are always working to offer solutions that help make protective gear stronger, more durable and safer. Nomex® brand fibers possess inherent flame resistant qualities that can't be washed out or worn away, so it lasts.

Nomex® brand garments are lightweight and comfortable for every worker. Clothe your crews with the name that means superior protection: DuPont™ Nomex®\*.

\*DuPont™ and Nomex® are registered trademarks of E.I. du Pont de Nemours and Company.

### The Flame Retardant Materials we use:

**Pyrovatex**®: A durable flame retardant product for cellulosic fibers. Pyrovatex®\* is a treated fabric that offers the best overall fire protection available for cotton, as proven by comprehensive testing according to international flame retardant standards. Treated fabrics barely shrink when exposed to heat and fires, thereby ensuring that the skin is not exposed to hazardous conditions. Treated cotton, unlike synthetics, will not melt in the presence of heat from fires. Treated fabrics also offer excellent thermal protection where heat is an added danger.

#### **Key characteristics of Pyrovatex®:**

- · Outstanding durability to wash and wear, which assures long life of the clothing.
- · Finishes have negligible influence on fabric coloration and therefore preserve flexibility to meet specific color demands
- Treated fabrics have good compatibility with other treatments, permitting the creation of multifunctional garments.



<sup>\*</sup>Pyrovatex® is a registered trademark of Huntsman Corporation.

**PROTECTIVE CLOTHING AGAINST HEAT AND FLAME** 

ADAPTED FROM EN ISO 11612:2015

### **EN ISO 11612**



#### All fabrics, hardware used in garment shall not:

- At a temperature of 180°C, ignite or melt, and shrink >5%
- At a temperature of 260°C, ignite or melt, and shrink >10%
- Be made of any material known to be harmful to the wearer
- Possess a pH-value of ≤3.5 and ≥9.5, for textiles
- · After 5 cleaning cycles, exceed: 3% shrinkage (woven, nonwoven and sheet materials) 5% shrinkage (knitted materials)

### Physical requirements for outer material:

- Tensile strength: withstands ≥300N force in both the machine and cross directions
- Tear strength: withstands ≥15N force in both the machine and cross directions
- Burst strength for knitted materials: withstands ≥200kPa
- Seam strength: withstands ≥225N

### Usage and Care of WORKSafe® FR Workwear:

- For a correct fit, try garment on before washing or wearing.
- · Wash garments separately from other garments.
- Machine wash with hot water and heavy duty detergent (60°C/140°F).
- Tumble dry low (71°C/160°F).
- Do not bleach and avoid detergents containing bleach.
- Do not line-dry in direct sunlight.
- · Wash your new workwear before wearing and after each subsequent wearing to thoroughly remove potentially flammable fabric processing aides/finishes, greases, oily soil and other flammable contaminants.
- · Always wear 100% natural fiber undergarments with all flame resistant garments.
- · Antistatic garments should be used in conjunction with proper grounding procedures for maximum protection against the threat of spark. Do not remove garments when in a hazardous environment.

For further details, please refer to the respective product care instruction labels.



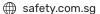
# FR GARMENT (Guidelines to Consider Before Buying FR Workwear)

### **EN ISO 11612**



- There should be substantial overlap between gloves and sleeves so that contact with heat, flame or hot material is avoided
- Trouser bottoms should overlap top of footwear whilst walking or crawling
- Openings should be capable of being closed to prevent entry of heat, flame or hot material
- There should be quick-release fasteners to allow rapid removal during emergencies

Letter code	Description	Grading			
Limited flame spread  A1  Tested in accordance with ISO 15025:2000, procedure A	Single layer garments incl. seams/innermost lining and the outer material of multilayered garments incl. seams, shall meet the following:  • no flaming to the top or either side edge  • no hole formation  • no melting or suffering flaming or molten debris  • afterflame and afterglow each, shall be ≤2s				
Limited flame spread  A2 Tested in accordance with ISO 15025:2000, procedure B	Hemmed specimens from single layer garments shall meet the following:  • no flaming to the top or either side edge  • no melting or suffering flaming or molten debris  • afterflame and afterglow each, shall be ≤2s				
Convective heat <b>B</b>	Single or multilayer garments and/or clothing assemblies that offer protection against convective	Performance levels (B*)	Range of HT min.	l <sup>a</sup> 24 values <sup>s</sup> max.	
Tested in accordance with	heat shall meet at least a performance level of B1.	B1	4.0	<10.0	
ISO 9151		B2	10.0	<20.0	
		В3	20.0		
		<sup>a</sup> Heat transfer ind	ex, as defined in IS	0 9151	
Radiant heat <b>C</b>	Single or multilayer garments and/or clothing assemblies that offer protection against radiant	Performance levels (C*)	Heat transfer fact min.	or RHTI <sup>a</sup> 24 values <sup>s</sup> max.	
Tested in accordance with	heat shall meet at least a performance level of C1.	C1	7.0	<20.0	
ISO 6942		C2	20.0	<50.0	
		C3	50.0	<95.0	
		C4	95.0		
		<sup>a</sup> Radiant heat transfer index, as defined in ISO 6942			
Molten aluminium splash <b>D</b>	Single or multilayer garments and/or clothing assemblies that offer protection against molten	Performance levels (D*)	Molten alum min.	inium splash <sup>g</sup> max.	
Tested in accordance with	aluminium splash shall meet at least a performance	D1	100	<200	
ISO 9185	level of D1.	D2	200	<350	
		D3	350		
Molten iron splash	Single or multilayer garments and/or clothing assemblies that offer protection against molten	Performance levels (E*)	Molten iro	on splash g max.	
Tested in accordance with	iron splash shall meet at least a performance level	E1	60	<120	
ISO 9185	of E1.	E2	120	<200	
		E3	200	1200	
Contact heat <b>F</b>	Tested at 250°C, single or multilayer garments and/ or clothing assemblies that offer protection against	Performance levels (F*)	Thresho	old time s max.	
Tested in accordance with	contact heat shall meet at least a performance	F1	5.0	<10.0	
ISO 12127	level of F1.	F2	10.0	<15.0	
		F3	15.0	1.5.0	





## FR GARMENT MEASUREMENT GUIDE For WORKSafe® FR Garment



### 1. Height:

Stand straight against a wall without your shoes. Make a mark level with the top of your head. Measure from this point down to the floor.

#### 2. Neck:

Measure around the base of the neck where a collared shirt would fit, or measure a collarband on a shirt that fits you well. Lay the collarband flat. Measure from the beginning of the button hole to the center of the button

#### 3. Chest:

Measure well up under your arms, across your shoulder blades and over the fullest part of your chest. Hold firmly, but not tightly. Be sure the tape is level and straight across your back. Stand naturally.

#### 4. Sleeve:

Bend the elbow slightly. Start at the shoulder and measure to the elbow and down to the wrist bone.

#### 5. Waist:

First, remove your belt. Then, measure over shirt (not over pants) at the position where you normally wear your pants. Hold the tape firmly, but not tightly

#### 6. Hips:

Stand with your heels together. Measure around the fullest part of the hips, holding tape measure level.

# WORKSAFE® WORKWEAR COVERALL (NOMEX, PYROVATEX, COTTON)\*

SIZES	S	M	L	XL	2XL	3XL	4XL
Collar	15	16	16.5	17	17.5	18	-
Shirt L	18.5	19	19.5	20	20.5	21	-
Shoulder	17.5	18.5	19.5	20.5	21.5	22.5	-
Chest	40	42	44	46	48	50	-
Waist R	31	33	35	37	39	41	-
Waist E	35	37	39	41	43	45	-
Arm H	20	21	22	23	24	25	-
Sleeve	22.5	23	23.5	24	24.5	25	-
Cuff	9	9.5	10	10.5	11	11.5	-
Pants L	39	40	41	42	43	43	-
Hip	40	41	42.5	44	46	48	-
Crotch	27	28	29	30	31	32	-
Thigh	25.5	26.5	27.5	28.5	29.5	30.5	-
Bottom	17	17	17	17	18	18	-

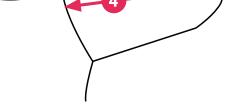


Shirt L: Shirt Length
Waist R: Waist Relaxed

Pants L: Pants Length
Waist E: Waist Extended

Arm H : Arm Hole

<sup>\*</sup> These are actual body measurements in inches.



# **WORKSAFE WORKWEAR MEASUREMENT GUIDE**

### **WORKSAFE® WORKWEAR JACKET\***

SIZES	S	M	L	XL	2XL	3XL	4XL/MTM
Collar	15	16	16.5	17	17.5	18	-
Length	28	28.5	29.5	30.5	31.5	32	-
Shoulder	17.5	18.5	19.5	20.5	21.5	22.5	-
Chest	39	41	43	45	47	49	-
Waist	38	40	42	44	46	48	-
Hip	39	41	43	45	47	49	-
Sleeve	22.5	23	23.5	24	24.5	25	-
Cuff	9	9.5	10	10.5	11	11.5	-

### **WORKSAFE® WORKWEAR PANTS\***

SIZES	S	М	L	XL	2XL	3XL	4XL/MTM
Length	38.5	39.5	40.5	41.5	42.5	43	-
Waist	28	30	32	34	36	38	-
Hip	38	39.5	41	42.5	44.5	46.5	-
Crotch	26	26.5	27.5	28.5	29.5	30.5	-
Thigh	25	26	27	28.5	29.5	30.5	-
Bottom	17	17	17	17	18	18	-

# **WORKSAFE® LABCOAT (UNISEX)\***

SIZES	XS	S	М	L	XL	2XL	3XL
Chest	32-35.5	36-38	38.5-42	42.5-50	46.5-50	50.5-54	54.5-58
Hip	33.5-36	36.5-39	39.5-42	42.5-46	46.5-50.5	51-54	55.5-59.5

<sup>\*</sup> These are actual body measurements in inches.

