

Protective Clothing COLOSSUS

Standard : EN469:2005, Level 2, Xf2, Xr2, Y2, Z2

Protective Clothing COLOSSUS is designed for body protection, with flame retardant, waterproof and breathable, heat insulation, anti-static and strong marking performance, composed of the outer layer, waterproof breathable layer, insulation layer and comfortable layer.



SPECIFICATION

Structure	4 Layers
Outer Layer	Nomex IIIA <ul style="list-style-type: none"> • 93% Nomex • 5% Kevlar • 2% P140 - 205 g/m² ripstop
Moisture Layer	Aramid non-woven fabric + PTFE
Thermal Layer	<ul style="list-style-type: none"> • 80% Nomex • 20% Kevlar insulation mat
Comfortable Layer	<ul style="list-style-type: none"> • 50% Nomex • 50% FR Viscose
Arc Thermal Performance Value	34 cal/cm ²
Reflective Stripe	3M
Dimension	57 x 38 x 10 cm
Weight	2.8 kg





Outer Layer	<ul style="list-style-type: none"> • Material: Nomex IIIA (produced by <i>Dupont</i>) • Weight of unit area: 205 g/m² • Flame retardant: After flame time 0 sec • Cutting resistance: Warp 1173 N, weft 1003 N • Moisture resistance: 3° • Thermal stability change rate: 1%
Moisture Layer	<ul style="list-style-type: none"> • Material: Aramid non-woven fabric + PTFE • Weight of unit area: 108 g/m² • Hydrostatic pressure: >50 Kpa • Water vapour transmission rate: 6099 g/m²(24h) • Oil repellent performance: Level 4 • Thermal stability change rate: 2%
Thermal Layer	<ul style="list-style-type: none"> • Material: 80% Nomex, 20% Kevlar insulation • Weight of unit area: 75 g/m² • Flame retardant: After flame time 0 sec • Thermal stability change rate: 1%
Comfortable Layer	<ul style="list-style-type: none"> • Material: 50% Nomex, 50% FR Viscose • Weight of unit area: 120 g/m² • Flame retardant: After flame time 0 sec • Thermal stability change rate: 1%
Reflective Tape	<ul style="list-style-type: none"> • Material: 3M • Properties: Flame retardant, washing resistant, and high temperature resistant
Life-saving Towing Belt (DRD- Drag Rescue Service)	<ul style="list-style-type: none"> • Unfolding time: 6 sec • Drag distance: >2.5 m • Breaking strength: 8373 N
Elbow & Knee Protection	<ul style="list-style-type: none"> • Material: Kevlar dan PU coating • Tebal material: 360 g/m²
Other features	<ul style="list-style-type: none"> • Sewing thread material: Nomex • Sewing stitch density: 13 stitching/3 cm • Seam tensile strength: Warp 918 N, weft 849 N • Zipper inside jacket: to maintain membrane and life-saving towing belt

Other choice of color :



Rescue Suit (1 Layer & 3 Layers)

SPECIFICATION



• 1 Layer

Structure	1 Layer
Material	Aramid Fabric 188 g/m ²
Flame retardant	After flame time ≤ 2 sec, after glow time ≤ 2 sec
Fabric tensile strength	Longitude 1300 N, latitude 1090 N
Tear strength	Warp ≥ 171.8 N, zonal ≥ 143.05 N
Moisture resistance	≥ 3°
Shrinkage	≤ 2.5%
Anti-static nature	≤ 3.5 sec
Weight	1.9 kg



• 3 Layers

Structure	3 Layers
Outer layer	Nomex IIIA
Second layer	Cotton non-woven and PTFE Membrane
Third layer	Flame Retardant Cotton
Weight	2.2 kg

Accessories Included (all types):



Aluminized Fire Entry Suit

Standard : EN1486:2007



SPECIFICATION

Structure	3 Layers
Outer Layer	Kevlar + Alumunium Coated
Thermal Layer	Aramid Retardant Insulation Mat 170 g/m ²
Comfortable Layer	Lining Natural Cotton
Visor Material	PES + Silicone Oxide/Silver Coating, 3 mm
Inside Helmet	HDPE
TPP Value	35.0 cal/cm ²
Heat Resistant	1000°C
Flame Retardant	Damaged length 5 mm, burn off time 5 sec
Accessories	Hood, Jacket, SCBA Backpack, Pants, Gloves, Shoes
Weight	4.2 kg



