# Because everyone has someone depending on them to get home safely

DuPont is more focused than ever on providing innovative protection solutions and expert technical support tailored to meet the specific needs of workers in the oil & gas industry around the world.

Because their safety is our business, workers in the oil & gas industry can rely on the world-class people, products and innovation that have made DuPont a trusted partner in personal protection.

With a wide range of industry-leading personal protective equipment (PPE) solutions and a global network of PPE specialists, technical experts and manufacturing, DuPont is uniquely suited to provide the protection and comfort every worker deserves to face a range of workplace hazards with confidence.

#### Our brands

#### Nomex<sup>®</sup>

DuPont™ Nomex® offers a tested and proven portfolio of protective solutions that continues to meet or exceed global standards for heat, flame and electric arc flash protection.\*

#### Kevlar®

Gloves made with DuPont™ Kevlar® offer industry-leading cut protection, built-in heat and flame resistance and electric arc flash protection, while providing the dexterity and comfort workers want.

#### Tyvek®

DuPont™ Tyvek® garments provide workers with superior protection from small-sized hazardous particles, including lead, asbestos and mold. And because protection is built into the fabric itself, there are no films or laminates to abrade or wear away.

#### Tychem<sup>®</sup>

DuPont™ Tychem® garments deliver durable protection and offer strong permeation barrier against a wide range of chemicals. Together with Tychem® gloves and tape, they create the Tychem® Trusted Chemical System™ for complete protection.

# Are your workers really protected?



Workers in the oil & gas industry face many on-the-job hazards, including flash fire; slick, oily surfaces; sharp edges; punctures; heat contact; uncontrolled pressure release; and exposure to hazardous chemicals, dust and solvents—to name just a few.

Providing workers with the protection they need for the hazards they face is a major responsibility. DuPont Personal Protection has the in-depth knowledge, unparalleled expertise and broad portfolio of PPE solutions to help keep your workers safe.

DuPont PPE solutions are designed to meet or exceed global standards for protection and performance, including National Fire Protection Association (NFPA), ASTM International, Canadian General Standards Board (CGSB), American National Standards Institute (ANSI), International Organization for Standardization (ISO) and China GB National Standards.

To help you in the decision-making process, from risk assessment through implementation, we recommend using the 4P methodology:

#### **Predict**

Analyze all activities required for each part of your operation.

Identify all potential risks associated with each activity.

Understand severity and likelihood of risks.

#### Provide

Document PPE selected to address each residual risk.

Build awareness with workers about their specific risks and selected PPE.

Train workers on correct use of PPE.

#### **Prevent**

Evaluate ways to eliminate hazards.

Make substitutions when possible.

Reduce residual risks with engineering processes or operational changes.

#### **Protect**

Select appropriate PPE to address residual risks.

Ensure PPE meets performance and comfort requirements in the work environment.

Remember, PPE is the last line of defense.

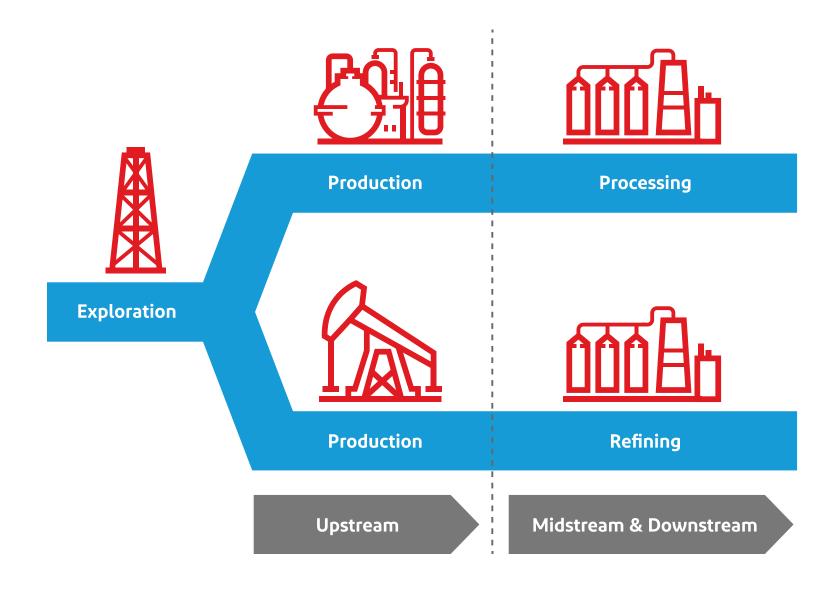
# Drilling, producing and refining oil & gas involves high-risk tasks in extreme conditions

To remain competitive, oil & gas companies are embracing new technology and focusing on improving productivity and efficiency from oil rigs to petrochemical refineries.

Workers in the oil & gas industry perform many high-risk tasks that involve potential flash fires, mechanical hazards and exposure to a wide range of hazardous chemicals. In some cases, these high-risk tasks are performed under extreme weather conditions and in remote locations.

As a result, workers in the oil & gas industry face multiple workplace hazards in a very dynamic work environment and health, safety and environment (HSE) managers have many tasks to balance.

DuPont offers a broad range of PPE solutions to address these hazards, including: Nomex® garments for flash fire hazards; Tyvek® garments for protection against fine particle hazards and low level liquid splashes; Tychem® garments, gloves and tape for protection against concentrated chemicals; and gloves made with Kevlar® for cut and multi-hazard protection. DuPont experts are also available to work side by side with the HSE manager to help simplify the process of properly matching PPE to the hazards your workers face.







#### Tasks

Confined space entry

Entering tanks, vessels or pits that may contain hazardous atmospheres to perform work

#### Hazards

Flash fire

Hazardous chemicals (liquids or solids)

Cut hazards requiring cut level A3 protection

For a full list of PPE solutions, visit SafeSPEC™.



#### **Available PPE options**

#### Flame-resistant (FR) garments



#### Nomex® Comfort

Nomex® Comfort is a lightweight, quick-drying innovative fabric that delivers extreme heat and flame protection, maximum comfort and excellent durability. Garments are available in men's and women's styles and sizes.







NOTE: Certifications listed here are for Nomex® Comfort fabric; consult with garment manufacturer for garment certifications.



#### Nomex® Essential

A highly durable protective solution that helps minimize break-open and provides excellent heat and flame protection.







NOTE: Certifications listed here are for Nomex® Essential fabric; consult with garment manufacturer for garment certifications.

#### Chemical-resistant/flame-resistant (CR/FR) garments



#### Tychem® 2000 SFR

Tychem® 2000 SFR provides chemical and secondary flame protection in a lightweight garment. Worn over primary FR garments such as Nomex® Comfort, they won't ignite if a flash fire occurs and won't contribute to additional burn injury.



#### Tychem® 6000 FR

Tychem® 6000 FR styles TP198T and TP199T are single-layer garments that provide triple hazard protection against liquid chemical splash, flash fire and electric arc flash. Tychem® 6000 FR offers at least 30 minutes of protection against more than 180 toxic industrial chemicals and may be used as a primary FR garment.







Requirements of NFPA 70E°

#### Chemical-resistant (CR) gloves\*



#### Tychem® PV350

Extremely durable, these 55-mil polyvinyl chloride (PVC) gloves provide protection against chemicals, oils and greases. The cotton/jersey knit lining adds comfort and flexibility while the textured grip makes it easier to grasp wet objects.

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#### Tasks

Confined space entry

Entering tanks, vessels or pits that may contain hazardous atmospheres to perform work

#### Hazards

Flash fire

Hazardous chemicals (liquids or solids)

Cut hazards requiring cut level A3 protection



#### Tvchem® NT470

These unlined, 15-mil nitrile gloves offer protection against a wide range of solvents, oils, hydrocarbons, greases and other chemicals. Thin and lightweight, Tychem® NT470 gloves are ergonomically designed to maximize comfort. The bisque finish grip makes working in humid environments easier.











#### Tychem® NP570 CT

These 68-mil neoprene gloves, which feature an engineered yarn liner, provide protection against the dual risk of chemical exposure and cut. Tychem® NP570 CT gloves provide ANSI level A5 and EN level E cut protection, as well as first-class defense against acids, caustics, solvents, greases and oils.



EN 388:2016 3X43E







#### Tychem® BT730

These unlined, 14-mil butyl gloves provide protection against a wide array of chemicals, including acids, ketones and alcohols. Light and thin with a "second-skin" feel, anatomical shape and rough surface, Tychem® BT730 gloves are comfortable and enable optimal grip. Impermeable for working in damp or greasy environments.









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#### Tychem® 2000 Tape

Tychem® 2000 Tape helps hold a sleeve over a glove, a pant leg over a boot or a closure flap closed, while providing protection against a variety of inorganic acids and bases, as well as common industrial cleaning agents, such as bleach. The tape tears easily for quick and convenient application. Repositionable once applied, the tape's elasticity enables tight adhesion to help prevent leaks.

\*Tychem® gloves and tape should not be used around heat, open flame, sparks or in potentially flammable environments. For professional use only.

#### Cut-resistant gloves



#### **SHOWA KV660**

Made with Kevlar® fiber and coated with PVC, SHOWA KV660 gloves offer cut level A3 protection and are resistant to oil and hydrocarbons. The rough finish provides tactile feel and a better grip. Impermeable for working in damp or greasy environments.













#### **Upstream**

#### Tasks

Drilling

Boring into the earth to access either oil or gas reservoirs

#### Hazards

Mechanical hazards

Blowout or explosion

Flash fire

Caustic chemicals

Hydrogen sulfide or other asphyxiants

Cut hazards requiring cut level A3 protection

#### **Available PPE options**

Flame-resistant (FR) garments



#### Nomex® Comfort

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Nomex® Comfort is a lightweight, quick-drying innovative fabric that delivers extreme heat and flame protection, maximum comfort and excellent durability. Garments are available in men's and women's styles and sizes.







NOTE: Certifications listed here are for Nomex® Comfort fabric; consult with garment manufacturer for garment certifications.



#### Nomex® Essential

A highly durable protective solution that helps minimize break-open and provides excellent heat and flame protection.









NOTE: Certifications listed here are for Nomex® Essential fabric; consult with garment manufacturer for garment certifications.