### **WORKGARD® SAFETY VEST**

SIZES	s	М	L	XL	2XL	3XL
A. Length (cm)	68	68	70	70	70	72
B. Chest (cm)	56	58	60	62	64	66





# **MEASUREMENT GUIDE** Disposable & Reusable Coveralls

# **WORKSAFE® CHEMPRO 1500**

SIZES	S	М	L	XL	2XL	3XL
Chest (cm)	84-92	92-100	100-108	108-116	116-124	124-132
Height (cm)	162-170	170-176	176-182	182-188	188-194	194-200

### **WORKSAFE® CHEMPRO 1800 & MICROVEK**

SIZES	s	М	L	XL	2XL	3XL
Chest (cm)	112	120	127	135	142	148
Height (cm)	162-174	163-177	166-180	170-184	174-188	182-196

# **DUPONT™ TYVEK® & TYCHEM® COVERALL** (Disposable & Reusable)

### **BODY HEIGHT (CM)**

	SIZES	152-173	160-173	166-178	173-191	183-190	188-196	193-203	200-210
9	41-59	SM							
<b>=</b>	59-77		MD						
WEIGHT (KG)	64-95			LG					
3	68-104				XL				
	82-113					2X			
	104-132						3X		
	108-141							4X	
	118-150								5X

# **ANSELL COVERALL** (Disposable & Reusable)

SIZES	s	М	L	XL	2XL	3XL	4XL	5XL
Chest (cm)	84-92	92-100	100-108	108-116	116-124	124-132	132-140	140-148
Height (cm)	164-170	170-176	176-182	182-188	188-194	194-200	200-206	206-212

# **RESPIREX COVERALL** (Disposable & Reusable)

SIZES	s	M	L	XL	2XL
Chest (cm)	88-96	96-104	104-112	112-124	124-136
Height (cm)	163-175	169-182	176-188	182-194	188-200

# **CHOOSING A GARMENT**

### **Disposable & Reusable Coveralls**

There's no garment that can protect you from everything. Here are some factors to bear in mind as you select a coverall that works for you.

Ensure that the material your coveralls are made provides a good barrier from the hazards you're exposed to at work. Certain fabrics or materials are more resistant to certain kinds of chemicals or physical impact. Also, materials differ in comfort, durability, breathability and protection. Choose wisely to ensure your needs are met!

Also, each material has different levels of penetration and permeation resistance.

- Penetration tests show how the liquid or gas passes through a defect in the garment.
- Permeation testing shows how the liquid or gas interacts with the garment without applying pressure and without exploiting defects.

Permeation testing is a better way to show what happens when liquids and gases interact with the fabric. But do keep both tests in mind when choosing your garment!

There are several types of seams, and each is rated for different levels of protection. Remember: one stray unravelled thread can create a gap which opens you up to risk.



Serged or sewn seams are made when threads interlock the edges of the material.



 Taped seams are sewn and taped to increase resistance against strong liquid splashes and tears.



**Bound** seams are sewn seams with an extra reinforced outer binding to strengthen the protective barrier.



**Double taped** seams are taped on the inside as well as the outside to produce an incredibly strong resistive seam.

High visibility garments make you more identifiable at a glance, which is useful for first responders and emergency personnel who need to be easily seen. However, garments that are low visibility are also available for discreet jobs.

From hooded coveralls to aprons, fully sealed coveralls to shoe covers, there is a wide variety of garment styles to suit your specific needs.

# **CHOOSING A GARMENT**

## **Disposable & Reusable Coveralls**

# **Hoods and face shields**

Some coveralls are specially designed to accommodate hoods and face shields, ensuring that your comfort is not compromised when needing to wear these PPE alongside your garment.











**Hoods** 

Standard

Respirator fit

Elastomeric faceseal With Safety PPE

In addition to our standard hood design, many of our garments offer a respirator fit hood. These hoods are designed with a longer zipper for complete coverage of the neck area.



**Faceshields** 



Standard



EX (extra-wide)

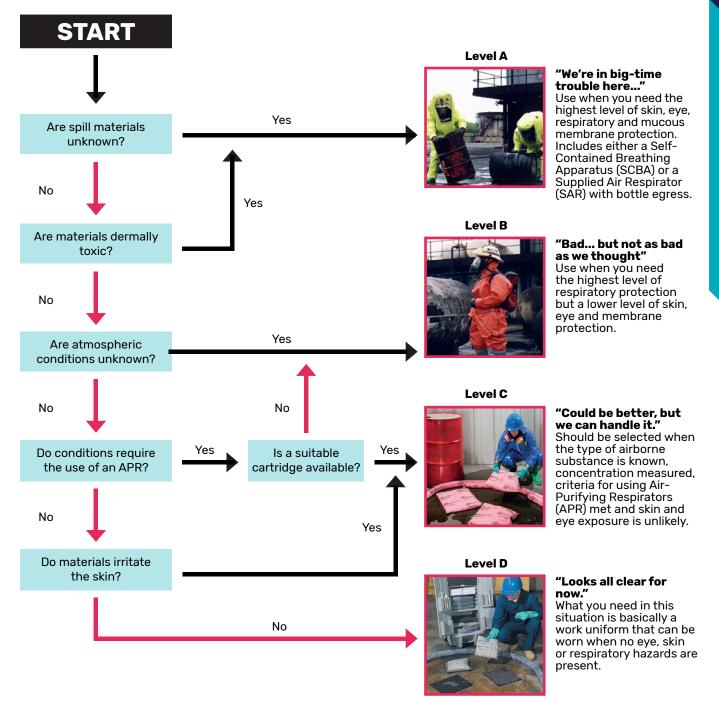
In addition to the standard faceshield, DuPont has several garment styles that offer a greater field of vision, enabling the wearer to see more of what they are dealing with, reducing missteps and allowing more natural movement and better eye contact.

The EX (extra-wide) faceshield options on Tychem® 10000 and Tychem® 9000 Level A garments feature a wrap-around design that provides ample room for a mask-mounted regulator. This faceshield is wider and longer, providing expanded peripheral and vertical viewing.

# **CHEMICAL PROTECTIVE APPAREL**

Protective clothing certified to different EN standards and types have different protection properties. It is important to select the appropriate protective clothing depending on the type of risk that you are exposed to ensure maximum protection.

# **GENERAL SELECTION GUIDELINES FOR PPE REQUIREMENTS\***



<sup>\*</sup> As adapted from the "Emergency Management" article by the U.S. Environmental Protection Agency (EPA) and the "General description and discussion of the levels of protection and protective gear" article by the Occupational Safety and Health Administration (OSHA).

## SELECTION GUIDE FOR CHEMICAL PROTECTIVE CLOTHING **UNDER EN STANDARDS**

"Category III" clothing are designed to protect against a hazard which may be life-threatening. Category I products are those that are not suitable for protection against hazards. Products such as basic single layer polypropylene are Category I products and are not deemed suitable for protection against hazards.

All CE Category III garments are marked with, for example: notification body.

where "0120" or other 4-digit numbers represent the

### GUIDE TO EN STANDARDS FOR CHEMICAL PROTECTIVE CLOTHING

		GUIDE TO PROTECTIVE CLOTHING						
	EN TYPE	TYPE DESCRIPTION	EN SYMBOL					
	<b>Type 1</b> EN943-1 EN943-2	<b>Gas-Tight suits</b> Protective clothing against liquid and gaseous chemicals, aerosols and solid particulates.	TYPE 1					
	<b>Type 2</b> EN943-1	Non Gas-Tight Protective Clothing Suits that retain positive pressure to prevent ingress of dusts, liquid and vapours.	TYPE 2					
CHEMICAL	<b>Type 3</b> EN14605							
PROTECTION	<b>Type 4</b> EN14605	Spray Tight Suits Suits that offer protect against saturation of liquid chemicals.	TYPE 4					
	<b>Type 5</b> EN ISO 13982-1	<b>Dry Particle Suits</b> Suits that provide protection to the full body against airborne solid particulates.	TYPE 5					
	<b>Type 6</b> EN13034	<b>Reduced Spray Suits</b> Suits that offer limited protection against a light spray of liquid chemical.	TYPE 6					
RADIOACTIVE CONTAMINATION	EN1073-2	Non-ventilated protective suits that offer protection against particulate radioactive contamination						
BIOLOGICAL PROTECTION	EN14126	Suits that offer protection against infective agents						
ANTISTATIC	EN1149-5	Suits that offer antistatic properties	4					

### "WHOLE SUIT TEST"

Each of these examples represent a "whole suit test" - a test on a finished garment to confirm that a coverall is suitable for a task. This generally involves the test subject entering a glass booth and being sprayed with either coloured or dry particles. The type of spray used differs according to the type being tested. The result is either a pass or a fail.







# **FLAME-RESISTANT COVERALLS**



- FR two-way brass zipper
- Two large double-stitched cargo pockets on both legs with flap-on hidden fasteners
- Two radio loops above chest pockets
- One pen-pocket with flap-on hidden fasteners
- · Double-stitched seams for enhanced durability
- Elastic waist
- Available in 2 types of fabrics: Nomex<sup>®</sup> Soft or Pyrovatex<sup>®</sup>
- FR reflective strips, logo and nametags are optional



Size (X): S / M / L / XL / 2XL / 3XL / 4XL / MTM

BRAND	PRODUCT CODE	DESCRIPTION
	620WSCNMXA450RCSX	Nomex® Soft, 4.5oz, Orange
	620WSCNMXA45RBCSX	Nomex® Soft, 4.5oz, Royal Blue
WORKSafe®	620WSCNMXA45NBCSX	Nomex® Soft, 4.5oz, Navy Blue
	620WSCNMXA45RDCSX	Nomex® Soft, 4.5oz, Red
	620WSCNMXA45GYCSX	Nomex® Soft, 4.5oz, Grey
WORKSafe®	620WSCNMXA55YLCSX	Nomex® Soft, 5.3oz, Yellow
WORKSafe®	620WSCPYR700RCSX	Pyrovatex <sup>®</sup> Orange

# **FLAME-RESISTANT APPAREL**



### **FLAME-RESISTANT JACKET**

- · Two large double-stitched chest pockets with flap-on fasteners
- · Two radio loops above chest pockets
- One pen-pocket with flap-on hidden fasteners
- · Double-stitched seams for enhanced durability
- Available in 2 types of fabrics: Nomex<sup>®</sup> Soft or Pyrovatex<sup>®</sup>
- FR reflective strips, logo and nametags are optional