Fire Entry Suit JUGGERNAUT



SPECIFICATION

Structure	7 Layers
Layers	<ol style="list-style-type: none"> 1. Oxidized Fiber 70% and Kevlar 30% 2. Anti-thermal Radiation Layer 3. Fire Retardant Cotton Layer 4. High-density Waterproof Breathable Layer 5. 100% Cotton Heat Insulation Layer 6. 100% Cotton Spinning Anti-static Comfortable Layer 7. Cotton Lining
Components	Jacket, Pants, Fire Retardant Gloves, Fire Boots, Wide Vision UV Hood, Backpack for Air Breathing Apparatus
Advantages	<ul style="list-style-type: none"> • Can use gas mask inside Fire Entry Suit • Can be worn in 1000°C workplace for 30 sec with temperature inside the suit does not exceed 25°C
Technical Parameter	<ul style="list-style-type: none"> • Waterproof and Moisture Resistance • Smoldering time: < 2 sec • Flame Resistance: max. 860°C • Heat Resistance: max. 1050°C • Weight: 7 kg



Anti-Bee Suit BEEHIVE



SPECIFICATION

Material	Flame Retardant PVC
Accessories	Hood, Coverall, Puncture proof Gloves, Rubber Boots
Performance	Anti Cutting, Anti Acid and Alkali, Anti Virus
Coverall Strength	Max. Tensile Strength: 450 N/5 cm Max. Tear Strength: 32 N
Boot Sole Strength	Max. Electrical Insulation: 5000 V Max. Puncture Resistance: 1500 N
Weight	3.6 kg



Chemical Suit Light Duty



SPECIFICATION

Material	Modified PVC Coated Fabric (610±10 g/m ²)
Features	Flame Retardant, Acid/salt Resistance, Penetration Resistance, Gasoline Resistance, Aging Resistance, Water Resistant, Cold Resistance
Anti Water Leakage	No leakage after 20 min
Heat Aging Resistance	125°C; No Stick, No Brittle, No Crack
Seam Strength	200 N
Chemical Permeability	1 hour in 6.1 mol/L NaOH, 80% H ₂ SO ₄ , 60% HNO ₃ , 30% HF solution soaked, No Penetration
Cold Resistance	5 min, No crack in environment temp. -25°C
Solo Puncture Resistance	≥ 900 N
Gloves Puncture Resistance	≥ 22 N
Boots Anti Cutting Performance	No cut through by cutting test
Boots Electrical Insulation	≥ 5000 V; leakage current < 3 mA
Accessories	Coveralls, Hood, Gloves, Boots
Weight	2 kg

Chemical Suit Heavy Duty



SPECIFICATION

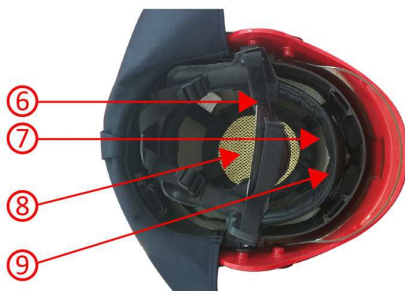
Material	Modified PVC Coated Fabric (660±10 g/m ²)
Features	Flame Retardant, Acid/salt Resistance, Penetration Resistance, Gasoline Resistance, Aging Resistance, Water Resistant, Cold Resistance
Whole Air Tightness	≤ 300 Pa
Air Tightness of Exhaust Valve	≥ 15 sec
Ventilation Valve Resistance	78 ~ 118 Pa
Adhesion Strength	≥ 0.78 kN/m
Tensile Strength	≥ 9 kN/m
Tear Strength	≥ 50 N
Heat Aging Resistance	125°C; No Stick, No Brittle, No Crack
Seam Strength	250 N
Chemical Permeability	1 hour in 6.1 mol/L NaOH, 80% H ₂ SO ₄ , 60% HNO ₃ , 30% HF solution soaked, No Penetration
Cold Resistance	5 min, No crack in environment temp. -25°C
Solo Puncture Resistance	≥ 1100 N
Gloves Puncture Resistance	≥ 22 N
Boots Anti Cutting Performance	No cut through by cutting test
Boots Electrical Insulation	≥ 5000 V; leakage current < 3 mA
Accessories	Coveralls, Hood, Gloves, Boots
Weight	4 kg

Fire Fighting Helmet COMPACT

Standard : EN443:2008, ISO9001:2008

Fire fighting helmet COMPACT offers high performance, unique and functional design features along with superior protection, fit, and comfort. COMPACT does not be deformed under influence of circumstances as exposure to sun, flame, high heat, rain and cold.

SPECIFICATION



1. Outer Shell	Flame retardant PA66 thermoplastic shell resists high temperature, abrasion, UV-rays, chemicals, electricity.
2. Flashlight Holder	Flame retardant PA66 thermoplastic shell resists high temperature, abrasion, UV-rays, chemicals, electricity.
3. Rotary Headband Adjustment	Headband adjustment insures a secure and comfortable fit for various head sizes from 52 mm to 62 mm and permits use with SCBA.
4. Faceshield (Visor)	Polyethersulfone faceshield is coated on both sides with an anti-scratch chemical for safety optical clarity.
5. Neck Protector	Aramid neck protector allows ears and neck of the wearer to protect against high heat and flame.
6. Chinstrap	Made of aramid and cow leather, chinstrap with one hand quick release buckle allows quick and easy adjustment .
7. Inner Liner (Impact Net)	Polystyrene foam resin material, inner liner increase impact protection and sustains the suspension system under a severe shock.
8. Suspension	Improved 6-point suspension, cradle strap assembly made of Nomex fabric to serve as impact cap's overhead suspension.
9. Headband	Made of plastic and cow leather, reduce pressure and increase comfort. Located at the nape device to allow proper adjustment for the headband to fit and prevents backing out or slipping during use.