#### Nomex® Essential Arc

Nomex® Essential Arc is engineered to provide >8 cal/cm² arc thermal performance value (ATPV) protection combined with enhanced durability against abrasion. Nomex® is resistant to many chemicals and oil stains are washed out easier than with standard cotton garments.











NOTE: Certifications listed here are for Nomex® Essential Arc fabric; consult with garment manufacturer for garment certifications



#### FR face mask made with Nomex®\*

Made with Nomex® Comfort fabric, this FR face mask from PGI Safety may help meet guidance from the U.S. Centers for Disease Control and Prevention (CDC) for wearing masks in environments that require FR protection while social distancing. This FR face mask offers exceptional breathability and durability with inherent, built-in flame resistance that cannot be washed out or worn away.

\*FR face masks are for use while social distancing and may be used for other tasks identified by a site hazard risk assessment







#### Tasks

Drilling

Boring into the earth to access either oil or gas reservoirs

#### Hazards

Mechanical hazards

Blowout or explosion

Flash fire

Caustic chemicals

Hydrogen sulfide or other asphyxiants

Cut hazards requiring cut level A3 protection

#### Chemical-resistant (CR) gloves\*



#### Tychem® NP570 CT

These 68-mil neoprene gloves, which feature an engineered varn liner, provide protection against the dual risk of chemical exposure and cut. Tychem® NP570 CT gloves provide ANSI level A5 and EN level E cut protection, as well as first-class defense against acids, caustics, solvents, greases and oils.

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#### Tychem® 2000 Tape

Tychem® 2000 Tape helps hold a sleeve over a glove, a pant leg over a boot or a closure flap closed, while providing protection against a variety of inorganic acids and bases, as well as common industrial cleaning agents, such as bleach. The tape tears easily for quick and convenient application. Repositionable once applied, the tape's elasticity enables tight adhesion to help prevent leaks.

\*Tychem® gloves and tape should not be used around heat, open flame, sparks or in potentially flammable environments. For professional use only.

#### Cut-resistant gloves



#### **SHOWA KV660**

Made with Kevlar® fiber and coated with PVC, SHOWA KV660 gloves offer cut level A3 protection and are resistant to oil and hydrocarbons. The rough finish provides tactile feel and a better grip. Impermeable for working in damp or greasy environments.

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#### **Upstream**

#### Tasks

Drilling fluid (mud) management

Creating appropriate mud with additives, pumps, pressurized hoses, mud tank system, moving parts, open fluid-filled pits

#### Hazards

Dirt/dust

Chemical exposures

Pressurized equipment

Confined spaces

Flash fire

Cut hazards requiring cut level A3 protection

#### **Available PPE options**

#### Flame-resistant (FR) garments



#### Nomex® Comfort

Nomex® Comfort is a lightweight, quick-drying innovative fabric that delivers extreme heat and flame protection, maximum comfort and excellent durability. Garments are available in men's and women's styles and sizes.







NOTE: Certifications listed here are for Nomex® Comfort fabric; consult with garment manufacturer for garment certifications.



#### Nomex® Essential

A highly durable protective solution that helps minimize break-open and provides excellent heat and flame protection.







NOTE: Certifications listed here are for Nomex® Essential fabric; consult with garment



#### ProShield® 6 SFR

Providing a barrier against non-hazardous aerosols and particles, ProShield® 6 SFR is a cost-effective solution designed to help protect and preserve primary protective garments. ProShield® 6 SFR garments are designed to keep primary FR garments clean from things like dirt, dust and grime, while not contributing to burn injury when exposed to a flame source. This coverall should be worn on top of an FR garment, such as a garment made of Nomex® Comfort.

#### Non-FR/chemical-protective garments



#### Tyvek® 400

Tyvek® 400 garments are composed of flashspun high-density polyethylene, which creates a unique, nonwoven material. Tyvek® 400 fabric offers an inherent barrier against particles (down to 1.0 micron in size). Protection is built into the fabric itself; there are no films or laminates to abrade or wear away.



#### Tyvek® 800

Type 3-B

Tyvek® 800 garments combine resistance to low-concentration, water-based inorganic chemicals with the strength and durability of Tyvek®. The coveralls provide an effective barrier against many water-based inorganic chemicals in low concentration and particles (down to 1.0 micron in size).











Type 6-B









#### Tasks

Drilling fluid (mud) management

Creating appropriate mud with additives, pumps, pressurized hoses, mud tank system, moving parts, open fluid-filled pits

#### Hazards

Dirt/dust

Chemical exposures

Pressurized equipment

Confined spaces

Flash fire

Cut hazards requiring cut level A3 protection

For a full list of PPE solutions,



#### Tvchem® 2000

Tychem® 2000 is a lightweight and durable fabric that uses the strength of Tyvek® fabric and polyethylene coating. Tychem® 2000 offers permeation barrier protection for at least 30 minutes against more than 40 chemical challenges.



#### Tvchem® 4000

Tychem® 4000 provides effective protection against a range of chemical environments, offering at least 30 minutes of protection against more than 120 chemical challenges.

#### Chemical-resistant/flame-resistant (CR/FR) garments



#### Tychem® 2000 SFR

Tychem® 2000 SFR provides chemical and secondary flame protection in a lightweight garment. Worn over primary FR garments such as Nomex® Comfort, they won't ignite if a flash fire occurs and won't contribute to additional burn injury.

#### Chemical-resistant (CR) gloves\*



#### Tychem® PV350

Extremely durable, these 55-mil PVC gloves provide protection against chemicals, oils and greases. The cotton/jersey knit lining adds comfort and flexibility while the textured grip makes it easier to grasp wet objects.



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#### Tychem® NT470

These unlined, 15-mil nitrile gloves offer protection against a wide range of solvents, oils, hydrocarbons, greases and other chemicals. Thin and lightweight, Tychem® NT470 gloves are ergonomically designed to maximize comfort. The bisque finish grip makes working in humid environments easier.



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#### **Upstream**

#### Tasks

Drilling fluid (mud) management

Creating appropriate mud with additives, pumps, pressurized hoses, mud tank system, moving parts, open fluid-filled pits

#### Hazards

Dirt/dust

Chemical exposures

Pressurized equipment

Confined spaces

Flash fire

Cut hazards requiring cut level A3 protection



#### Tvchem® NP570 CT

These 68-mil neoprene gloves, which feature an engineered yarn liner, provide protection against the dual risk of chemical exposure and cut. Tychem® NP570 CT gloves provide ANSI level A5 and EN level E cut protection, as well as first-class defense against acids, caustics, solvents, greases and oils.









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#### Tychem® BT730

These unlined, 14-mil butyl gloves provide protection against a wide array of chemicals, including acids, ketones and alcohols. Light and thin with a "second-skin" feel, anatomical shape and rough surface, Tychem® BT730 gloves are comfortable and enable optimal grip. Impermeable for working in damp or greasy environments.







EN ISO 374-1:2016 Type A EN ISO 374-5:2016





#### Tychem® 2000 Tape

Tychem® 2000 Tape helps hold a sleeve over a glove, a pant leg over a boot or a closure flap closed, while providing protection against a variety of inorganic acids and bases, as well as common industrial cleaning agents, such as bleach. The tape tears easily for quick and convenient application. Repositionable once applied, the tape's elasticity enables tight adhesion to help prevent leaks.

\*Tychem® gloves and tape should not be used around heat, open flame, sparks or in potentially flammable environments. For professional use only.

#### Cut-resistant gloves



#### **SHOWA KV660**

Made with Kevlar® fiber and coated with PVC, SHOWA KV660 gloves offer cut level A3 protection and are resistant to oil and hydrocarbons. The rough finish provides tactile feel and a better grip. Impermeable for working in damp or greasy environments.





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#### Tasks

Electrical work

Performing electrical work

#### Hazards

Arc flash

Hazards requiring gloves made with Kevlar® that are arc rated 2 up to 4

Chemical exposures

#### **Available PPE options**

Flame-resistant (FR) garments



#### Evolv<sup>™</sup> built with Nomex<sup>®</sup>

This lightweight Nomex® blended fabric is CAT 2 arc-rated/flame-resistant (AR/FR) and NFPA 2112 compliant, providing workers with comfortable protection. Garments are available in men's and women's styles and sizes.







#### Nomex® Essential Arc High-Arc Suit

These multi-layer garments built with Nomex® are used for protection against high incident energy hazard levels and meet U.S. Occupational Safety and Health Administration (OSHA) 1910.269 and NFPA 70E° standards.

**NOTE:** For additional high-arc rated solutions, consult *Use of layered solutions to address COVID-19* contamination concerns with high-arc suits to see currently available Nomex® layering systems.

#### Chemical-resistant/flame-resistant (CR/FR) garments



#### Tychem® 2000 SFR

Tychem® 2000 SFR provides chemical and secondary flame protection in a lightweight garment. Worn over primary FR garments such as Nomex® Comfort, they won't ignite if a flash fire occurs and won't contribute to additional burn injury.



#### Tychem® 6000 FR

Tychem® 6000 FR styles TP198T and TP199T are single-layer garments that provide triple hazard protection against liquid chemical splash, flash fire and electric arc flash. Tychem® 6000 FR offers at least 30 minutes of protection against more than 180 toxic industrial chemicals and may be used as a primary FR garment.







Requirements of NFPA 70E®







#### **Upstream**

#### **Tasks**

Electrical work

Performing electrical work

#### Hazards

Arc flash

Hazards requiring gloves made with Kevlar® that are arc rated 2 up to 4

Chemical exposures

#### Cut-resistant gloves



#### Youngstown FR Ground Glove 12-3365-60

Cut and sewn glove, tan goatskin leather. Dual-layer leather in palm/fingertips/ knuckles. Kevlar® liner. Gauntlet cuff. Certified to NFPA 70E® 2015 and OSHA 29 CFR Part 1926.

ANSI/ISEA 105:2016 ANSI A4





#### Superior Glove® Dexterity® S18KGNE

Made with Kevlar® fiber, Dexterity® 18-gauge FR arc flash gloves provide 8.2 cal/cm<sup>2</sup> ATPV protection. Featuring great FR properties and good resistance to oil, these gloves have a neoprene palm coating that enables excellent grip—both wet and dry. Electrostatic dissipating (ESD) carbon filament imparts antistatic properties.