Size (X): S / M / L / XL / 2XL / 3XL / 4XL / MTM

BRAND	PRODUCT CODE	DESCRIPTION
	620WSCNMXA450RJSX	Nomex® Soft, 4.5oz, Orange
	620WSCNMXA45RBJSX	Nomex® Soft, 4.5oz, Royal Blue
WORKSafe®	620WSCNMXA45NBJSX	Nomex <sup>®</sup> Soft, 4.5oz, Navy Blue
	620WSCNMXA45RDJSX	Nomex® Soft, 4.5oz, Red
	620WSCNMXA45GYJSX	Nomex® Soft, 4.5oz, Grey
WORKSafe®	620WSCPYR700RJSX	Pyrovatex <sup>®</sup> Orange





### **FLAME-RESISTANT PANTS**

- Two slack-style front pockets
- · Two set-in hip pockets
- · FR brass zippers
- 2 cargo-style pockets at both legs
- · Double-stitched seams for enhanced durability
- Available in 2 types of fabrics: Nomex® Soft or Pyrovatex®
- FR reflective strips, logo and nametags are optional

Size (X): S / M / L / XL / 2XL / 3XL / 4XL / MTM

BRAND	PRODUCT CODE	DESCRIPTION
	620WSCNMXA450RPSX	Nomex® Soft, 4.5oz, Orange
	620WSCNMXA45RBPSX	Nomex® Soft, 4.5oz, Royal Blue
<b>WORKSafe®</b>	620WSCNMXA45NBPSX	Nomex® Soft, 4.5oz, Navy Blue
	620WSCNMXA45RDPSX	Nomex® Soft, 4.5oz, Red
	620WSCNMXA45GYPSX	Nomex® Soft, 4.5oz, Grey
WORKSafe <sup>®</sup>	620WSCPYR700RPSX	Pyrovatex® Orange











# **FLAME-RESISTANT APPAREL**



### **FLAME-RESISTANT LABCOAT**

- Button front closures
- · Lapel collar
- · Side vent openings
- 3 pockets
- · Made to order
- · Available in 1 type of fabric: Nomex® Soft

Size (X): S / M / L / XL / 2XL / 3XL / 4XL / MTM

BRAND	PRODUCT CODE	DESCRIPTION
	620WSCNMXA450RLSX	Nomex® Soft, 4.5oz, Orange
	620WSCNMXA45RBLSX	Nomex® Soft, 4.5oz, Royal Blue
WORKSafe®	620WSCNMXA45NBLSX	Nomex® Soft, 4.5oz, Navy Blue
	620WSCNMXA45RDLSX	Nomex® Soft, 4.5oz, Red
	620WSCNMXA45GYLSX	Nomex® Soft, 4.5oz, Grey



# NOMEX® IIIA HOOD BALACLAVA SINGLE/DOUBLE LAYER, NATURAL COLOUR

- Material: NOMEX® IIIA Knitting Fabric
- · NOMEX® IIIA interlock knit which adjust to wearers head and face profile
- It fits comfortably under helmet
- The soft and breathable interlock knit feels comfortable
- · Inherent flame resistant for machine washable, reusable and 100% durable

BRAND	PRODUCT CODE	DESCRIPTION
	620WSCNMXA10NABF	FR Hood, Balaclava Nomex® III A Single Layer, Natural Colour
WORKSafe®	620WSCNMXA20NABF	FR Hood, Balaclava Nomex® III A Single Laver, Natural Colour

# **REUSABLE CLOTH MASK**





# WORKSAFE® 2 LAYER FR FACE MASK

Reliable, reusable masks that will shield you from workplace heat hazards. This fireresistant mask defends well against heat hazards such as flash fires and sudden flames. An antibacterial inner layer makes it suitable for blocking microbial hazards.

#### **Product Info:**

- Made of Nomex® Soft fabric, renowned for its comfort, fire resistant and moisture wicking properties.
- Available in five colours.
- Suitable for utilities, manufacturing, oil & gas and chemical industrial work.

Size: Free

BRAND	PRODUCT CODE	DESCRIPTION
	400WSRNMXOR2P	Nomex® Soft, 4.5oz, Orange
	400WSRNMXRB2P	Nomex® Soft, 4.5oz, Royal Blue
WORKSafe®	400WSRNMXNB2P	Nomex® Soft, 4.5oz, Navy Blue
	400WSRNMXRD2P	Nomex® Soft, 4.5oz, Red
	400WSRNMXGY2P	Nomex® Soft, 4.5oz, Grey

# **COTTON WORK ATTIRE**



### **WEARITE® COTTON COVERALL**

- Two-way zipper
- · Two large double-stitched cargo pockets on both legs with flap-on fasteners
- · Two large double-stitched chest pockets with flap-on fasteners
- One pen pocket
- Available in 2 types of pre-shrunk 100% cotton: 260gsm premium cotton or 180gsm standard cotton
- · Reflective strips, logo and nametags are optional
- · Made-to-order option available

Size (X): S / M / L / XL / 2XL / 3XL / 4XL / MTM

BRAND	PRODUCT CODE	DESCRIPTION
	630WRCCTPORCSX	Cotton Premium Orange Coverall
	630WRCCTPRBCSX	Cotton Premium Royal Blue Coverall
WEARITE®	630WRCCTPNBCSX	Cotton Premium Navy Blue Coverall
	630WRCCTPWHCSX	Cotton Premium White Coverall
	630WRCCTPGYCSX	Cotton Premium Grey Coverall
	630WRCCTSORCSX	Cotton Standard Orange Coverall
WEADITE®	630WRCCTSRBCSX	Cotton Standard Royal Blue Coverall
WEARITE®	630WRCCTSNBCSX	Cotton Standard Navy Blue Coverall
	630WRCCTSWHCSX	Cotton Standard White Coverall

### **WEARITE® COTTON PREMIUM LABCOAT**

- · Button front closures
- Lapel collar
- Side vent openings
- 3 pockets
- Available in 1 type of pre-shrunk 100% cotton: 260gsm premium cotton
- · Made-to-order option available

Size (X): S / M / L / XL / 2XL / 3XL / 4XL / MTM

BRAND	PRODUCT CODE	DESCRIPTION
WEARITE®	630WRCCTSWHLCSX	Cotton Premium White Coverall



# **COTTON WORK ATTIRE**



### **WEARITE® COTTON JACKET**

- · Two large double-stitched chest pockets with flap-on fasteners
- · One pen pocket
- Available in 1 type of pre-shrunk 100% cotton: 260gsm premium cotton
- · Reflective strips, logo and nametags are optional
- · Made-to-order option available

Size (X): S / M / L / XL / 2XL / 3XL / 4XL / MTM

BRAND	PRODUCT CODE	DESCRIPTION
	630WRCCTPORJSX	Wearite® Cotton Premium Orange Jacket
WEARITE®	630WRCCTPRBJSX	Wearite® Cotton Premium Royal Blue Jacket
WEARITE	630WRCCTPNBJSX	Wearite® Cotton Premium Navy Blue Jacket
	630WRCCTPGYJSX	Wearite® Cotton Premium Grey Jacket
	630WRCCTSORJSX	Wearite® Cotton Standard Orange Jacket
WEADITE®	630WRCCTSRBJSX	Wearite® Cotton Standard Royal Blue Jacket
WEARITE	WEARITE® 630WRCCTSNBJSX	Wearite® Cotton Standard Navy Blue Jacket
	630WRCCTSGYJSX	Wearite® Cotton Standard Grey Jacket

### **WEARITE® COTTON PANTS**

- Two slack-style front pockets
- Two large double-stitched cargo pockets on both legs with flap-on fasteners
- One set-in hip pocket
- Available in 2 types of pre-shrunk 100% cotton: 260gsm premium cotton or 180gsm standard cotton
- · Reflective strips, logo and nametags are optional
- · Made-to-order option available

Size (X): S / M / L / XL / 2XL / 3XL / 4XL / MTM

BRAND	PRODUCT CODE	DESCRIPTION
	630WRCCTPORPSX	Wearite® Cotton Premium Orange Pants
WEARITE®	630WRCCTPRBPSX	Wearite® Cotton Premium Royal Blue Pants
WEARITE	630WRCCTPNBPSX	Wearite® Cotton Premium Navy Blue Pants
	630WRCCTSGYPSX	Wearite® Cotton Premium Grey Pants
	630WRCCTSORPSX	Wearite® Cotton Standard Orange Pants
MEADITE®	630WRCCTSRBPSX	Wearite® Cotton Standard Royal Blue Pants
WEARITE®	630WRCCTSNBPSX	Wearite® Cotton Standard Navy Blue Pants
	630WRCCTSGYPSX	Wearite® Cotton Standard Grey Pants



# **SAFETY VEST**



### **WORKGARD® SAFETY VEST**

- · One size fits all
- · Lightweight and flexible
- · High visibility fluorescent colour
- Reflective strips located on the front and back
- 100% polyester mesh fabric
- · Machine washable: cold cycle

PRODUCT CODE	DESCRIPTION
610WGCSV100GN	WORKGard® Safety Vest, Lime Green With Reflective Strip. Size: Free
610WGCSV1000R	WORKGard® Safety Vest, Orange With Reflective Strip. Size: Free
610WGCSV200YLSX	WORKGard® Safety Vest, Yellow With Reflective Strip, Zipper, Pockets. Size (X): S/M/L/XL

### **WORKGARD® ELASTIC REFLECTIVE VEST**

- · Elastic webbing vest
- One size fits all
- · Lightweight and flexible
- · High visibility fluorescent colour
- Reflective strips throughout vest
- · Machine washable: cold cycle

PRODUCT CODE	DESCRIPTION
610WGCSV110GN	WORKGard® Elastic Reflective Vest, Lime Green. Size: Free
610WGCSV1100R	WORKGard® Elastic Reflective Vest, Orange. Size: Free







EN 1149-5:

2008

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## **WORKSAFE® CHEMPRO 1800** LIMITED WEAR LIFE HOODED **COVERALLS**

- · Made from a white micro-porous film laminate on to a nonwoven fabric
- · Protects against particulates, liquid chemicals, infective agents, particulate radioactive contamination; antistatic
- · Elasticated hood, waist, wrists and ankles
- · Double sliders on zips

