

# 640/645 Challenger Suit

## The structural suit of the future.

Challenger isn't just the latest version of an existing product, it's setting a completely new benchmark. Using all-new designs from our specialist in-house team, and the latest in fabrics, membranes and components (including some specifically designed for these garments), making this the best structural suit on the market.

### Styles

- 640 Structural Firefighting Jacket
- 645 Structural Firefighting Trousers

### EN Standards

- AS 4967:2019  
Protective clothing for firefighters

### Intended Use

- Firefighting operations and associated activities such as rescue work, assistance during disasters

### Size Range

- Chest/Waist: XS-4XL
- Fit: Male & female fits available

### Choice of Fabric Systems

- **Nomex® Truecolour®** Colour: Gold | Red | Navy
- **PBI PRO** Colour: Gold
- **PBI MAX** Colour: Gold



Appropriate for:  
Structural Firefighting



# 640 Challenger Jacket

## Features & Benefits

- Collar hanging loop
- High shaped mandarin collar for better comfort and protection
- Two microphone loops at upper chest
- Optional Velcro® loop for ID marking at right upper chest area
- Abrasion resistant, breathable shoulder reinforcement with internal FR 3D spacer shoulder
- Abrasion resistant and breathable elbow reinforcement for added comfort and safety, extended reinforcement at the back for additional protection
- Two large hip inner pockets to fit note pads, made from lightweight pocketing
- Adjustable torch strap at right chest area, grab tab for easier opening when wearing gloves
- Bellow radio pocket, adjustable for different radio heights, flap can accommodate radio antennas at both sides, grab tab for easier opening when wearing gloves
- Napoleon pocket on left side as worn with whistle loop on the inside
- Pen pocket underneath the storm guard
- Glow in the dark strips, phosphorescent tape
- Thumb loop to stop sleeving riding up when arms are extended
- Extended hem at the back to ensure full coverage of the lumber region when bending
- Grab tab at the storm guard for easier opening when gloves are worn, additionally storm guard attached using spot Velcro® closure
- Reinforcement fabric at cuff hem and jacket hem for better abrasion resistance
- Industrial wash, flame retardant sew-on perforated reflective tape, attached with twin needle stitching for added strength, 50mm and 75mm used
- Twin needle structural seams for added strength
- Main zip attached to zip carrier for easier repair
- Strategic panelling that's ergonomically shaped for wearer comfort and ease of movement
- Inner stud fastening for easier inspection and repair of the outer shell
- Inner zip for moisture barrier inspection
- Anti-wicking panels on the cuff and body hem



# 645 Challenger Trouser

## Features & Benefits

- Removable braces with quick adjustment, braces feature 3D breathable padding for additional comfort
- Front waist adjustment for better fit
- Two large bellow combat style pockets, featuring glove hanging loops, secured with reinforced edge flaps, including carabine snap hooks
- Ergonomically shaped abrasion resistant knee reinforcement panels with Kevlar padding for additional puncture protection. Internal removable knee pads to ensure wearers comfort
- Elasticated waist band at the back - breathable 3D spacer pad in the back waist offers additional protection and comfort to the lower back lumber region.
- Reinforced leg hem for abrasion resistance
- Reinforced inner leg sections for abrasion resistance - reinforced inside leg seam at the ankle
- Centralised fly zip with inner zip guard - fly zip is covered with a storm guard
- Industrial wash, flame retardant sew-on perforated reflective tape, attached with twin needle stitching for added strength, 50mm and 75mm used
- Twin needle structural seams for added strength
- Easier zip repair
- Ergonomically shaped knee panels
- All closures are easily operated whilst wearing gloves
- Glow in the dark strips, phosphorescent tape



Trouser back

Trouser front

## Washing Instructions



**Wash Machine  
Temperature**  
60°C



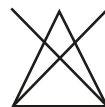
**Tumble Dry  
Settings**  
Two Dot:  
Mid temperature  
Max 80 degrees



**Ironing**  
Two Dot:  
High temperature



**Dry Cleaning**  
P: Dry  
cleaning with  
perchloroethylene



**Do not use  
bleach**

## General PPE Maintenance Guidelines

- Wash the PPE regularly using specially adapted programs for contaminated emergency clothing
- The garments should be cleaned after incidents where they have been affected by fire gases or soiled by soot, by-products of combustion, blood, body fluids, tar, fuel, resin, paint, acid or other dangerous substances
- Contaminated clothing should be transported so that gases are enclosed
- Pressure clothing should be cleaned separately from other garments
- Do not hang the garment in direct sunlight, as UV radiation will eventually weaken the outer fabric
- Lubricate the zipper if it starts to go slow

## Before Washing

- Ensure all zips within the garments are fastened, including inspection zips on inside of garment
- Ensure all Velcro® closures are fastened
- Ensure all buttons are closed
- Ensure all pockets are empty
- Remove any detachable ID tags
- Remove all carabine snap hooks
- Relax any adjustable closures, typically in the cuff, collar, ankle, waist
- Check fluorocarbon finish before each wash by using a spray test, re-apply impregnation if needed. Always re-do the impregnation after chemical cleaning

## After Washing & Drying

- Ensure closures are functioning after wash
- Ensure the fit of garment is still suitable, the garment is not too loose or close fitting
- There is a sufficient overlap between jacket and trouser when performing stretching movements of legs and arms
- There is no damage or soiling
- The clothing is dry on inside and outside
- Perform a spray test to ensure the fluorocarbon finish is functioning
- Check seams integrity or broken stitches
- Check reflective tape condition

## Storage

Store the garment in dry conditions, not in direct sunlight. Do not store in airtight containers or vacuum packed, do not store at temperatures less than -32°C or above 82°C, do not store in contact with contaminants such as (not limited to) oils, solvents, acids or alkalis.

## Important Notes

- Ensure cleaning is performed by a trained specialist, do not clean in the private household
- Follow product care label instructions
- Do not use domestic washing detergents, powders, softeners or whitening agents
- Do not use a tunnel dryer
- Do not iron retro-reflective tape
- Do not wash with combustible materials
- Washing machine must not be more than 80% capacity based on weight

## Fluorocarbon Re-impregnation

The protective clothing should be re-impregnated regularly using a fluorocarbon resin-based treatment, it is recommended to re-impregnate the finish after 5 washing and drying cycles, the re-impregnation may be necessary after less washes which depends on the use of the garment, therefore it's recommended to test the finish using a spray test before each wash cycle.

Simply spray some water over the garment, if the water is absorbed into the fabric and does not drip off then re-apply the fluorocarbon finish. The re-impregnation can be done easily by adding the right impregnation product to the last of the rinsing water in the washing process.

## Repairs

The garment should be inspected regularly for any damages, repairs should be performed by a trained specialist, modifications to garment are not allowed. Any repair or modification made by unauthorised service centre will void the warranty.

We recommend that the suit be removed from service if the repair costs exceed 50% of the replacement cost. Please contact FlamePro Global Ltd for advice.

## Warranty

1 Year warranty from date of manufacture on structural seams and hardware, subject to wear & tear. Modifications or repairs made by unauthorised specialist will invalidate the warranty.

We recommend care and maintenance in line with BS 8617 which can be obtained from BSI shop ([shop.bsigroup.com](http://shop.bsigroup.com))