#### **SHOWA 240**

Lightweight and comfortable, these 13-gauge Kevlar® lined gloves have a sponge neoprene palm coating. Flame resistant Kevlar® enables protection against arc flash up to a level 2, according to open arc/box tests. Flat dipped sponge neoprene coating provides enhanced grip and the anatomical design helps prevent hand fatigue.

















#### Tasks

Fracking

Inject proppant (sand) into fractures in formation to facilitate flow of oil or gas into well

#### Hazards

Flash fire

Dirt/dust

Chemical exposures

Mechanical hazards

Traffic (low visibility)

Cut hazards requiring cut level A2 or A3 protection





#### **Available PPE options**

Flame-resistant (FR) garments



#### Nomex® Comfort

Nomex® Comfort is a lightweight, quick-drying innovative fabric that delivers extreme heat and flame protection, maximum comfort and excellent durability. Garments are available in men's and women's styles and sizes.

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NOTE: Certifications listed here are for Nomex® Comfort fabric; consult with garment manufacturer for garment certifications.



#### Nomex® Essential

A highly durable protective solution that helps minimize break-open and provides excellent heat and flame protection.

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2112

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NOTE: Certifications listed here are for Nomex® Essential fabric; consult with garment



#### ProShield® 6 SFR

Providing a barrier against non-hazardous aerosols and particles, ProShield® 6 SFR is a cost-effective solution designed to help protect and preserve primary protective garments. ProShield® 6 SFR garments are designed to keep primary FR garments clean from things like dirt, dust and grime, while not contributing to additional burn injury when exposed to a flame source. This coverall should be worn on top of an FR garment, such as a garment made of Nomex® Comfort.



#### FR face mask made with Nomex®\*

Made with Nomex® Comfort fabric, this FR face mask from PGI Safety may help meet guidance from the U.S. CDC for wearing masks in environments that require FR protection while social distancing. This FR face mask offers exceptional breathability and durability with inherent, built-in flame resistance that cannot be washed out or worn away.

\*FR face masks are for use while social distancing and may be used for other tasks identified by a site

#### Non-FR/chemical-protective garments



#### Tyvek® 400

Tyvek® 400 garments are composed of flashspun high-density polyethylene, which creates a unique, nonwoven material. Tyvek® 400 fabric offers an inherent barrier against particles (down to 1.0 micron in size). Protection is built into the fabric itself; there are no films or laminates to abrade or wear away.



#### Tyvek® 800

Tyvek® 800 garments combine resistance to low-concentration, water-based inorganic chemicals with the strength and durability of Tyvek®. The coveralls provide an effective barrier against many water-based inorganic chemicals in low concentration and particles (down to 1.0 micron in size).











#### **Upstream**

#### Tasks

Fracking

Inject proppant (sand) into fractures in formation to facilitate flow of oil or gas into well

#### Hazards

Flash fire

Dirt/dust

Chemical exposures

Mechanical hazards

Traffic (low visibility)

Cut hazards requiring cut level A2 or A3 protection



#### High-visibility garments



#### Tyvek® 400 HV

Tvchem® 2000

Tychem® 4000

120 chemical challenges.

Tychem® 2000 SFR

Chemical-resistant/flame-resistant (CR/FR) garments

Tyvek® 400 HV coveralls combine proven chemical and biological protection with high-visibility functionality in a comfortable design.

Tychem® 2000 is a lightweight and durable fabric that uses the strength of Tyvek® fabric and polyethylene coating. Tychem® 2000 offers permeation barrier protection for at least 30 minutes against more than 40 chemical challenges.

Tychem® 4000 provides effective protection against a range of chemical

environments, offering at least 30 minutes of protection against more than

Tychem® 2000 SFR provides chemical and secondary flame protection in a

lightweight garment. Worn over primary FR garments such as Nomex® Comfort, they won't ignite if a flash fire occurs and won't contribute to additional burn injury.

#### Chemical-resistant (CR) gloves\*



#### Tychem® PV350

Extremely durable, these 55-mil PVC gloves provide protection against chemicals, oils and greases. The cotton/jersey knit lining adds comfort and flexibility while the textured grip makes it easier to grasp wet objects.



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#### Tychem® NT470

These unlined, 15-mil nitrile gloves offer protection against a wide range of solvents, oils, hydrocarbons, greases and other chemicals. Thin and lightweight, Tychem® NT470 gloves are ergonomically designed to maximize comfort. The bisque finish grip makes working in humid environments easier.



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#### Tasks

Fracking

Inject proppant (sand) into fractures in formation to facilitate flow of oil or gas into well

#### Hazards

Flash fire

Dirt/dust

Chemical exposures

Mechanical hazards

Traffic (low visibility)

Cut hazards requiring cut level A2 or A3 protection



#### Tvchem® NP570 CT

These 68-mil neoprene gloves, which feature an engineered yarn liner, provide protection against the dual risk of chemical exposure and cut. Tychem® NP570 CT gloves provide ANSI level A5 and EN level E cut protection, as well as first-class defense against acids, caustics, solvents, greases and oils.









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#### Tychem® BT730

These unlined, 14-mil butyl gloves provide protection against a wide array of chemicals, including acids, ketones and alcohols. Light and thin with a "second-skin" feel, anatomical shape and rough surface, Tychem® BT730 gloves are comfortable and enable optimal grip. Impermeable for working in damp or greasy environments.











#### Tychem® 2000 Tape

Tychem® 2000 Tape helps hold a sleeve over a glove, a pant leg over a boot or a closure flap closed, while providing protection against a variety of inorganic acids and bases, as well as common industrial cleaning agents, such as bleach. The tape tears easily for quick and convenient application. Repositionable once applied, the tape's elasticity enables tight adhesion to help prevent leaks.

\*Tychem® gloves and tape should not be used around heat, open flame, sparks or in potentially flammable environments. For professional use only.

#### Cut-resistant gloves



#### SHOWA KV660

Made with Kevlar® fiber and coated with PVC, SHOWA KV660 gloves offer cut level A3 protection and are resistant to oil and hydrocarbons. The rough finish provides tactile feel and a better grip. Impermeable for working in damp or greasy environments.













#### **SHOWA 4561**

Excellent multi-hazard, 15-gauge glove providing high levels of cut resistance and heat resistance while maintaining comfort, dexterity and tactility. Extremely lightweight, these gloves are lined with Kevlar® and feature a sponge nitrile palm coating that provides excellent grip in oily conditions.





4X32D

For a full list of PPE solutions, visit SafeSPEC™.





# **Upstream**

#### **Tasks**

Cleaning

Pigging

Hydroblasting

Pressure washing

Sand blasting

#### Hazards

Pressurized liquids

Liquids or gases

Abrasives

Cut hazards requiring cut level A2 or A3 protection

High temperatures

Mechanical hazards

#### **Available PPE options**

#### Flame-resistant (FR) garments

#### Nomex® Comfort

Nomex® Comfort is a lightweight, quick-drying innovative fabric that delivers extreme heat and flame protection, maximum comfort and excellent durability. Garments are available in men's and women's styles and sizes.







NOTE: Certifications listed here are for Nomex® Comfort fabric; consult with garment manufacturer for garment certifications



#### Nomex® Essential

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A highly durable protective solution that helps minimize break-open and provides excellent heat and flame protection.









NOTE: Certifications listed here are for Nomex® Essential fabric; consult with garment manufacturer for garment certifications.

#### Chemical-resistant/flame-resistant (CR/FR) garments



#### Tychem® 2000 SFR

Tychem® 2000 SFR provides chemical and secondary flame protection in a lightweight garment. Worn over primary FR garments such as Nomex® Comfort, they won't ignite if a flash fire occurs and won't contribute to additional burn injury.



#### Tychem® 6000 FR

Tychem® 6000 FR styles TP198T and TP199T are single-layer garments that provide triple hazard protection against liquid chemical splash, flash fire and electric arc flash. Tychem® 6000 FR offers at least 30 minutes of protection against more than 180 toxic industrial chemicals and may be used as a primary FR garment.







#### Non-FR/chemical-protective garments



Tyvek® 800

Tyvek® 800 garments combine resistance to low-concentration, water-based inorganic chemicals with the strength and durability of Tyvek®. The coveralls provide an effective barrier against many water-based inorganic chemicals in low concentration and particles (down to 1.0 micron in size).











Type 6-B

visit SafeSPEC™. 

For a full list of PPE solutions,



#### Tasks

Cleaning

Pigging

Hydroblasting

Pressure washing

Sand blasting

#### Hazards

Pressurized liquids

Liquids or gases

**Abrasives** 

Cut hazards requiring cut level A2 or A3 protection

High temperatures

Mechanical hazards

For a full list of PPE solutions, visit SafeSPEC™.





#### Tychem® 2000

Tychem® 2000 is a lightweight and durable fabric that uses the strength of Tyvek® fabric and polyethylene coating. Tychem® 2000 offers permeation barrier protection for at least 30 minutes against more than 40 chemical challenges.

#### Chemical-resistant (CR) gloves\*



#### Tychem® NP570 CT

These 68-mil neoprene gloves, which feature an engineered yarn liner, provide protection against the dual risk of chemical exposure and cut. Tychem® NP570 CT gloves provide ANSI level A5 and EN level E cut protection, as well as first-class defense against acids, caustics, solvents, greases and oils.

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#### Tychem® 2000 Tape

Tychem® 2000 Tape helps hold a sleeve over a glove, a pant leg over a boot or a closure flap closed, while providing protection against a variety of inorganic acids and bases, as well as common industrial cleaning agents, such as bleach. The tape tears easily for quick and convenient application. Repositionable once applied, the tape's elasticity enables tight adhesion to help prevent leaks.

\*Tychem® gloves and tape should not be used around heat, open flame, sparks or in potentially flammable environments. For professional use only.

#### Cut-resistant gloves



#### **SHOWA KV660**

Made with Kevlar® fiber and coated with PVC, SHOWA KV660 gloves offer cut level A3 protection and are resistant to oil and hydrocarbons. The rough finish provides tactile feel and a better grip. Impermeable for working in damp or greasy environments.