#### Size (X): S/M/L/XL/XXL/XXXL

BRAND	PRODUCT CODE	DESCRIPTION			
WORKSafe®	610WSC1800SX	Chempro 1800 Coverall With Hood, White			

### **WORKSAFE® CHEMPRO 1500** LIMITED WEAR LIFE HOODED **COVERALLS**

- · Made from a white lightweight SMS fabric
- · Protects against particulates, liquid chemicals, infective agents, particulate radioactive contamination; antistatic
- · Elasticated hood, waist, wrists and ankles
- · Double sliders on zips

Size (X): XS / S / M / L / XL / XXL / XXXL

BRAND	PRODUCT CODE	DESCRIPTION
WORKSafe®		Chempro 1500 Coverall with Hood, White



# WORKSAFE® MICROVEK POLYPROPYLENE (PP) DISPOSABLE COVERALL

- An ideal solution for non-hazardous and grimy work environments
- Low cost disposable garment for lightweight application
- Breathable and comfortable

### Size (X): M / L / XL / 2XL

BRAND	PRODUCT CODE	DESCRIPTION		
WORKSafe®	610WSC8100WSX	Microvek Polypropylene Coverall, White		

# VINYLAPRON/SLEEVE



# **VINYL APRON/SLEEVE**

- · High quality vinyl apron, thickness 8mil, length 48"
- Plain edge and lint-free straps for clean environment use
- High quality vinyl sleeves, thickness 8mil, length 18"
- Elastic-sewn edge at both ends
- · Provides superior flexibility and resistance to chemicals, fats, oils and grease
- · Ideal for use in food handling and preparation, industrial maintenance and chemical processing

BRAND	PRODUCT CODE	DESCRIPTION		
WORKSafe®	600WSCVL08AP48	Vinyl Apron, Raw Edge, 8mil, 48" length, Size: Free		
	600WSCVL08SL18	Vinyl Sleeves, 8mil, 18" lengtl Size: Free		





# Disposable Sleeves & Shoe Cover

# **DUPONT™ TYVEK® COVERALLS**

Tyvek® garments provide the best balance of protection, durability and comfort. Provides protection against solidparticle exposure (Type 5) and low-level liquid aerosols from water-based chemicals (Type 6).

PRODUCT CODE	DESCRIPTION
610DPT9423	Tyvek® 400 Hooded Coverall, White, Size S
610DPT9424	Tyvek® 400 Hooded Coverall, White, Size M
610DPT9425	Tyvek® 400 Hooded Coverall, White, Size L
610DPT9426	Tyvek® 400 Hooded Coverall, White, Size XL
610DPT10347	Tyvek® 400 Hooded Coverall, White, Size XXL
610DPT10348	Tyvek® 400 Hooded Coverall, White, Size XXXL
610DPTC13996	Tyvek® Labcoat with Pockets, Size M
610DPTC13997	Tyvek® Labcoat with Pockets, Size L
610DPTC13998	Tyvek® Labcoat with Pockets, Size XL
610DPTC13999	Tyvek® Labcoat with Pockets, Size XXL
610DPT12440	Tyvek® Shoe Cover, Elastic Top, Skid Resistant
610DPTC13988	Tyvek® Shoe Cover Elastic Top Plain White
610DPTC13972	Dupont™ Tyvek® Overboots Anti Slip
600DPTD13674680	Dupont™ Tyvek® 400, Model TY500S Sleeve





TYVEK 400 Coverall











EN 1073-2



EN 14126





### **DUPONT TYVEK 500 CLASSIC XPERT HOODED COVERALL**

Applications for Tyvek® 500 Xpert garments include those found in pharmaceutical handling, chemical processing, the oil and gas industry, general maintenance and operations, automatic spray painting and many others.

- · Certified according to Regulation (EU) 2016/425
- · Chemical protective clothing, Category III, Type 5-B and
- EN 14126 (barrier to infective agents), EN 1073-2 (protection against radioactive contamination)
- Antistatic treatment (EN 1149-5) on both sides
- · Stitched external seams

- · Very low inward leakage thanks to optimised design
- Tyvek® auto-lock zipper and zipper flap for increased protection

PRODUCT CODE	DESCRIPTION			
610DPTD152340X	Dupont Tyvek 500 Classic Xpert Hooded Coverall, White, Size (X): M(58)/ L(63)/ XL(73)/ XXL(83)			







Alphatec 2000



### **ANSELL ALPHATEC® 1500-WH PLUS COVERALL HOOD**

#### Previously Known as Microgard 1500 Plus Chemical **Protective White Coverall**

MICROGARD® 1500 PLUS is a highly breathable anti-static SMS fabric which utilises the latest developments in microfibre technology to ensure good filtration efficiency

- Proven protection, filters 99.9% of particles >3 microns\*
- · Air and water vapour permeable (breathable) fabric helps reduce the risk of heat stress
- Optimised body fit, improving wearer comfort and safety
- · Silicone free, critical in spray painting applications
- · Anti-static, tested according to EN 1149-5
- · Optimized Body Fit Improves wearer comfort and safetv.
- \*JSTIIF particle penetration test.
- · Available in White, Light Blue & Navy.

PRODUCT CODE	DESCRIPTION
6100VI1500SX	1500-WH Plus Coverall Hood 111, Size (X): S/M/L/XXL/XXL/5XL











EN 1073-2 EN 1149-5

## **ANSELL ALPHATEC® 2000-WH** STD COVERALL HOOD

#### Previously known as Microgard 2000 Chemical **Protective Coverall**

MICROGARD® 2000 STANDARD provides both protection and comfort with exceptional liquid and particulate protection. Ideal for a wide range of industrial applications.

Specifically designed for working in warmer climates to help reduce heat stress. Provide protection against liquid spray and particulate hazards.

- Breathable microporous PE laminate fabric with optimized body fit for improved wearer comfort
- Bound seams ensure a high level of liquid protection
- Approved for antistatic use (EN1149-1)

PRODUCT CODE	DESCRIPTION
6100VI2000SX	2000-WH Std Coverall Hood 111, Size (X): S/M/L/ XL/XXL/XXXL















TYPE 5-B TYPE 6-B EN 1073-2 EN 14126 EN 1149-5 DIN 32781



# **CLEANROOM COVERALL**



# DUPONT™ TYVEK® ISOCLEAN® IC180/ IC109 COVERALL WITH HOOD

- Made from Tyvek® brand flashspun polyolefin protective
- · Unique, patented flash-spinning process creates a barrier to dry particles, microorganisms, and nonhazardous liquids. Comfortable, lightweight, and durable
- · Serged or bound seams with covered elastic options
- · Bound seam garments offer highest particle barrier within DuPont CE product portfolio
- Gripper™ soles offer a higher level of slip resistance than

DESCRIPTION
Tyvek® Isoclean® IC180 Coverall With Hood, Option OS & OO, White. Size (X): 73(M)/74(L)/75(XL)/76(XXL)
Tyvek® Isoclean® IC109 Coverall Zip FT, Option OS, White. Size (X): MD/LG/XL/2L



# **CLEANROOM COVERALL**





# DUPONT™ TYVEK® ISOCLEAN® COVERALL WITH HOOD AND SHOE COVER

Tyvek® IsoClean® delivers an ideal balance of protection, durability and comfort. Made of high density polyethylene using a patented flash spinning process. Inherent barrier to particles, microorganisms and non-hazardous water-based light liquid splash.

- · Breathable and exceptionally low linting
- · Serged internal seams, elastic face, wrists and ankles

PRODUCT CODE	DESCRIPTION			
610DPTIC105SWH002500X	DuPont™ Tyvek® IsoClean® Coveralls, White, Size (X): LG/XL			

## DUPONT™ TYVEK® ISOCLEAN® SLEEVES AND SHOE COVER

Tyvek® IsoClean® delivers an ideal balance of protection, durability and comfort. Made of high density polyethylene using a patented flash spinning process. Inherent barrier to particles, microorganisms and non-hazardous waterbased light liquid splash.

- · Breathable and exceptionally low linting
- 18" length sleeves: Bound seams, covered elastic wrist, bicep
- 5" high shoe cover: Serged seams, elastic opening, PVC sole, elastic toe
- 18" high boot cover: Serged seams, elastic opening, elastic ankles, Gripper™ sole

PRODUCT CODE	DESCRIPTION
600DPTIC501BWH0001000S	DuPont™ Tyvek® IsoClean® 18" Sleeves, White, 100prs/case
610DPTIC461SWHLG0300	DuPont™ Tyvek® IsoClean® IC461 Shoe Cover, White, 150prs/case
610DPTD13473315	DuPont™ Tyvek® IsoClean® IC447 Boot Cover, White, 100prs/case

Please refer to next page for **Garment Material** and **Selection Chart**.



# **DUPONT ISOCLEAN GARMENT**

#### Tyvek® sterile garments

The highest performing garments in our product line are made from Tyvek®, which has been used to make high-quality cleanroom garments for more than 25 years. Tyvek® is made by DuPont with a proprietary flash-spinning process that creates continuous fibers of high-density polyethylene that are randomly distributed and non-directional.



Tyvek® is tough, yet lightweight and soft.



Tyvek® offers an ideal balance of protection, durability, and comfort.



Tyvek® acts as a breathable barrier against particles and bacteria.



Tyvek® repels aqueous liquids and liquid aerosols.



Tyvek® is inherently low linting and abrasion resistant.

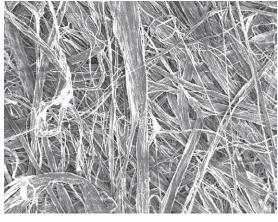


Image shown at 200x magnification.

Tyvek® is made with a unique flash-spinning process that creates a tortuous path for particles.

### Single-use garments from DuPont

DuPont sterile cleanroom garments, designed for single use, offer meaningful advantages in today's challenging cleanroom environments, including:

- Quality single-use garments are not subjected to multiple cycles of wearing, laundering, and sterilization, so fabric barrier and strength are consistent and predictable. Also, DuPont Controlled Environments garments help minimize cross-contamination risk because cleanprocessing and packaging are done in a facility that only handles new garments.
- Flexibility the DuPont single-use apparel program allows you to order only the quantities that you plan to use, which offers flexibility as your needs change
- Cost control single-use garments help eliminate budget uncertainties associated with garment repair, damage, and loss, helping you to better predict expenditures.