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#### Superior Glove® Endura® 378GOBKL

Made of goat grain leather treated with Oilbloc™ for oil and water repellency, these Endura® gloves feature a seamless-knit Kevlar® lining. These driver-style gloves are exceptionally tough and abrasion resistant. They provide 41 cal/cm<sup>2</sup> ATPV protection.









#### Superior Glove® Endura® 378GKGVB

Made of goat grain leather treated with Oilbloc™ for oil and water repellency, these Endura® gloves feature a Kevlar® lining, impact-resistant back-of-hand protection and a padded palm. These driver-style gloves provide excellent cut protection, outstanding abrasion resistance and 36 cal/cm<sup>2</sup> ATPV protection.











#### **Upstream**

#### Tasks

Well/pipeline operations

Inspections

Operate valves

**Draining** 

Venting

#### Hazards

Chemical exposures

Flash fire

Ergonomic issues

Cut hazards requiring cut level A2, A3 or A4 protection

For a full list of PPE solutions,

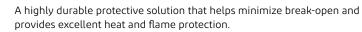
visit SafeSPEC™.

#### Nomex® Essential

manufacturer for garment certifications.

ASTM

F1506





**Available PPE options** 

Flame-resistant (FR) garments

Nomex® Comfort



NFPA

2112



Nomex® Comfort is a lightweight, quick-drying innovative fabric that delivers extreme heat and flame protection, maximum comfort and excellent durability.

CGSB

155.20

Garments are available in men's and women's styles and sizes.

**NOTE:** Certifications listed here are for Nomex® Comfort fabric; consult with garment

**NOTE:** Certifications listed here are for Nomex® Essential fabric; consult with garment

#### Chemical-resistant/flame-resistant (CR/FR) garments



#### Tychem® 2000 SFR

Tychem® 2000 SFR provides chemical and secondary flame protection in a lightweight garment. Worn over primary FR garments such as Nomex® Comfort, they won't ignite if a flash fire occurs and won't contribute to additional burn injury.

#### Tvchem® 6000 FR

Tychem® 6000 FR styles TP198T and TP199T are single-layer garments that provide triple hazard protection against liquid chemical splash, flash fire and electric arc flash. Tychem® 6000 FR offers at least 30 minutes of protection against more than 180 toxic industrial chemicals and may be used as a primary FR garment.







#### Chemical-resistant (CR) gloves\*



#### Tychem® PV350

Extremely durable, these 55-mil PVC gloves provide protection against chemicals, oils and greases. The cotton/jersey knit lining adds comfort and flexibility while the textured grip makes it easier to grasp wet objects.



EN 388:2016 (<u>I</u> 3111X

Туре В **AKLMP** 

EN ISO 374-5:2016 





#### Tychem® NT470

These unlined, 15-mil nitrile gloves offer protection against a wide range of solvents, oils, hydrocarbons, greases and other chemicals. Thin and lightweight. Tychem® NT470 gloves are ergonomically designed to maximize comfort. The bisque finish grip makes working in humid environments easier.













#### Tasks

Well/pipeline operations

Inspections

Operate valves

**Draining** 

Venting

#### Hazards

Chemical exposures

Flash fire

Ergonomic issues

Cut hazards requiring cut level A2, A3 or A4 protection







#### Tvchem® NP570 CT

These 68-mil neoprene gloves, which feature an engineered yarn liner, provide protection against the dual risk of chemical exposure and cut. Tychem® NP570 CT gloves provide ANSI level A5 and EN level E cut protection, as well as first-class defense against acids, caustics, solvents, greases and oils.

Cat. III  $\epsilon$ 2777

EN 388:2016 3X43E





EN ISO 374-5:2016

**D** 

VIRUS





#### Tychem® BT730

These unlined, 14-mil butyl gloves provide protection against a wide array of chemicals, including acids, ketones and alcohols. Light and thin with a "second-skin" feel, anatomical shape and rough surface, Tychem® BT730 gloves are comfortable and enable optimal grip. Impermeable for working in damp or greasy environments.

Cat. III  $\epsilon$ 2777

EN 388:2016 0110X







#### Tychem® 2000 Tape

Tychem® 2000 Tape helps hold a sleeve over a glove, a pant leg over a boot or a closure flap closed, while providing protection against a variety of inorganic acids and bases, as well as common industrial cleaning agents, such as bleach. The tape tears easily for quick and convenient application. Repositionable once applied, the tape's elasticity enables tight adhesion to help prevent leaks.

\*Tychem\* gloves and tape should not be used around heat, open flame, sparks or in potentially flammable environments. For professional use only.

#### Cut-resistant gloves



#### **SHOWA KV660**

Made with Kevlar® fiber and coated with PVC, SHOWA KV660 gloves offer cut level A3 protection and are resistant to oil and hydrocarbons. The rough finish provides tactile feel and a better grip. Impermeable for working in damp or greasy environments.

Cat. III  $\epsilon$ 



4342





**1** 



#### Superior Glove® Endura® 378GOBKL

Made of goat grain leather treated with Oilbloc™ for oil and water repellency. these Endura® gloves feature a seamless-knit Kevlar® lining. These driver-style gloves are exceptionally tough and abrasion resistant. They provide 41 cal/cm<sup>2</sup> ATPV protection.









#### Youngstown FR Ground Glove 12-3365-60

Cut and sewn glove, tan goatskin leather. Dual-layer leather in palm/fingertips/ knuckles. Kevlar® liner. Gauntlet cuff. Certified to NFPA 70E® 2015 and OSHA 29 CFR Part 1926.











#### **Upstream**

#### Tasks

Offshore drilling and production

All land-based tasks associated with drilling but performed in an open water environment

#### Hazards

Flash fire

Blowout

Cut hazards requiring cut level A3, A4 or A5 protection

#### **Available PPE options**

#### Flame-resistant (FR) garments



#### Nomex® Comfort

Nomex® Comfort is a lightweight, quick-drying innovative fabric that delivers extreme heat and flame protection, maximum comfort and excellent durability. Garments are available in men's and women's styles and sizes.







NOTE: Certifications listed here are for Nomex® Comfort fabric; consult with garment manufacturer for garment certifications.



#### Nomex® Essential

F1506

A highly durable protective solution that helps minimize break-open and provides excellent heat and flame protection.







**NOTE:** Certifications listed here are for Nomex<sup>®</sup> Essential fabric; consult with garment manufacturer for garment certifications.

#### Chemical-resistant (CR) gloves\*



#### Tychem® NP570 CT

These 68-mil neoprene gloves, which feature an engineered yarn liner, provide protection against the dual risk of chemical exposure and cut. Tychem® NP570 CT gloves provide ANSI level A5 and EN level E cut protection, as well as first-class defense against acids, caustics, solvents, greases and oils.

Cat. III  $\epsilon$ 2777











\*Tychem® gloves should not be used around heat, open flame, sparks or in potentially flammable environments. For professional use only.

AJKLMT



#### Tychem® 2000 Tape

Tychem® 2000 Tape helps hold a sleeve over a glove, a pant leg over a boot or a closure flap closed, while providing protection against a variety of inorganic acids and bases, as well as common industrial cleaning agents, such as bleach. The tape tears easily for quick and convenient application. Repositionable once applied, the tape's elasticity enables tight adhesion to help prevent leaks.

\*Tychem® gloves and tape should not be used around heat, open flame, sparks or in potentially flammable environments. For professional use only.







#### Tasks

Offshore drilling and production

All land-based tasks associated with drilling but performed in an open water environment

#### Hazards

Flash fire

Blowout

Cut hazards requiring cut level A3, A4 or A5 protection

#### Cut-resistant gloves



#### **SHOWA KV660**

Made with Kevlar® fiber and coated with PVC, SHOWA KV660 gloves offer cut level A3 protection and are resistant to oil and hydrocarbons. The rough finish provides tactile feel and a better grip. Impermeable for working in damp or greasy environments.

Cat. III

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EN 374-2-2003

EN 374:2003





#### Superior Glove® Endura® 378GOBKL

EN 388:2003

4342

Made of goat grain leather treated with Oilbloc™ for oil and water repellency, these Endura® gloves feature a seamless-knit Kevlar® lining. These driver-style gloves are exceptionally tough and abrasion resistant. They provide 41 cal/cm<sup>2</sup> ATPV protection.







#### Superior Glove® Endura® 378GKGVB

Made of goat grain leather treated with Oilbloc<sup>™</sup> for oil and water repellency, these Endura® gloves feature a Kevlar® lining, impact-resistant back-of-hand protection and a padded palm. These driver-style gloves provide excellent cut protection, outstanding abrasion resistance and 36 cal/cm<sup>2</sup> ATPV protection.











#### **Upstream**

#### Tasks

Emergency response—fire or blowout, spill or release

Stop fuel source and extinguish fire

Stop liquid or gas release and clean up or neutralize

#### Hazards

Thermal burns

Chemical exposures

Flash fire

#### **Available PPE options**

#### Flame-resistant (FR) garments



#### Nomex® Comfort

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F1506

Nomex® Comfort is a lightweight, quick-drying innovative fabric that delivers extreme heat and flame protection, maximum comfort and excellent durability. Garments are available in men's and women's styles and sizes.







**NOTE:** Certifications listed here are for Nomex\* Comfort fabric; consult with garment manufacturer for garment certifications.



#### Nomex® Essential

A highly durable protective solution that helps minimize break-open and provides excellent heat and flame protection.







NOTE: Certifications listed here are for Nomex® Essential fabric; consult with garment manufacturer for garment certifications



#### Hoods made with Nomex® Nano Flex

Thin, lightweight and durable, hoods made with Nomex® Nano Flex prevent potentially harmful particulates from being absorbed through the skin on the neckline and upper jaw, which are areas that historically are known to be the most vulnerable and least protected. When added to a firefighter hood composite structure, hoods made with Nomex® Nano Flex result in up to a 4X increase in particle barrier efficiency.

This game-changing barrier protection is achieved without compromising thermal resistance, breathability, comfort or situational awareness.

DuPont is proud to partner with these manufacturers of hoods made with Nomex® Nano Flex:

Fire-Dex Veridian Viking PGI



#### Turnout gear made with Nomex®, Nomex® Nano and Kevlar®

Nomex<sup>®</sup>, Nomex<sup>®</sup> Nano and Kevlar<sup>®</sup> fibers can be found in each layer of most firefighter turnout gear. Together, these innovative fibers help provide proven protection, durability and comfort from the inside out.

Nomex®, Nomex® Nano and Kevlar® fibers help manufacturers create fire-resistant liners, outer shells and accessories that not only stand up to the thermal hazards that firefighters may face, but also help them to get the job done without getting in the way of mobility.

DuPont is proud to partner with these manufacturers of turnout gear made with Nomex®, Nomex® Nano and Kevlar®:

Fire-Dex Innotex Quaker Safety Globe Lakeland Veridian

Honeywell Lion

#### Chemical-resistant/flame-resistant (CR/FR) garments



#### Tychem® 10000 FR

"Single skin" fully encapsulated Level A garment offers broad chemical holdout. This garment provides 30 minutes of protection against more than 290 chemicals. Tychem® 10000 FR is certified to NFPA 1991 with chemical flash fire protection option and liquefied gas protection option requirements of NFPA 1991.









#### Tasks

Emergency response—fire or blowout, spill or release

Stop fuel source and extinguish fire

Stop liquid or gas release and clean up or neutralize

#### Hazards

Thermal burns

Chemical exposures

Flash fire



#### Tvchem® 6000 FR

Tychem® 6000 FR styles TP198T and TP199T are single-layer garments that provide triple hazard protection against liquid chemical splash, flash fire and electric arc flash. Tychem® 6000 FR offers at least 30 minutes of protection against more than 180 toxic industrial chemicals and may be used as a primary FR garment.







Requirements

#### Tychem® 2000 SFR

Tychem® 2000 SFR provides chemical and secondary flame protection in a lightweight garment. Worn over primary FR garments such as Nomex® Comfort, they won't ignite if a flash fire occurs and won't contribute to additional burn injury.

#### Chemical-resistant (CR) gloves\*



#### Tychem® NT470

These unlined, 15-mil nitrile gloves offer protection against a wide range of solvents, oils, hydrocarbons, greases and other chemicals. Thin and lightweight, Tychem® NT470 gloves are ergonomically designed to maximize comfort. The bisque finish grip makes working in humid environments easier.











#### Tychem® NP570 CT

These 68-mil neoprene gloves, which feature an engineered yarn liner, provide protection against the dual risk of chemical exposure and cut. Tychem® NP570 CT gloves provide ANSI level A5 and EN level E cut protection, as well as first-class defense against acids, caustics, solvents, greases and oils.











#### Tychem<sup>®</sup> BT730

These unlined, 14-mil butyl gloves provide protection against a wide array of chemicals, including acids, ketones and alcohols. Light and thin with a "second-skin" feel, anatomical shape and rough surface, Tychem® BT730 gloves are comfortable and enable optimal grip. Impermeable for working in damp or greasy environments.











#### Tychem® 2000 Tape

Tychem® 2000 Tape helps hold a sleeve over a glove, a pant leg over a boot or a closure flap closed, while providing protection against a variety of inorganic acids and bases, as well as common industrial cleaning agents, such as bleach. The tape tears easily for quick and convenient application. Repositionable once applied, the tape's elasticity enables tight adhesion to help prevent leaks.

\*Tychem® gloves and tape should not be used around heat, open flame, sparks or in potentially flammable environments. For professional use only.



# Midstream/ **Downstream**

#### Tasks

Laboratory

Perform analytical testing on all types of refinery inputs, outputs and intermediate streams

#### Hazards

Chemical exposures

Ergonomic issues

Thermal hazards

For a full list of PPE solutions,

visit SafeSPEC™.

Cut hazards



#### **Available PPE options**

#### Flame-resistant (FR) garments

ASTM

F1506

F1506



A highly durable protective solution that helps minimize break-open and provides excellent heat and flame protection.







NOTE: Certifications listed here are for Nomex® Essential fabric: consult with garment



#### Nomex® Comfort

Nomex® Essential

Nomex® Comfort is a lightweight, quick-drying innovative fabric that delivers extreme heat and flame protection, maximum comfort and excellent durability. Garments are available in men's and women's styles and sizes.







NOTE: Certifications listed here are for Nomex® Comfort fabric; consult with garment manufacturer for garment certifications.



#### Nomex® FR/CP lab coat

Made of innovative Westex® ShieldCXP™ fabric with Nomex® Essential fibers. this lightweight, breathable flame-resistant/chemical-protective (FR/CP) lab coat helps provide protection against multiple hazards and is comfortable to wear. It won't ignite during short-duration thermal incidents or emergency exposure to flame and repels small amounts of liquid chemicals. This innovative lab coat offers 5.6 cal/cm<sup>2</sup> ATPV protection.

**NOTE:** Please consult with fabric and garment manufacturers for certifications.



#### FR face mask made with Nomex®\*

Made with Nomex® Comfort fabric, this FR face mask from PGI Safety may help meet guidance from the U.S. CDC for wearing masks in environments that require FR protection while social distancing. This FR face mask offers exceptional breathability and durability with inherent, built-in flame resistance that cannot be washed out or worn away.

\*FR face masks are for use while social distancing and may be used for other tasks identified by a site

#### Non-FR/chemical-protective garments



#### Tychem® 2000

Tychem® 2000 is a lightweight and durable fabric that uses the strength of Tyvek® fabric and polyethylene coating. Tychem® 2000 offers permeation barrier protection for at least 30 minutes against more than 40 chemical challenges.



#### Tychem® 4000

Tychem® 4000 provides effective protection against a range of chemical environments, offering at least 30 minutes of protection against more than 120 chemical challenges.





#### Tasks

Laboratory

Perform analytical testing on all types of refinery inputs, outputs and intermediate streams

#### Hazards

Chemical exposures

Ergonomic issues

Thermal hazards

Cut hazards



#### Tvchem® 5000

Tychem® 5000 fabric is a multi-layer film barrier laminated to a durable polypropylene substrate. It is strong and durable for rigorous activities and provides an effective barrier to a broad range of chemicals. The knee-length apron with attached sleeves provides enhanced frontal protection and features ties at the waist.

#### Chemical-resistant (CR) gloves\*



#### Tychem® NT470

These unlined, 15-mil nitrile gloves offer protection against a wide range of solvents, oils, hydrocarbons, greases and other chemicals. Thin and lightweight, Tychem® NT470 gloves are ergonomically designed to maximize comfort. The bisque finish grip makes working in humid environments easier.









#### Tychem® NP570 CT

These 68-mil neoprene gloves, which feature an engineered yarn liner, provide protection against the dual risk of chemical exposure and cut. Tychem® NP570 CT gloves provide ANSI level A5 and EN level E cut protection, as well as first-class defense against acids, caustics, solvents, greases and oils.













#### Tychem® BT730

These unlined, 14-mil butyl gloves provide protection against a wide array of chemicals, including acids, ketones and alcohols. Light and thin with a "second-skin" feel, anatomical shape and rough surface, Tychem® BT730 gloves are comfortable and enable optimal grip. Impermeable for working in damp or greasy environments.



EN 388:2016 0110X



EN ISO 374-5:2016 

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#### Tychem® 2000 Tape

Tychem® 2000 Tape helps hold a sleeve over a glove, a pant leg over a boot or a closure flap closed, while providing protection against a variety of inorganic acids and bases, as well as common industrial cleaning agents, such as bleach. The tape tears easily for quick and convenient application. Repositionable once applied, the tape's elasticity enables tight adhesion to help prevent leaks.

\*Tychem® gloves and tape should not be used around heat, open flame, sparks or in potentially



# Midstream/ **Downstream**

#### Tasks

Loading/unloading rail cars or trucks

Attach loading/unloading hoses

Monitor and transfer materials

#### Hazards

Flash fire

Chemical exposures

Thermal hazards

Cut hazards requiring cut level A2 and thermal level 4 protection

#### **Available PPE options**

#### Flame-resistant (FR) garments



#### Nomex® Essential

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A highly durable protective solution that helps minimize break-open and provides excellent heat and flame protection.







NOTE: Certifications listed here are for Nomex® Essential fabric; consult with garment manufacturer for garment certifications.



#### Nomex® Comfort

Nomex® Comfort is a lightweight, quick-drying innovative fabric that delivers extreme heat and flame protection, maximum comfort and excellent durability. Garments are available in men's and women's styles and sizes.







**NOTE:** Certifications listed here are for Nomex® Comfort fabric; consult with garment manufacturer for garment certifications.

#### Chemical-resistant/flame-resistant (CR/FR) garments



#### Tychem® 2000 SFR

Tychem® 2000 SFR provides chemical and secondary flame protection in a lightweight garment. Worn over primary FR garments such as Nomex® Comfort, they won't ignite if a flash fire occurs and won't contribute to additional burn injury.



#### Tvchem® 6000 FR

Tychem® 6000 FR styles TP198T and TP199T are single-layer garments that provide triple hazard protection against liquid chemical splash, flash fire and electric arc flash. Tychem® 6000 FR offers at least 30 minutes of protection against more than 180 toxic industrial chemicals and may be used as a primary FR garment.









#### Chemical-resistant (CR) gloves\*



#### Tychem® NT470

These unlined, 15-mil nitrile gloves offer protection against a wide range of solvents, oils, hydrocarbons, greases and other chemicals. Thin and lightweight, Tychem® NT470 gloves are ergonomically designed to maximize comfort. The bisque finish grip makes working in humid environments easier.

Cat. III  $\epsilon$ 

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EN 388:2016 

2001X

EN ISO 374-1:2016 Type A

JKLOPT

EN ISO 374-5:2016 

VIRUS





#### Tasks

Loading/unloading rail cars or trucks

Attach loading/unloading hoses

Monitor and transfer materials

#### Hazards

Flash fire

Chemical exposures

Thermal hazards

Cut hazards requiring cut level A2 and thermal level 4 protection



#### Tvchem® NP570 CT

These 68-mil neoprene gloves, which feature an engineered yarn liner, provide protection against the dual risk of chemical exposure and cut. Tychem® NP570 CT gloves provide ANSI level A5 and EN level E cut protection, as well as first-class defense against acids, caustics, solvents, greases and oils.