#### **DuPont quality systems for cleanroom garments**

DuPont single-use garments for controlled environments offer the following standards of quality:

- The DuPont Controlled Environments quality management system is ISO 9001:2015 registered.
- Tyvek® IsoClean® sterile garments have a sterility assurance level of 10-6. Radiation doses are validated in accordance with ANSI/AAMI/ISO 11137 through bioburden and dose verification testing.
- Tyvek® IsoClean® sterile garments are gamma irradiated in a facility that is registered by ISO 13485 quality standard and adheres to the requirements of ANSI/AAMI/ISO 11137.
- A Certificate of Sterility and a Certificate of Compliance come with every shipment of sterile single-use garments.
- Dose audits are conducted quarterly to maintain dose validation.
- Customers are invited to audit our manufacturing and sterilization facilities.
- Quality documentation is readily available and accurate when requested to help meet customer requirements.
- Lot traceability is maintained through garment manufacturing, processing, and sterilization.

# **DUPONT ISOCLEAN SELECTION CHART**

When it comes to working in a broad range of controlled environments, specifiers have many product options from which to select. The process to understand which option atches a given environment can be confusing and taxing. DuPont has tried to help reduce some of that burden by providing a complete line of products and information to help guide specifiers through their selection process.

To get the most out of your cleanroom apparel, it is necessary to understand where each product can be used. To provide a quicker overview of our products and where they are intended for use, we developed the simple guide below. Our goal is to provide the appropriate DuPont product that is suitable for a given environment or hazard.

### **Fabric performance features**

Fabric	Available sterile	Particle barrier	Non hazardous liquid barrier	Comfort	Durability	Static dissipation <sup>†</sup>	Particle shedding	Strengths
Tyvek® IsoClean® flashspun polyolefin, clean-processed	Yes CS option	<b>/</b> +	<b>✓</b>	<b>/</b> +	<b>/</b> +		<b>/</b> +	
Tyvek® IsoClean® flashspun polyolefin, bulk	Yes Sterile 0S option	<b>/</b> +	<b>/</b>	<b>/</b> +	<b>/</b> +	<b>/</b> +	<b>/</b> +	ldeal combination of protection, durability, and comfort
Tyvek® Micro-Clean® 2-1-2 flashspun polyolefin	Yes Sterile OS option	<b>/</b> +		<b>/</b> +	<b>/</b> +	<b>\'</b> "	<b>/</b> +	
DuPont™ ProClean® 6 microporous films	No	<b>/</b> +	<b>/</b> +'	<b>/</b> +	<b>/</b> +	<b>/</b> +	<b>/</b>	Effective liquid barrier; low cost

Comparison within the DuPont portfolio:



Better

(Blank) Not recommended

- \* Barrier properties may be compromised through use.
- \*\* Antistatic performance may be reduced for sterile products.
- † Nuisance static

# **DUPONT ISOCLEAN SELECTION CHART**

				1110		-01		OHAIT
		Tyvek® I	soClean®		Tyv Micro-Cle		ProClean® 6*	
	Clean processed sterile	Sterile	Clean processed non-sterile	Bulk non-sterile	Sterile	Non- sterile**	Non-sterile	Considerations
Environments								
ISO Class 5 Aseptic Cleanrooms (Former FED-STD- 209E; Class 100)	<b>/</b> +	<b>✓</b>			<b>/</b>			Tyvek® IsoClean® sterile garments offer excellent cleanliness, barrier, and sterility assurance level.
ISO Class 6, 7, and 8 Bioburden Control Areas (Former FED-STD- 209E; Class 1000, 10,000 and 100,000)	<b>/</b> +	<b>/</b> +			<b>/</b>			Tyvek® IsoClean® sterile garments offer excellent cleanliness, barrier, and sterility assurance level.
ISO Class 6, 7, and 8 Cleanrooms (Former FED-STD-209E; Class 1000, 10,000 and 100,000)			<b>/</b> +	<b>/</b> +		<b>/</b>	<b>/</b>	Tyvek® is durable, low- linting and provides an inherent particle barrier. Clean processing and bound seams should be considered for more critical environments.
Hazards								
Non-hazardous dry particles	<b>/</b> +	<b>/</b> +	<b>/</b> +	<b>/</b> +	<b>/</b> +	<b>/</b> +	<b>/</b> +*	Tyvek® provides an inherent barrier against small particles. Bound seam garments offer a higher level of protection than serged seam garments.
Non-hazardous, light liquid splash	<b>/</b>	<b>/</b>	<b>/</b>	<b>/</b>			<b>/</b> +	ProClean® provides an effective barrier against a variety of common non-hazardous liquids.
Hazardous powders Notice: DuPont Controlled Environments garments should not be used in potentially explosive or flammable environments.	<b>/</b> +	<b>/</b> +	<b>/</b> +	<b>/</b> +				Use bound seam garments when working with hazardous powders.
Hazardous liquid splash Examples: organic solvents, caustics								Please refer to our DuPont™ Tychem® product line for liquid and vapor chemical protection.
Electric arc, industrial fire hazard, welding			D	o Not Us	e <b>e</b>			Please refer to DuPont™ Nomex® for flame- resistant apparel. Controlled environment garments are not suitable for firefighting activities, nor for protection from hot liquids, steam, molten metals, welding, electric arc, or thermal radiation.

Comparison within the DuPont portfolio:

√+ Best

(Blank) Not recommended

- \* Barrier properties may be compromised through use.
- \*\* Packaged individually.





# DUPONT ISOCLEAN GARMENT PROCESS & PACKAGING

#### **Sterile**

#### Clean-processed and sterile (option code CS)

Garments are specially processed to minimize particle shedding, then folded to aid in aseptic donning and individually packaged in an ISO Class 4 cleanroom. The case quantity is packaged in a cardboard case with two polyethylene liners. Sterility is achieved by gamma irradiation. Radiation dosage is validated in accordance with ISO 11137 for a Sterility Assurance Level (SAL) of 10<sup>-6</sup>.

#### Sterile (option code OS)

Garments are folded to aid in aseptic donning and individually packaged. The case quantity is packaged in a cardboard case with two polyethylene liners.

Some sterile items are folded and individually packaged in an ISO Class 5 cleanroom (see garment data sheet). Sterility is achieved by gamma irradiation. Radiation dosage is validated in accordance with ISO 11137 for a Sterility Assurance Level (SAL) of 10<sup>-6</sup>.



Opaque sterile pouch packaging features a no-smear label.

#### Non-sterile

#### Clean-processed (option code 0C)

Garments are specially processed to minimize particle shedding and individually packaged in an ISO Class 4 cleanroom. The case quantity is packaged in a cardboard case with two polyethylene liners.

### Individually packaged (option code PI)

Garments are individually packaged in an ISO Class 5 cleanroom. The case quantity is packaged in a cardboard case with two polyethylene liners.

#### Bulk (option code 0B or 00)

Case quantities are packed in a cardboard case with two polyethylene liners. Tychem® garments are packed in a cardboard case with a single polyethylene liner.

BB Bulk BH 50/bag MP Multipack

Note: Individual packaging for shoe and boot covers indicates that each pair has its own sealed bag. Masks and cuff tapes may have subgroupings of individually packaged items within the case.

#### Sterile packaging process-Critical assurance sterile apparel multilevel packaging



Outer shipping carton is securely sealed.

Carton displays product label, sterile dot indicator, and fully traceable lot number.

Multilevel interior packaging features one or two polyethylene carton liners.

The outer liner provides protection from dust and contamination, particularly if outer carton is discarded.

A lot-specific Certificate of Compliance with sterile dot indicator is placed between the two liners.

The inner liner allows transportation of product to a cleaner, more controlled environment. Completely heat sealed, airtight individual garment opaque bag is made from durable polyethylene film and features a varnish-coated ink, easy-to-open linear-tear, and embossed lot number.

Sterile garment consistently folded and packaged to ease aseptic donning.

Traceable lot numbers are stamped on each individual sterile garment.

# **CHEMICAL RESISTANT COVERALL**



### **DUPONT™ TYCHEM® 2000 C/ 6000 F COVERALLS**

Tychem® C/ F coveralls consists of a substrate of regular Tyvek® plus a specialised polymeric coating. Provides protection against numerous organic chemicals, highly concentrated inorganic chemicals and biological hazards.

- · Antistatic coating to the interior white surface
- · Lightweight fabric that is durable and resistant to tear and abrasion
- 100% particle tight and resists splashes of pressures up to 2 bar
- · Standard fit hood, elastic face, wrist and ankles
- Taped seams

PRODUCT CODE	DESCRIPTION
610DPTD136753XX	Tychem® 2000 C Coverall, Yellow, Size (XX): 05(S)/ 15(M)/24(L)/36(XL)/40(XXL)/52(XXXL)
610DPTD136752XX	Tychem® 6000 F Coverall, Size (XX): 15(S)/24(M)/36(L)/40(XL)/52(XXL)











Tychem® 2000 is used for splash or pressurised splash protection in a variety of industrial environments, including pulp and paper manufacturing, food processing, chemical processing and pharmaceutical manufacturing.

- · JACKET: Hooded jacket with zipper closure
- · PANTS: Pants without pockets
- · Antistatic treatment (EN 1149-1) on inside; see footnotes
- EN 14126 (barrier to infective agents)
- · Stitched and over-taped seams with barrier tape for protection and strength

PRODUCT CODE	DESCRIPTION
610DPTD136754XX	Tychem® 2000 Jacket, Yellow, Size (XX): 36(M)/40(L)/52(XL)/67(XXL)
610DPTD136754XX	Tychem® 2000 Pants, Yellow, Size (XX): 75(M)/88(L)/91(XL)







**PANTS** 

# CHEMICAL RESISTANT COVERALL



## **DUPONT™ TYCHEM® 4000 S COVERALLS/ SLEEVED APRON**

Tychem® 4000 Sisideal for chemical handling, environmental clean-up operations and emergency response. It is suitable for use in a variety of industries, including oil and gas, chemical engineering, and for use by hazardous material response teams and other emergency services.