Cat. III  $\epsilon$ 

2777

EN 388:2016 3X43E





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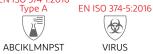
#### Tychem® BT730

These unlined, 14-mil butyl gloves provide protection against a wide array of chemicals, including acids, ketones and alcohols. Light and thin with a "second-skin" feel, anatomical shape and rough surface, Tychem® BT730 gloves are comfortable and enable optimal grip. Impermeable for working in damp or greasy environments.

Cat. III  $\epsilon$ 2777









#### Tychem® 2000 Tape

Tychem® 2000 Tape helps hold a sleeve over a glove, a pant leg over a boot or a closure flap closed, while providing protection against a variety of inorganic acids and bases, as well as common industrial cleaning agents, such as bleach. The tape tears easily for quick and convenient application. Repositionable once applied, the tape's elasticity enables tight adhesion to help prevent leaks.

\*Tychem® gloves and tape should not be used around heat, open flame, sparks or in potentially flammable environments. For professional use only.

#### Cut-resistant gloves



#### Ironclad Heatworx® Heavy Duty HW6X

These heavy-duty gloves have a full Kevlar® shell for extra heat protection and improved cut resistance combined with a Kovenex® palm liner and silicone-laminated Kevlar® blend finger sidewalls for extreme heat protection in critical areas.

Cat. II  $\epsilon$ 









#### Superior Glove® Dexterity® SKG/PXNE

Made with a blend of Kevlar® and Protex® yarns, these winter-lined arc flash gloves provide excellent heat and cut resistance. Neoprene palm coating features great FR properties and good oil resistance. These gloves provide 25 cal/cm<sup>2</sup> ATPV protection.













# Midstream/ **Downstream**

#### Tasks

Operations—sampling

Collecting process and other samples

#### Hazards

Flash fire

Chemical exposures

For a full list of PPE solutions,

visit SafeSPEC™.

Ergonomic issues



#### Flame-resistant (FR) garments

Nomex® Essential

A highly durable protective solution that helps minimize break-open and provides excellent heat and flame protection.







**NOTE:** Certifications listed here are for Nomex\* Essential fabric; consult with garment manufacturer for garment certifications.



#### Nomex® Comfort

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Nomex® Comfort is a lightweight, quick-drying innovative fabric that delivers extreme heat and flame protection, maximum comfort and excellent durability. Garments are available in men's and women's styles and sizes.







NOTE: Certifications listed here are for Nomex® Comfort fabric; consult with garment



#### FR face mask made with Nomex®\*

Made with Nomex® Comfort fabric, this FR face mask from PGI Safety may help meet guidance from the U.S. CDC for wearing masks in environments that require FR protection while social distancing. This FR face mask offers exceptional breathability and durability with inherent, built-in flame resistance that cannot be washed out or worn away.

\*FR face masks are for use while social distancing and may be used for other tasks identified by a site

#### Chemical-resistant/flame-resistant (CR/FR) garments



#### Tvchem® 2000 SFR

Tychem® 2000 SFR provides chemical and secondary flame protection in a lightweight garment. Worn over primary FR garments such as Nomex® Comfort, they won't ignite if a flash fire occurs and won't contribute to additional burn injury.



#### Tychem® 6000 FR

Tychem® 6000 FR styles TP198T and TP199T are single-layer garments that provide triple hazard protection against liquid chemical splash, flash fire and electric arc flash. Tychem® 6000 FR offers at least 30 minutes of protection against more than 180 toxic industrial chemicals and may be used as a primary FR garment.









For a full list of PPE solutions,







#### Tasks

Operations—sampling

Collecting process and other samples

#### Hazards

Flash fire

Chemical exposures

Ergonomic issues

#### Chemical-resistant (CR) gloves\*



#### Tychem® NT470

These unlined, 15-mil nitrile gloves offer protection against a wide range of solvents, oils, hydrocarbons, greases and other chemicals. Thin and lightweight, Tychem® NT470 gloves are ergonomically designed to maximize comfort. The bisque finish grip makes working in humid environments easier.

Cat. III  $\epsilon$ 2777 EN 388:2016 2001X









#### Tychem® NP570 CT

These 68-mil neoprene gloves, which feature an engineered yarn liner, provide protection against the dual risk of chemical exposure and cut. Tychem® NP570 CT gloves provide ANSI level A5 and EN level E cut protection, as well as first-class defense against acids, caustics, solvents, greases and oils.

Cat. III  $\epsilon$ 2777

EN 388:2016 3X43E

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#### Tychem® BT730

These unlined, 14-mil butyl gloves provide protection against a wide array of chemicals, including acids, ketones and alcohols. Light and thin with a "second-skin" feel, anatomical shape and rough surface, Tychem® BT730 gloves are comfortable and enable optimal grip. Impermeable for working in damp or greasy environments.

Cat. III  $\epsilon$ 2777

EN 388:2016 0110X











#### Tychem® 2000 Tape

Tychem® 2000 Tape helps hold a sleeve over a glove, a pant leg over a boot or a closure flap closed, while providing protection against a variety of inorganic acids and bases, as well as common industrial cleaning agents, such as bleach. The tape tears easily for quick and convenient application. Repositionable once applied, the tape's elasticity enables tight adhesion to help prevent leaks.

\*Tychem® gloves and tape should not be used around heat, open flame, sparks or in potentially flammable environments. For professional use only



# Midstream/ **Downstream**

#### Tasks

Cleaning

Pigging

**Hydroblasting** 

Pressure washing

Sand blasting

#### Hazards

Pressurized liquids

Liquids or gases

Abrasives

Cut hazards requiring cut level A2 or A3 protection

High temperatures

Mechanical hazards

For a full list of PPE solutions, visit SafeSPEC™.



#### **Available PPE options**

#### Flame-resistant (FR) garments



#### Nomex® Comfort

Nomex® Comfort is a lightweight, quick-drying innovative fabric that delivers extreme heat and flame protection, maximum comfort and excellent durability. Garments are available in men's and women's styles and sizes.







NOTE: Certifications listed here are for Nomex® Comfort fabric; consult with garment manufacturer for garment certifications



#### Nomex® Essential

A highly durable protective solution that helps minimize break-open and provides excellent heat and flame protection.





manufacturer for garment certifications



NOTE: Certifications listed here are for Nomex® Essential fabric; consult with garment

#### Chemical-resistant/flame-resistant (CR/FR) garments



#### Tychem® 2000 SFR

Tychem® 2000 SFR provides chemical and secondary flame protection in a lightweight garment. Worn over primary FR garments such as Nomex® Comfort, they won't ignite if a flash fire occurs and won't contribute to additional burn injury.



#### Tychem® 6000 FR

Tychem® 6000 FR styles TP198T and TP199T are single-layer garments that provide triple hazard protection against liquid chemical splash, flash fire and electric arc flash. Tychem® 6000 FR offers at least 30 minutes of protection against more than 180 toxic industrial chemicals and may be used as a primary FR garment.









#### Non-FR/chemical-protective garments



#### Tyvek® 800

Tyvek® 800 garments combine resistance to low-concentration, water-based inorganic chemicals with the strength and durability of Tyvek®. The coveralls provide an effective barrier against many water-based inorganic chemicals in low concentration and particles (down to 1.0 micron in size).











Type 6-B



For a full list of PPE solutions,



#### Tasks

Cleaning

Pigging

Hydroblasting

Pressure washing

Sand blasting

#### Hazards

Pressurized liquids

Liquids or gases

Abrasives

Cut hazards requiring cut level A2 or A3 protection

High temperatures

Mechanical hazards

For a full list of PPE solutions, visit SafeSPEC™.





#### Tvchem® 2000

Tychem® 2000 is a lightweight and durable fabric that uses the strength of Tyvek® fabric and polyethylene coating. Tychem® 2000 offers permeation barrier protection for at least 30 minutes against more than 40 chemical challenges.

#### Chemical-resistant (CR) gloves\*



#### Tychem® NP570 CT

These 68-mil neoprene gloves, which feature an engineered yarn liner, provide protection against the dual risk of chemical exposure and cut. Tychem® NP570 CT gloves provide ANSI level A5 and EN level E cut protection, as well as first-class defense against acids, caustics, solvents, greases and oils.

Cat. III  $\epsilon$ 2777

EN 388:2016 (<u>ı</u> 3X43E

EN ISO 374-1:2016 EN ISO 374-5:2016 Type A **D** AJKLMT







#### Tychem® 2000 Tape

Tychem® 2000 Tape helps hold a sleeve over a glove, a pant leg over a boot or a closure flap closed, while providing protection against a variety of inorganic acids and bases, as well as common industrial cleaning agents, such as bleach. The tape tears easily for quick and convenient application. Repositionable once applied, the tape's elasticity enables tight adhesion to help prevent leaks.

\*Tychem® gloves and tape should not be used around heat, open flame, sparks or in potentially

#### Cut-resistant gloves



#### SHOWA KV660

Made with Kevlar® fiber and coated with PVC, SHOWA KV660 gloves offer cut level A3 protection and are resistant to oil and hydrocarbons. The rough finish provides tactile feel and a better grip. Impermeable for working in damp or greasy environments.

Cat III  $\epsilon$  EN 388-2003 (<u>+</u> 4342

EN 374-2-2003







#### Superior Glove® Endura® 378GOBKL

Made of goat grain leather treated with Oilbloc™ for oil and water repellency, these Endura® gloves feature a seamless-knit Kevlar® lining. These driver-style gloves are exceptionally tough and abrasion resistant. They provide 41 cal/cm<sup>2</sup> ATPV protection.









#### Superior Glove® Endura® 378GKGVB

Made of goat grain leather treated with Oilbloc™ for oil and water repellency, these Endura® gloves feature a Kevlar® lining, impact-resistant back-of-hand protection and a padded palm. These driver-style gloves provide excellent cut protection, outstanding abrasion resistance and 36 cal/cm<sup>2</sup> ATPV protection.













# Midstream/ **Downstream**

#### Tasks

Confined space entry

Entering tanks, vessels or pits that may contain hazardous atmospheres to perform work

#### Hazards

Hazardous atmospheres

Flash fire

Hazardous chemicals (liquids or solids)

Cut hazards requiring cut level A3 protection

For a full list of PPE solutions,

visit SafeSPEC™.