- EN 14126 (barrier to infective agents), EN 1073-2 (protection against radioactive contamination)
- · Antistatic treatment (EN 1149-5) on inside
- Stitched and over-taped seams with barrier tape for protection and strength
- Double cuffs for good glove compability
- Double zippers and double flaps for greater tightness, outer flap with adhesive tape and integrated chin flap
- Sleeved Apron: Delivers effective protection against a range of chemical environments

PRODUCT CODE	DESCRIPTION
610DPTD151934XX	Tychem® 4000 S Coverall, White, Size (XX): 51(M)/67(L)/73(XL)/81(XXL)/94(XXXL)
610DPTD142496XX	Tychem® 4000 Sleeved Apron, White, Size (XX): 25(S)/17(M)/02(L)/38(XL)

















COVERALL SLEEVED APRON

TYPE 4

TYPE 5

TYPE 6 EN 1073-2 EN 1149-5





## **DUPONT™ TYCHEM® 6000 FR** THERMOPRO COVERALL

Certified to NFPA 1992, NFPA 2112, and the Category 2 Requirements of NFPA 70E. Respirator Fit, Drawstring Hood. Elastic Wrists, Open Ankles. Double Storm Flap With Hook & Loop Closure. Taped Seams. Orange.

- · Taped seams provide strong chemical resistance against heavy liquid splashes.
- · Attached respirator-fit hood with drawstring to pull tightly around respirator; longer zipper extends to chin for complete coverage of neck area.
- · Bright orange color for high visibility

PRODUCT CODE	DESCRIPTION
610DPTTP198T/SX	Tychem® Thermopro Coverall, Orange, TP198T Size (X): M/L/XL









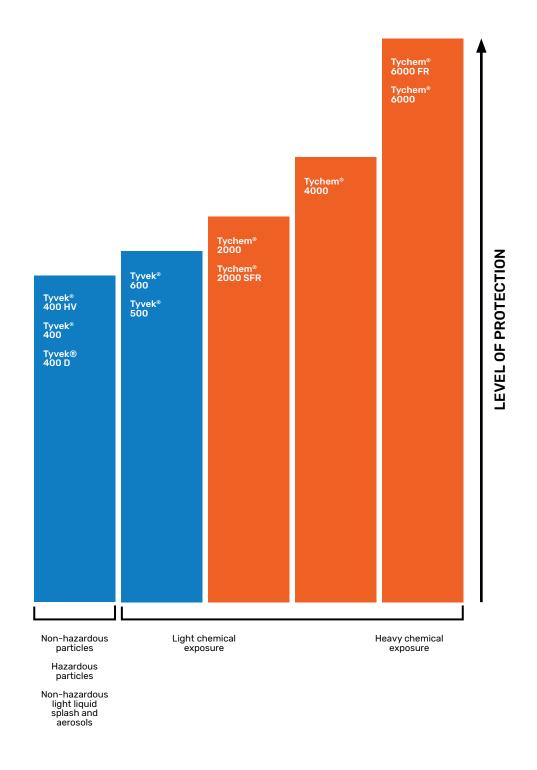








# DUPONT® CHEMICAL COVERALL CHART



# DUPONT® CHEMICAL COVERALL CHART

### TYVEK® PRODUCTS

Typical general industrial hazards/description/examples

	F	Particle	es	Aer	osol	Light	liquid sp	olash*		Particles			Aerosol	Bloodborne pathogens	Flame** resistance						
Garment	General dirt & grime	Animal waste	Sanding & grinding waste	Spray paint	Oil & grease		Fertilizer	Sewage	Fertilizer	Pesticides .	Asbestos			Berylium	Mold	Fiberglass	Carbon	Radioac- tive particles	Isocyanate containing		
Tyvek® 400	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		
Tyvek® 500	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		

### **TYCHEM® CHEMICAL PROTECTION PRODUCTS**

Typical chemical hazards/examples

	Hazardous dry powders & solids	Bloodborne pathogens & biohaz- ards	Light chemical splash & aerosols	Moderate liquid chemical splash	Potential flash fire exposure & liquid organic chemicals	Heavy liquid chemical splash (toxics & corrosives)	ChemBio & warfare agents	Chemical vapors & gases (toxics & corrosives)				FPA mbles		
Garment	Dry pharma chemicals	Blood, saliva, human excrement	Inorganic acids and bases, salts	Organics, solvents	Metham- phetamine	Known carcinogens	Sarin, mustard, VX nerve agent	Chlorine, anhydrous ammonia	1991 Flash fire option	1991 Liquid gas option	1992	1994 Class 2	2112	70E Cat 2
Tychem® 2000 SFR	•	•	•											
Tychem® 2000	•	•	•*											
Tychem® 4000	•	•	•*	0										
Tychem® 5000	0	•	0	•			0				•			
Tychem® 6000	0	•	0	•			•				•			
Tychem® 6000 FR	0	0	0	•	•		•				•		•	•

Generally preferred

Acceptable for use

<sup>\*</sup>Serged and/or bound seams are degraded by some hazardous liquid chemicals, such as strong acids, and should not be worn when these chemicals are present.

# CHEMICAL RESISTANT COVERALL



## **ANSELL ALPHATEC® 3000-YE/ 4000-GR COVERALL HOOD**

### Previously Known as Microchem 3000 / 4000 Chemical **Protective Coverall**

Ansell Alphatec® 3000 / 4000 Chemical Protective Coverall is one of the lightest and most comfortable chemical protective garments on the market today. One of the lightest and most comfortable chemical protective garments on the market today.

- AlphaTec® 3000: 3-layer spun bond PP with barrier film, with strong ultrasonically welded seams, provides an effective chemical barrier against most inorganic chemicals
- AlphaTec® 4000: Unique 5-layer fabric provides exceptional barrier to organic and inorganic chemicals
- Approved for antistatic use (EN1149-1)

PRODUCT CODE	DESCRIPTION
6100VI3000SX	AlphaTec® 3000 Chemical Protective Hooded Coveralls, Size (X): S/M/L/XL/XXL/XXXL
6100VI4000SX	AlphaTec® 4000 Chemical Protective Hooded Coveralls, Size (X): S/M/L/XL/XXL/XXXL/XXXXL
6100VI4000-162SX	AlphaTec® 4000-GR Model 162 Size (X): S/M/L















TYPE 4-B TYPE 5-B EN 1073-2 EN 14126 EN 1149-5

AlphaTec® 4000 Apron



AlphaTec® 4000 Trousers

### **ANSELL ALPHATEC® 4000 APRON WITH SLEEVES**

Previously Known as Microchem® 4000, Model 215 **Apron With Sleeves** 

Innovative multi-layer chemical barrier technology

- · Exceptional chemical protection
- · Velcro fastening to neck
- · Tie fastening at the waist
- · Double cuff with knitted inner cuff
- · Welded and taped seams

PRODUCT CODE	DESCRIPTION
6100VI4000-215	AlphaTec® 4000 Model 215 Apron With Sleeve, Size (X): M/L/XL
6100VI4000-301	AlphaTec® 4000-GR Model 301 Trousers, Size (X): L/XL







Type PB [3]-B Type PB [3]-B



# **CHEMICAL RESISTANT COVERALL**





### RESPIREX GTL DISPOSABLE SUIT

The fully encapsulating GTL is a Type 1A - ET single use gas-tight suit designed to protect the emergency responder against toxic, corrosive gases, liquids and solid chemicals.

- Heavy duty 122cm (48") long gas tight zip, fitted to the right hand side of the suit - flap with a hook and loop fastener fitted to cover the teeth of the zip.
- · Adjustable internal support belt and bat-wing sleeves for optimal wearer comfort.
- · Flexible, multi-laminated, anti-mist visor giving clear undistorted vision.
- · Seams welded and taped for maximum performance.
- Kemblok™ chemically protective laminated glove welded to the suit material with an elasticated over sleeve to prevent splash entering the supplied neoprene outer
- · Integral socks with outer splash guards.
- · Tested to EN464 prior to despatch for leak-tightness.

PRODUCT CODE	DESCRIPTION
610RILGTL001/159X	Respirex Gtl Disposable Suit In Yellow Laminate Material, Size (X): S/M/L/XL

# **CHEMICAL RESISTANT COVERALL** (REUSABLE)



# **RESPIREX® CHEMICAL-RESISTANT JACKET & TROUSERS**

Reusable Chemical Protection jackets and trousers are available in a wide variety of fabrics to provide the best possible protection in numerous industries.

- · Different options available based on working environment
- · Can be customised in different fabric material

PRODUCT CODE	DESCRIPTION
610RILJKT019/17X	Respirex® Yellow Neoprene Jacket Size (X): S/M/L/XXL
610RILBTRS002/17X	Respirex® Yellow Neoprene Trousers Size (X): S/M/L/XXL



Available in a wide variety of different materials - VBV, Hypalon, Butyl, Neoprene, VBP and PVC

safety.com.sg



## **RESPIREX® SIREN SUIT IN NEOPRENE**

Reusable one-piece chemical protective suits are available in a wide range of fabrics to provide the best possible protection in numerous industries. Suits feature nylon coarse tooth zips and a choice of hook and loop fastener or press stud zip flaps. Zip can be central or from thigh to collar.

- · Yellow neoprene
- · Reinforced cuffs
- Can be customised in different fabric material

PRODUCT CODE	DESCRIPTION
610RILCOMB191/17/X	Respirex® Siren Suit In Neoprene With Reinforced Cuffs, Size (X): M/L/XL
610RILCOMB214/3X	Respirex® Chemical Protective Siren One-Piece Viton/Butyl/Viton Suit, W/Straight Outer Sleeve, 2" Extended, Size (X): L/XL/XXXL





Available in a wide variety of different materials - VBV, Hypalon, Butyl, Neoprene, VBP and PVC

# **RESPIREX® GAS TIGHT SUIT**





The Respirex® limited life gas tight suit (Type 1A) is designed to protect the emergency responder against toxic, corrosive gases, liquids and solid chemicals.