#### **Available PPE options**

#### Flame-resistant (FR) garments



#### Nomex® Comfort

Nomex® Comfort is a lightweight, quick-drying innovative fabric that delivers extreme heat and flame protection, maximum comfort and excellent durability. Garments are available in men's and women's styles and sizes.







NOTE: Certifications listed here are for Nomex® Comfort fabric; consult with garment manufacturer for garment certifications



#### Nomex® Essential

A highly durable protective solution that helps minimize break-open and provides excellent heat and flame protection.







**NOTE:** Certifications listed here are for Nomex<sup>®</sup> Essential fabric; consult with garment manufacturer for garment certifications.

#### Chemical-resistant/flame-resistant (CR/FR) garments



#### Tychem® 2000 SFR

Tychem® 2000 SFR provides chemical and secondary flame protection in a lightweight garment. Worn over primary FR garments such as Nomex® Comfort, they won't ignite if a flash fire occurs and won't contribute to additional burn injury.



#### Tychem® 6000 FR

Tychem® 6000 FR styles TP198T and TP199T are single-layer garments that provide triple hazard protection against liquid chemical splash, flash fire and electric arc flash. Tychem® 6000 FR offers at least 30 minutes of protection against more than 180 toxic industrial chemicals and may be used as a primary FR garment.







#### Chemical-resistant (CR) gloves\*



#### Tychem® PV350

Extremely durable, these 55-mil PVC gloves provide protection against chemicals, oils and greases. The cotton/jersey knit lining adds comfort and flexibility while the textured grip makes it easier to grasp wet objects.

AKLMP











2777

3111X



#### Tasks

Confined space entry

Entering tanks, vessels or pits that may contain hazardous atmospheres to perform work

#### Hazards

Hazardous atmospheres

Flash fire

Hazardous chemicals (liquids or solids)

Cut hazards requiring cut level A3 protection



#### Tvchem® NT470

These unlined, 15-mil nitrile gloves offer protection against a wide range of solvents, oils, hydrocarbons, greases and other chemicals. Thin and lightweight, Tychem® NT470 gloves are ergonomically designed to maximize comfort. The bisque finish grip makes working in humid environments easier.











#### Tychem® NP570 CT

These 68-mil neoprene gloves, which feature an engineered yarn liner, provide protection against the dual risk of chemical exposure and cut. Tychem® NP570 CT gloves provide ANSI level A5 and EN level E cut protection, as well as first-class defense against acids, caustics, solvents, greases and oils.















#### Tychem® BT730

These unlined, 14-mil butyl gloves provide protection against a wide array of chemicals, including acids, ketones and alcohols. Light and thin with a "second-skin" feel, anatomical shape and rough surface, Tychem® BT730 gloves are comfortable and enable optimal grip. Impermeable for working in damp or greasy environments.





















#### Tychem® 2000 Tape

Tychem® 2000 Tape helps hold a sleeve over a glove, a pant leg over a boot or a closure flap closed, while providing protection against a variety of inorganic acids and bases, as well as common industrial cleaning agents, such as bleach. The tape tears easily for quick and convenient application. Repositionable once applied, the tape's elasticity enables tight adhesion to help prevent leaks.

\*Tychem® gloves and tape should not be used around heat, open flame, sparks or in potentially flammable environments. For professional use only.

#### Cut-resistant gloves



#### SHOWA KV660

Made with Kevlar® fiber and coated with PVC, SHOWA KV660 gloves offer cut level A3 protection and are resistant to oil and hydrocarbons. The rough finish provides tactile feel and a better grip. Impermeable for working in damp or greasy environments.













# Midstream/ **Downstream**

#### Tasks

Insulation work—asbestos or non-asbestos

> Handle thermal system insulation, metal bands and jacketing

#### Hazards

Sharp edges

Hazardous particles

Cut hazards requiring cut level A6 or A7 protection

#### **Available PPE options**

#### Flame-resistant (FR) garments



#### Nomex® Essential

A highly durable protective solution that helps minimize break-open and provides excellent heat and flame protection.





**NOTE:** Certifications listed here are for Nomex\* Essential fabric; consult with garment manufacturer for garment certifications.



#### Nomex® Comfort

ASTM

F1506

Nomex® Comfort is a lightweight, quick-drying innovative fabric that delivers extreme heat and flame protection, maximum comfort and excellent durability. Garments are available in men's and women's styles and sizes.







**NOTE:** Certifications listed here are for Nomex<sup>®</sup> Comfort fabric; consult with garment manufacturer for garment certifications.

#### Chemical-resistant/flame-resistant (CR/FR) garments



#### Tychem® 2000 SFR

Tychem® 2000 SFR provides chemical and secondary flame protection in a lightweight garment. Worn over primary FR garments such as Nomex® Comfort, they won't ignite if a flash fire occurs and won't contribute to additional burn injury.



#### Tychem® 6000 FR

Tychem® 6000 FR styles TP198T and TP199T are single-layer garments that provide triple hazard protection against liquid chemical splash, flash fire and electric arc flash. Tychem® 6000 FR offers at least 30 minutes of protection against more than 180 toxic industrial chemicals and may be used as a primary FR garment.







Requirements of NFPA 70E°

For a full list of PPE solutions, visit SafeSPEC™.







#### Tasks

Insulation work—asbestos or non-asbestos

Handle thermal system insulation, metal bands and jacketing

#### Hazards

Sharp edges

Hazardous particles

Cut hazards requiring cut level A6 or A7 protection

#### Cut-resistant gloves



#### Ansell HyFlex® 11-542

These lightweight Ansell HyFlex® gloves provide high levels of protection against lacerations and are comfortable to wear. Exclusive dirt masking design and high abrasion resistance make these gloves ideal for long-term use.



ANSI 7







EN 420:2003 +



#### PIP G-Tek® KEV™ 09-K1600

The seamless knit construction of these PIP G-Tek® KEV™ gloves provides comfort without sacrificing dexterity. The Kevlar® fiber shell provides high tensile strength, excellent cut resistance and it won't melt, ignite or conduct electricity. The nitrile foam grip is compatible with light oils and provides excellent abrasion resistance.





#### Cut-resistant sleeves



#### MCR Safety Cut Pro® 9318K7T

This Cut Pro® sleeve with Hero™ Technology offers high levels of protection and comfort for workers in tough environments. Made with blended Kevlar®, stainless steel and nylon fibers, this 18-inch sleeve with thumb slot provides excellent cut and abrasion resistance.











#### PIP Kut Gard® 10-KVSYBH

This Kut Gard® single-ply Kevlar® armor blended sleeve protects arms without sacrificing comfort or dexterity. Kevlar® provides excellent cut protection, heat resistance and inherent flame resistance.







# Midstream/ **Downstream**

#### Tasks

Line breaking/vessel opening

Shut down process

**Determine hazards** 

Lockout/tagout (LOTO)

Monitor hazardous atmospheres

Perform work

#### Hazards

Chemical exposures

Flash fire

Pressurized systems

Cut hazards requiring cut level A2 or A3 protection

#### **Available PPE options**

#### Flame-resistant (FR) garments



#### Nomex® Essential

A highly durable protective solution that helps minimize break-open and provides excellent heat and flame protection.







**NOTE:** Certifications listed here are for Nomex® Essential fabric; consult with garment manufacturer for garment certifications.



#### Nomex® Comfort

ASTM

F1506

Nomex® Comfort is a lightweight, quick-drying innovative fabric that delivers extreme heat and flame protection, maximum comfort and excellent durability. Garments are available in men's and women's styles and sizes.







**NOTE:** Certifications listed here are for Nomex\* Comfort fabric; consult with garment manufacturer for garment certifications.

#### Chemical-resistant/flame-resistant (CR/FR) garments



#### Tychem® 2000 SFR

Tychem® 2000 SFR provides chemical and secondary flame protection in a lightweight garment. Worn over primary FR garments such as Nomex® Comfort, they won't ignite if a flash fire occurs and won't contribute to additional burn injury.



#### Tychem® 6000 FR

Tychem® 6000 FR styles TP198T and TP199T are single-layer garments that provide triple hazard protection against liquid chemical splash, flash fire and electric arc flash. Tychem® 6000 FR offers at least 30 minutes of protection against more than 180 toxic industrial chemicals and may be used as a primary FR garment.







For a full list of PPE solutions, visit SafeSPEC™.







#### Tasks

Line breaking/vessel opening

Shut down process

**Determine hazards** 

Lockout/tagout (LOTO)

Monitor hazardous atmospheres

Perform work

#### Hazards

Chemical exposures

Flash fire

Pressurized systems

Cut hazards requiring cut level A2 or A3 protection

#### Chemical-resistant (CR) gloves\*



#### Tychem® NT470

These unlined, 15-mil nitrile gloves offer protection against a wide range of solvents, oils, hydrocarbons, greases and other chemicals. Thin and lightweight, Tychem® NT470 gloves are ergonomically designed to maximize comfort. The bisque finish grip makes working in humid environments easier.

Cat. III  $\epsilon$ 2777 EN 388:2016 2001X







#### Tychem® NP570 CT

These 68-mil neoprene gloves, which feature an engineered yarn liner, provide protection against the dual risk of chemical exposure and cut. Tychem® NP570 CT gloves provide ANSI level A5 and EN level E cut protection, as well as first-class defense against acids, caustics, solvents, greases and oils.

Cat. III  $\epsilon$ 2777











#### Tychem® BT730

These unlined, 14-mil butyl gloves provide protection against a wide array of chemicals, including acids, ketones and alcohols. Light and thin with a "second-skin" feel, anatomical shape and rough surface, Tychem® BT730 gloves are comfortable and enable optimal grip. Impermeable for working in damp or greasy environments.













#### Tychem® 2000 Tape

Tychem® 2000 Tape helps hold a sleeve over a glove, a pant leg over a boot or a closure flap closed, while providing protection against a variety of inorganic acids and bases, as well as common industrial cleaning agents, such as bleach. The tape tears easily for quick and convenient application. Repositionable once applied, the tape's elasticity enables tight adhesion to help prevent leaks.

\*Tychem® gloves and tape should not be used around heat, open flame, sparks or in potentially flammable environments. For professional use only.

#### Cut-resistant gloves



#### Superior Glove® Endura® 378GKGVBE

These goat skin Endura® gloves provide excellent cut resistance thanks to the blended Kevlar®/composite filament fiber lining. Featuring impact-resistant back-of-hand protection and a vibration-dampening padded palm, these gloves provide protection without impeding flexibility or dexterity.







For a full list of PPE solutions, visit SafeSPEC™.





# Midstream/ **Downstream**

#### **Tasks**

Maintenance—electrical work

Performing electrical work

#### Hazards

Arc flash

Hazards requiring gloves made with Kevlar® that are arc rated 2 up to 4

Chemical exposures

#### **Available PPE options**

#### Flame-resistant (FR) garments



#### Nomex® Essential Arc

Nomex® Essential Arc is engineered to provide >8 cal/cm² ATPV protection combined with enhanced durability against abrasion. Nomex® is resistant to many chemicals and oil stains are washed out easier than with standard cotton garments.













#### Evolv™ built with Nomex®

This lightweight Nomex® blended fabric is CAT 2 AR/FR and NFPA 2112 compliant, providing workers with comfortable protection. Garments are available in men's and women's styles and sizes.







#### Nomex® Essential Arc High-Arc Suit

These multi-layer garments built with Nomex® are used for protection against high incident energy hazard levels and meet U.S. OSHA 1910.269 and NFPA 70E° standards.

NOTE: For additional high-arc rated solutions, consult Use of layered solutions to address COVID-19 contamination concerns with high-arc suits to see currently available Nomex® layering systems.

#### Chemical-resistant/flame-resistant (CR/FR) garments



#### Tychem® 2000 SFR

Tychem® 2000 SFR provides chemical and secondary flame protection in a lightweight garment. Worn over primary FR garments such as Nomex® Comfort, they won't ignite if a flash fire occurs and won't contribute to additional burn injury.



#### Tychem® 6000 FR

Tychem® 6000 FR styles TP198T and TP199T are single-layer garments that provide triple hazard protection against liquid chemical splash, flash fire and electric arc flash. Tychem® 6000 FR offers at least 30 minutes of protection against more than 180 toxic industrial chemicals and may be used as a primary FR garment.











#### Tasks

Maintenance—electrical work

Performing electrical work

#### Hazards

Arc flash

Hazards requiring gloves made with Kevlar® that are arc rated 2 up to 4

Chemical exposures

#### Cut-resistant gloves



#### Youngstown FR Ground Glove 12-3365-60

Cut and sewn glove, tan goatskin leather. Dual-layer leather in palm/fingertips/ knuckles. Kevlar® liner. Gauntlet cuff. Certified to NFPA 70E® 2015 and OSHA 29 CFR Part 1926.

ANSI/ISEA 105:2016 ANSI **A4** 





#### Superior Glove® Dexterity® S18KGNE

Made with Kevlar® fiber, Dexterity® 18-gauge FR arc flash gloves provide 8.2 cal/cm<sup>2</sup> ATPV protection. Featuring great FR properties and good resistance to oil, these gloves have a neoprene palm coating that enables excellent grip—both wet and dry. ESD carbon filament imparts antistatic properties.











#### **SHOWA 240**

Lightweight and comfortable, these 13-gauge Kevlar® lined gloves have a sponge neoprene palm coating. Flame resistant Kevlar® enables protection against arc flash up to a level 2, according to open arc/box tests. Flat dipped sponge neoprene coating provides enhanced grip and the anatomical design helps prevent hand fatigue.

Cat. II  $\epsilon$  EN 388:2016 

EN 388:2003 (<u>4</u>)





# Midstream/ **Downstream**

#### **Tasks**

Emergency response—fire, spill or release

Stop fuel source and extinguish fire

Stop liquid or gas release and clean up or neutralize

#### Hazards

Thermal burns

Chemical exposures

Flash fire

#### **Available PPE options**

#### Flame-resistant (FR) garments



#### Nomex® Comfort

Nomex® Comfort is a lightweight, quick-drying innovative fabric that delivers extreme heat and flame protection, maximum comfort and excellent durability. Garments are available in men's and women's styles and sizes.







**NOTE:** Certifications listed here are for Nomex\* Comfort fabric; consult with garment manufacturer for garment certifications.



#### Nomex® Essential

F1506

A highly durable protective solution that helps minimize break-open and provides excellent heat and flame protection.







NOTE: Certifications listed here are for Nomex® Essential fabric; consult with garment manufacturer for garment certifications



#### Hoods made with Nomex® Nano Flex

Thin, lightweight and durable, hoods made with Nomex® Nano Flex prevent potentially harmful particulates from being absorbed through the skin on the neckline and upper jaw, which are areas that historically are known to be the most vulnerable and least protected. When added to a firefighter hood composite structure, hoods made with Nomex® Nano Flex result in up to a 4X increase in particle barrier efficiency.

This game-changing barrier protection is achieved without compromising thermal resistance, breathability, comfort or situational awareness.

DuPont is proud to partner with these manufacturers of hoods made with Nomex® Nano Flex:

Fire-Dex Veridian Viking PGI



#### Turnout gear made with Nomex®, Nomex® Nano and Kevlar®

Nomex<sup>®</sup>, Nomex<sup>®</sup> Nano and Kevlar<sup>®</sup> fibers can be found in each layer of most firefighter turnout gear. Together, these innovative fibers help provide proven protection, durability and comfort from the inside out.

Nomex®, Nomex® Nano and Kevlar® fibers help manufacturers create fire-resistant liners, outer shells and accessories that not only stand up to the thermal hazards that firefighters may face, but also help them to get the job done without getting in the way of mobility.

DuPont is proud to partner with these manufacturers of turnout gear made with Nomex®, Nomex® Nano and Kevlar®:

Fire-Dex Innotex Quaker Safety Globe Lakeland Veridian

Honeywell Lion

#### Chemical-resistant/flame-resistant (CR/FR) garments



#### Tychem® 10000 FR

"Single skin" fully encapsulated Level A garment offers broad chemical holdout. This garment provides 30 minutes of protection against more than 290 chemicals. Tychem® 10000 FR is certified to NFPA 1991 with chemical flash fire protection option and liquefied gas protection option requirements of NFPA 1991.









#### Tasks

Emergency response—fire, spill or release

Stop fuel source and extinguish fire

Stop liquid or gas release and clean up or neutralize

#### Hazards

Thermal burns

Chemical exposures

Flash fire



#### Tvchem® 6000 FR

Tychem® 6000 FR styles TP198T and TP199T are single-layer garments that provide triple hazard protection against liquid chemical splash, flash fire and electric arc flash. Tychem® 6000 FR offers at least 30 minutes of protection against more than 180 toxic industrial chemicals and may be used as a primary FR garment.

NFPA 1992 NFPA 2112

Requirements of NFPA 70E°

#### Tychem® 2000 SFR

Tychem® 2000 SFR provides chemical and secondary flame protection in a lightweight garment. Worn over primary FR garments such as Nomex® Comfort, they won't ignite if a flash fire occurs and won't contribute to additional burn injury.

#### Chemical-resistant (CR) gloves\*



#### Tychem® NT470

These unlined, 15-mil nitrile gloves offer protection against a wide range of solvents, oils, hydrocarbons, greases and other chemicals. Thin and lightweight, Tychem® NT470 gloves are ergonomically designed to maximize comfort. The bisque finish grip makes working in humid environments easier.

Cat. III  $\epsilon$ 2777

EN 388:2016 2001X

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#### Tychem® NP570 CT

These 68-mil neoprene gloves, which feature an engineered yarn liner, provide protection against the dual risk of chemical exposure and cut. Tychem® NP570 CT gloves provide ANSI level A5 and EN level E cut protection, as well as first-class defense against acids, caustics, solvents, greases and oils.

Cat. III  $\epsilon$ 2777

EN 388:2016 3X43E

AJKLMT

EN ISO 374-5:2016



#### Tychem® BT730

These unlined, 14-mil butyl gloves provide protection against a wide array of chemicals, including acids, ketones and alcohols. Light and thin with a "second-skin" feel, anatomical shape and rough surface, Tychem® BT730 gloves are comfortable and enable optimal grip. Impermeable for working in damp or greasy environments.

Cat. III  $\epsilon$ 2777

EN 388:2016 (<u>ı</u> 0110X

ABCIKLMNPST

EN ISO 374-5:2016 VIRUS



#### Tychem® 2000 Tape

Tychem® 2000 Tape helps hold a sleeve over a glove, a pant leg over a boot or a closure flap closed, while providing protection against a variety of inorganic acids and bases, as well as common industrial cleaning agents, such as bleach. The tape tears easily for quick and convenient application. Repositionable once applied, the tape's elasticity enables tight adhesion to help prevent leaks.

\*Tychem® gloves and tape should not be used around heat, open flame, sparks or in potentially flammable environments. For professional use only.







# Global reach

With operations in 96 countries and technical centers staffed with experts across the globe, we are here to provide you with the support you need when choosing the right PPE.

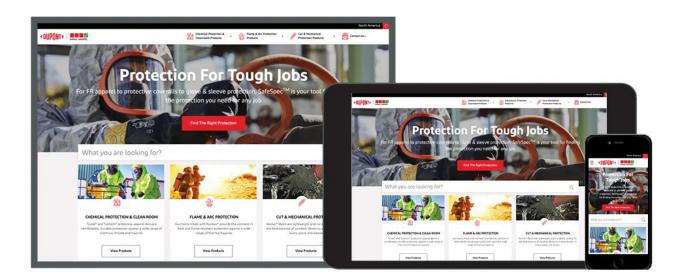
Our Thermo-Man® (life-sized thermal burn injury evaluation) and Arc-Man® (arc flash injury evaluation) units provide compelling demonstrations that help educate industrial workers about the durability and heat, flame and electric arc resistance that DuPont Safety PPE delivers.

# We're here to help

DuPont™ SafeSPEC™, our powerful web-based tool, can assist you with finding the appropriate DuPont garments for chemical, controlled environment, thermal, electric arc and mechanical hazards.

SafeSPEC<sup>™</sup> has a permeation test results database for Tychem<sup>®</sup> fabrics & gloves and allows you to search by either hazard or industry to help you find the right protection for the job at hand.

safespec.dupont.com







*<b>OUPONT* 

#### Kevlar. | Nomex. | Tyvek. | Tychem.

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