- High performance lightweight, seven-layer, nonwoven, chemical barrier fabric
- Flexible, multi-laminated, anti-mist visor giving clear undistorted vision
- Optional airline pass-thru for supplementary airline supply connection and detachable Respirex® Hazmax™ FPA safety boots available

PRODUCT CODE	DESCRIPTION
O IORIEI II	Respirex® Ultimate Barrier Limited Life Gas Tight Suit, Fully Encapsulated, (Type 1/Level A) Size (X): S/M/L/XL/XXL



# RESPIREX® REUSABLE GAS-TIGHT CHEMICAL PROTECTIVE SUIT

A fully encapsulating (Type 1A) gastight suit which is able to cover both the wearer and breathing apparatus. It incorporates the latest technology in both fabric and suit design and is compatible with any manufacturer's breathing apparatus.

- Double-glazed visor permitting clear undistorted vision that will withstand chemical permeation listed in EN943-2 and NFPA standards
- Replaceable highly chemicalresistant Hazmax<sup>™</sup> safety boots offers protection against substances listed in EN943-2 standards
- Can be customised in different fabric material

PRODUCT CODE	DESCRIPTION
610RILGT- B201/208/3X	Respirex® GTB Reusable Gas-Tight Suit, Type 1/ Level A, VBV (Viton/ Butyl/Viton) Size (X): S/M/L/XL

Available in a wide variety of different materials - VBV, Hypalon, Butyl, Neoprene, VBP and PVC



# RESPIREX® GTL LIGHTWEIGHT DISPOSABLE SUIT

Fully encapsulating GTL suit manufactured in Chemprotex™ 400 is a Type 1A - ET single use gas-tight suit designed to protect the emergency responder against toxic, corrosive gases, liquids and solid chemicals.

- Flexible, multi-laminated, anti-mist visor gives clear undistorted vision
- Chemically protective laminated glove welded to the suit material with an elasticated over sleeve to prevent splash
- Integral socks with outer splash guards
- Tested to EN464 prior to despatch for leak-tightness
- Approved to EN943-2:2002 Type 1A ET

PRODUCT CODE	DESCRIPTION
610RILGTL001/159X	Respirex® GTL Lightweight Suit, Size (X): S/M/L/XL

Please refer to pg 36 - 37 for **Material Permeation chart.** 

# **RESPIREX® GAS TIGHT SUIT**







## REUSABLE SIMPLAIR A.E. TANK CHEMICAL PROTECTIVE SUIT

A one-piece non-gas-tight (Type 2) chemical protective full suit designed for use with breathable air supplied by an external compressed air source.

- · Durable rigid PVC visor
- Elasticated ankles and stirrups with elasticated outer legs (splash guards)
- · Low-flow audible warning devices

### REUSABLE SIMPLAIR A.E. FULL CHEMICAL PROTECTIVE SUIT

A one-piece non-gas-tight (Type 2) chemical protective full suit designed for use with breathable air supplied by an external compressed air source.

- Available in durable rigid PVC visor or totally lightweight transparent PVC hood
- Elasticated ankles and stirrups with elasticated outer legs (splash guards)
- · Low-flow audible warning devices

## REUSABLE POWERED RESPIRATOR PROTECTIVE SUIT

The Respirex PRPS is a one piece gas tight chemical protective suit for use by emergency response personnel after a CBRN incident.

- High performance, lightweight, multi-layer chemical barrier material
- Internally-mounted Jupiter™ ER-02 powered air turbo unit with in-hood alarm system
- Single-use lithium battery
- Externally- mounted orange JFR-85-CE filters

PRODUCT CODE	DESCRIPTION
610RILSIMT106/17X	Respirex® Simplair A.E. Yellow Neoprene Air Supplied Tank Suit Size (X): S/M/L/XL

PRODUCT CODE	DESCRIPTION
610RILSIMS195/37X	Respirex® Simplair A.E. Air Supplied Suit in yellow C2 PVC, Size (X): S/M/L/XL/ XXL/XXXL

PRODUCT CODE	DESCRIPTION
610RIL- CPS0046M/9/8	Respirex® Powered Respirator Protective Suit, Size: M, Glove Size: 9, Boots Size: 8
610RILCPS0046X- L/X/X	Respirex® Powered Respirator Protective Suit, Size: XL, Gloves and Boots Size (X): 10/11

# **COLD RESISTANT APPAREL**









# **TEMPSHIELD CRYO APRON**

Cryogenic aprons made by Tempshield® provide a high-level of thermal protection to the torso and upper legs in harsh cryogenic atmospheres.

- Cryogenic protection for ultra-cold applications down to -196°C (-320°F).
- Made from state-of-the-art waterproof materials that are lightweight for comfort and ease of movement.
- Multiple lengths available for maximum safety.
- Adjustable straps at the neck and waist to ensure a proper fit
- Quick-release buckles at the neck and waist for swift on/ off function.
- Safety certified to meet EU standards: EN 511, EN 388, EN ISO 13688:2013.
- Applications: dispensing/transferring cryogenic liquids, handling of cryogenic samples into or removing from storage vessels.

PRODUCT CODE	DESCRIPTION
600TSICRYO-CAXX	Tempshield Cryo Apron, 24"W X (XX)"L Length (XX): 36/42/48/54



# **COLD RESISTANT APPAREL**



# **DELTAPLUS NORDLAND PU-COATED POLYESTER OXFORD COLD STORAGE PARKA**

Parka. Waterproof seams. Removable hood. Collar with polar lining for optimal comfort. Fastening with double zip under press stud storm flap. Adjustable waist and bottom with elastic drawstring. 7 pockets.

Quilted polyester Taffeta lining.

- · Cold protection
- · Internal storm cuff with cutaway
- · Thumb for improved cold protection
- · Fixed badge holder included
- Decorative reflective details









# **DELTAPLUS ICEBERG PU-COATED POLYESTER OXFORD COLD STORAGE**

Warm Salopette. Waterproof seams. Adjustable waist with elastic drawstring. Adjustable braces. Preformed and reinforced knees. 5 pockets.

Polyurethane-coated Oxford polyester fabric. Quilted polyester Taffeta lining.

- · Construction civil engineering, second work craftman, light industry services - logistics services, logistics - cold environment.
- Cold protection, waterproof zipped pockets, bottom of legs with storm flap, higher back protection.

PRODUCT CODE	DESCRIPTION
610DPGICEBERGNBSX	Deltaplus Iceberg Pu-Coated Polyester Oxford Cold Storage Dungarees Navy Blue. Size (X): S/M/L/XXL











# **SAFETY RAINCOAT**



### **DELTAPLUS 400 RAIN SUIT**

Rain jacket and trousers. Waterproof seams.

**JACKET:** Fastening with zip under storm flap. Fixed hood. Raglan sleeves. Adjustable cuffs with press-studs. 2 pockets.

TROUSERS: Elasticated waist. Adjustable bottom of legs with press-studs. 2 hand slits.

- · Ventilation back flap
- · Underarm ventilation eyelets

PRODUCT CODE	DESCRIPTION
610DPG400YLSX	Deltaplus 400 Rain Suit Yellow (2pcs Type) Size (X): M/L/XL/2XL
610DPG400NBSL	Deltaplus 400 Rain Suit Navy Blue (2pcs Type)

# **DELTAPLUS MA400 RAIN SUIT**

Rain coat. Waterproof seams. Fixed hood. Fastening with zip under storm flap. Elasticated inside cuffs. 2 pockets.

- · Decorative retro-reflective bands (front and back)
- · Ventilation back flap
- · Underarm ventilation eyelets
- · PVC-coated polyester fabric
- · Colour: Yellow, Green



PRODUCT CODE	DESCRIPTION
610DPGMA400GRSX	Deltaplus MA400 Rain Suit Green (1pcs Type) Size (X): M/L/XL/2XL
610DPGMA400YLSX	Deltaplus MA400 Rain Suit Yellow (1pcs Type) Size (X): M/L/XL/2XL



STEAM & HOT LIQUID RESISTANT ARC FLASH & FR SUITS





1801JN120



1801TN120

**NASCO PETROSTORM** 

Designed to be the lightest weight multi-hazard protective outerwear available. With both flash fire and arc protection, PetroStorm is great for Upstream and Downstream Oil & Gas operations. It offers multi-hazard protection in a comfortable, lightweight, functional design.

PetroStorm uses a composite film with CCT Technology™ to make it 60% lighter than PVC multi-hazard protection products on the market. This eliminates PVC which stores heat in the summer causing the wearer to be hot and uncomfortable.

The H1800N by NASCO is a 3 piece detachable hood with a 4 snap attachment. This hood can be attached to either 1801JN110 or 1801JN120.

- Electric Arc Resistant AR Category 2
- · Flash Fire Resistant

- · Chemical Splash Resistance
- · Steam & Hot Liquid Resistant
- · Soft, Flexible Maximizes worker movement and comfort
- · Waterproof, windproof
- Fall protection access
- · Reduces worker heat stress
- · Stays cool in Summer, stays soft in Winter

PRODUCT CODE	DESCRIPTION
620NASH1800N	Nasco Petrostorm Multi-Hazard Outerwear, Detachable Hood. Size: Free
620NAS1801TN120SX	Nasco Petrostorm, Bib Trouser, Navy Blue. Size (X): L/M/XL
620NAS1801JN110SX	Nasco Petrostorm Multi-Hazard Outerwear, Jacket With Reflective. Size (X): L/M/XL
620NAS1801JN120SX	Nasco Petrostorm Jacket With Storm Fly Front, Navy Blue. Size (X): L/M/XL

# **ARC FLASH & FR**



### **TCG SERIES ARC FLASH KIT**

Nearly clear **True Colour Gray™** hood window provides 100% true color acuity and includes antifog and anti-scratch resistant coatings. Hood comes equipped with an optional ventilation system and/or LED light for maximum comfort and vision while working.

Reflective day/night striping on arms and legs for increased visiblity. Ultralight suit made from a proprietary blend of arc rated, inherently flame resistant, aramid fibers.

- Premium IFR fabrics, dual stage front closure, high visibility stripping on the arms and legs
- Same as CAT, plus Electrical Utilities that demand the lightest weight suits with the best available suit features

#### ARC Rating:

TCG25: 27 cal/cm<sup>2</sup> TCG40: 46 cal/cm<sup>2</sup> TCG65: 76 cal/cm<sup>2</sup> TCG100: 100 cal/cm<sup>2</sup>

TCG140: 140 cal/cm<sup>2</sup>

Size: S / M / L / XL / 2XL / 3XL / 4XL / 5XL

PRODUCT CODE	DESCRIPTION
TCG3B	TCG25™ Suit Set, Black
TCG4B	TCG40™ Suit Set, Black
TCG5B	TCG65™ Suit Set, Black
TCG6B	TCG100™ Suit Set, Black
TCG7B	TCG140™ Suit Set, Black



\* Flash hood, flash coat or flash bibs can be buy separately from Arc flash kit - suit set.

# **ARC FLASH & FR**



### **CAT40™ ARC FLASH KIT**

Nearly clear grey hood window provides 100% true color acuity and includes anti-fog and antiscratch resistant coatings.

- Made from a flame resistant treated cotton
- Meets ANSI /ISEA 125 Level 2 Conformity and Arc Flash PPE Category 4 standards with an arc rating of 41 cal/cm<sup>2</sup>
- Adjustable suspenders for easy on/off. Simple and easy to use Velcro® front closure

PRODUCT CODE	DESCRIPTION					
FRTC4B	CAT40™ Suit Set, Khaki Size: S/M/L/XL/2XL/3XL/4XL/5XL					
CAT4-C	CAT40™ Arc Flash Hood, Khaki Size: OS					
CAT4-CT	CAT40™ Arc Flash Coat, Khaki Size: S/M/L/XL/2XL/3XL/4XL/5XL					
CAT4-BIB	CAT40™ Arc Flash Bibs, Khaki Size: S/M/L/XL/2XL/3XL/4XL/5XL					



### 8 CAL HRC2™

12 CAL TCG2P™

# 8 CAL HRC2™ / 12 CAL TCG2P™ ARC FLASH KIT

Includes True Color Grey arc flash face shield with hard cap, inherently flame resistant coverall, balaclava, and a nylon storage bag.

- Nearly clear grey window provides 100% true color acuity and includes anti-scratch and anti-fog resistant coating
- Meets ANSI/ISEA 125 Level 2 Conformity and Arc Flash PPE Category 2 standards with an arc rating of 8 cal/cm<sup>2</sup> or 12 cal/cm<sup>2</sup>
- Available with optional shield mounted light for increased visibility when working in dark spaces

PRODUCT CODE	DESCRIPTION
HRC2-CKE-NB / TCG2P-CKE-NB	8 Cal HRC2™ or 12 CAL TCG2P™ Arc Flash Kit, Navy. Size: S/M/L/XL/2XL/3XL/4XL/5XL
BSA-CBX7NB / BSA-OB59NB	8 Cal or 12 CAL BSA <sup>™</sup> Arc Flash Coveralls, Navy. Size: S/M/L/XL/2XL/3XL/4XL/5XL
-	Arc Flash Face Shield, Hard Cap, Balaclavas
-	Arc Flash Kit Storage & Shield Bags

# **ARC FLASH PPE CATEGORIES**

### PPE **CATEGORY**

#### **Arc-Rated Clothing**

- AR long-sleeve shirt and pants or arc-rated coverall
- AR rated suit hood or arc rated face shield & bala-
- AR jacket, parka, rainwear or hard hat liner

#### **Protective Equipment**

- Hard hat
- Safety glasses or safety goggles
- Hearing protection
- Heavy-duty leather gloves
- Leather footwear

#### **MINIMUM ARC RATING**





### **PPE CATEGORY**

#### **Arc-Rated Clothing**

- · AR long-sleeve shirt, pants, and hood or arc rated coverall and hood
- AR suit consisting of hood, coat, bib overalls, or hood & coveralls
- AR aloves
- · AR jacket, parka, rainwear or hard hat liner

#### **Protective Equipment**

- Hard hat
- Safety glasses or safety goggles
- Hearing protection
- · Heavy-duty leather gloves
- · Leather footwear

### **MINIMUM ARC RATING**



#### Arc-Rated Clothing

- AR long-sleeve shirt, pants, and hood or arc rated coverall and hood
- · AR suit consisting of hood, coat, bib overalls, or hood & coveralls
- AR gloves
- · AR jacket, parka, rainwear or hard hat liner

#### **Protective Equipment**

- Hard hat
- · Safety glasses or safety goggles
- Hearing protection
- Heavy-duty leather gloves
- Leather footwear

#### **MINIMUM ARC RATING**



#### MINIMUM ARC RATING



# PPE **CATEGORY**





**MINIMUM ARC RATING** 



#### MINIMUM ARC RATING



\*Energized electrical work over 40 cal/cm2 requires an incident energy analysis to be performed. Once this analysis has been done the appropriate PPE can be selected from the chart above by matching the calculated incident energy level with the corresponding PPE.

# **MATERIAL PERMEATION CHART**

#### Key:

- Breakthrough times over 480 minutes
- Breakthrough times between 241 and 480 minutes
- Breakthrough times between 61 and 240 minutes Breakthrough times between 31 and 60 minutes
- Breakthrough times less than 30 minutes

Chemical	CAS Number	Laminate Viton®	VBV	Tychem® TK	Chem- Prote 400	x Chem- Protex 300	Butyl	Neoprene	PVC C2	Hazmax™ Boot
acetaldehyde	75-07-0		•	•	•	•	•	•	•	
acetic acid, 10%	64-19-7							•	•	
acetic acid, glacial	64-19-7	•	•	•	•	•	•	•	•	•
acetic anhydride	108-24-7	•	•	•	•	•	•	•	•	
acetone	67-64-1	•	•	•	•	•	•	•		•
acetonitrile	75-05-8	•	•	•	•	•	•	•	•	•
acetophenone	98-86-2		•		•	•	•	•	•	
acrylic acid	79-10-7		•	•	•	•		•	•	•
acrylonitrile	107-13-1	•		•	•	•	•	•		•
allyl chloride	107-05-01		•	•			•	•	•	
ammonia gas	7664-41-7	•	•	•	•	•	•	•	•	•
ammonia solution, 35%	1336-21-6	•		•	•	•	•	•	•	
ammonium nitrate sat.	6484-52-2							•		
amyl acetate	628-63-7		•	•	•	•	•	•		
aniline	62-53-3	•	•	•	•	•	•	•	•	•
Aviation fuel	n/a		•		•	•		•		
benzene	71-43-2	•	•	•	•	•	•	•	•	•
benzoyl chloride	98-88-4		•	•	•	•	•	•		
benzyl alcohol	100-51-6	•	•		•	•	•	•	•	
brake fluid Mobil DTE 25	n/a						•	•		•
bromine liquid	7726-95-6		•	•	•	•	•	•		•
butadiene, 1,3-	106-99-0		•	•	•	•		•		•
butanone (MEK)	78-93-3	•	•		•	•	•	•		•
carbon disulphide	75-15-0	•	•	•	•	•	•	•		•
chlorine gas	7782-50-5	•	•	•	•	•	•	•	•	•
chlorobenzene	108-90-7	•	•	•	•	•	•	•	•	
chloroform	67-66-3	•	•	•	•	•	•	•	•	•
chloromethane gas	74-87-3		•		•	•	•	•		•
chlorosulphonic acid	7790-94-5			•				•	•	
cyclohexanone	108-94-1	•	•		•	•	•	•	•	
dibromomethane	74-95-3	•	•		•	•	•	•		
dichloromethane	75-09-2	•	•	•	•	•	•	•		•
diethylamine	109-89-7	•	•	•	•	•	•	•		•
diethylsulphate	64-67-5			•						
dimethylacetamide, N,N-	127-19-5		•	•	•	•	•	•	•	•
dimethylformamide	68-12-2	•	•	•	•	•	•	•	•	•
dimethyl sulphate	77-78-1	•	•	•	•	•	•	•		
epichlorohydrin	106-89-8	•	•	•	•	•	•	•		•
ethanol	64-17-5	•	•		•	•	•	•	•	•
ethyl acetate	141-78-6	•	•	•	•	•	•	•	•	•
ethyl benzene	100-41-4		•	•			•	•	•	
ethylene oxide	75-21-8	•	•	•	•	•	-	•		•
formaldehyde, 37% sol	50-00-0	•	•	•	•	•		•	•	•
formic acid, 30% - 90%	64-18-6			•	•	•		•	•	•
furfural	98-01-1		•		•	•	•	•	•	•
rarrarar	20 OT-1									

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 $\textit{Resprirex}^{\bowtie}, \textit{Chemprotex}^{\bowtie} \textit{ and Hazmax}^{\bowtie} \textit{ are trademarks of Respirex International Limited}$ 



CAS Number	Laminate Viton®	VBV	Tychem® TK	Chem- Protes 400	Chem- Protex 300	Butyl	Neoprene	PVC C2	Hazmax™ Boot
142-82-5	•	•		•	•	•	•		•
822-06-0			•			•	•	•	
110-54-3	•	•	•	•	•	•	•		•
7803-57-8			•	•	•		•		•
7647-01-0	•	•	•	•	•		•	•	•
7664-39-3		•	•	•	•	•	•	•	•
7664-39-3		•	•	•	•		•	•	•
7647-01-0	•	•	•	•	•		•		•
7664-39-3		•	•	•	•	•	•		•
7664-39-3		•	•	•	•		•		
7722-84-1			•	•	•	•	•		•
50-21-5				•	•		•	•	•
79-41-4	•	•	•	•	•	•	•	•	
124-63-0							•		
67-56-1	•	•	•	•	•	•	•	•	•
96-33-3	•	•	•	•	•	•	•	•	
80-62-6	•	•	•	•	•	•	•		•
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110-86-1		•	•	•	•	•	•	•	
1310-73-2	•	•	•	•	•	•	•	•	•
7681-52-9				•	•		•	•	•
100-42-5	•	•	•	•	•	•	•		•
7446-09-5			•	•	•	•	•		
7664-93-9				•	•	•	•	•	
7664-93-9	•	•	•	•	•	•	•	•	•
127-18-4	•	•	•	•	•	•	•		•
109-99-9	•	•	•	•	•				•
7719-09-7			•				•		
108-88-3	•	•	•	•	•	•	•	•	•
584-84-9		•	•	•	•	•	•	•	•
95-53-4			•	•	•	•	•	0	
120-82-1		•	•	•	•				
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	•	•	•	•	0	•	•	•	
		· · · · · · · · · · · · · · · · · · ·							
108-05-4	•	•	•	•	•	•	•	•	
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