Max Impact Force	3577.1 N (365 kg Force)
Top of Helmet	maximum impact speed 121.7 gn
Front of Helmet	maximum impact speed 297.2 gn (acceleration > 150 gn, duration 4.2 msec)
Side of Helmet	maximum impact speed 299.8 gn (acceleration > 150 gn, duration 4.2 msec)
Rear of Helmet	maximum impact speed 305.6 gn (acceleration > 150 gn, duration 4.2 msec)
Flame Resistance	after the fire source leaves, the helmet flame will extinguish within 5 sec
Electrical Insulation	leakage current 1.0 mA
Faceshield	no obvious deformation and damage after heat resistance test
Field of Vision	Left > 105° ; Right > 105°
Net Weight	1450 g

Protective Hood

Standard : EN13911:2017



SPECIFICATION

Fabric Properties	<ul style="list-style-type: none"> • Aramid knitted fabric • Flame Retardant: After flame time 2 sec, no melting • Heat Resistant: Dimension change $\leq 10\%$, no change in color • Water washing shrinkage $\leq 5\%$
Performance	<ul style="list-style-type: none"> • Seam Strength: ≤ 185 N • Face open dimension stability: $\leq 20\%$

Flame Retardant Sweater



SPECIFICATION

Material	Flame Retardant Wool
Thickness	1 mm
Weight	200 g

Fire Fighting Gloves FIRECLAW

Standard : EN659:2003



SPECIFICATION

Outer Layer	Flame Retardant Aramid (210 g/m ²)
Waterproof Layer	TPU low permeability milky white waterproof membrane
Thermal Barrier	Flame Retardant Aramid
Comfortable Layer	Flame Retardant Cotton
Abrasion Resistance Leather	Palm, Thumb, Index Finger
Reflective Stripe	50 mm
Weight	100 g

TECHNICAL PARAMETER

Gloves Shrinkage	1.5%
Lining Shrinkage	1.0%
Max. Abrasion Resistance	Palm: 2000 N ; Dorsum: 2000 N
Max. Cutting Force	Palm: 15 N ; Dorsum: 15 N
Tear Strength on Palm	84 N
Piercing Force on Palm	61 N

Fire Fighting Boot FIREBOLT

Standard : EN15090:2012 (F2 I HI3 P T CI), ISO9001:2008



SPECIFICATION

Lining Material	The assembly of the rubber boots has a cotton canvas inner lining and when boots assembly is properly tested according to European Standard EN15090:2012(F2 IS HI3 P T CI), it can withstand the temperature of 220°C provided for safety and comfort of the user.
Insulation	Rubber sponge type insulation is provided for proper protection of feet from burns and blisters.
Insole	Thick Nylon Fabric knitted cushioned insole, which protects feet and heel from blisters and oiling. Also protect feet from injuries and apparent infections.
Upper Construction	<ul style="list-style-type: none"> • Flame retardant with heat insulation Level 3 capabilities • Reinforced formulation with minimum thickness of 2 mm • High visibility with black and yellow contrast

Shin	Made of high grade poly-rubber with inner lining that runs from top to toe that provide resistance to heat. Patterned in such a manner to minimized leg exposure and designed for easy donning of trousers.
Sole/Heel	<ul style="list-style-type: none"> • Fuel and oil resistant sole suitable for inimical environment • Slip resistant vulcanized rubber sole conforms to EN15090 • Excellent abrasion resistant for extra durability • Tested to withstand 5000 V of life current (dry condition) • Heel energy absorption design to minimize the impact to your heel • Comfortable heel area, snugly holds the heel in place • Catered to enter high temperature with HRO performance • Multitasking performance with cold insulation protection
Steel Midsole	<ul style="list-style-type: none"> • One piece stainless steel penetration and flexing test requirements • Withstands pin & sharp objects • Combination of rubber and felt material midsole that exceeds the minimum requirements for heat and cold absorption, which also give extra comfort to the use
Outsole	Shall be of tractor-thread type.
Steel Toe Cap	<ul style="list-style-type: none"> • Meets EN15090 impact and compression tests • Does not slip out of place or cut into sole during impact, protected with sponge cushioned lining • Reliable protection in cold & hot environments
Loops	With two loops made of rubber coated nylon cord for great control, grip and ease in donning the boots.
Height and Weight	Approximate height shall be 350 mm. Average weight is 2.6 kg/pair.
Chemical Resistant	Sole & Upper-Resistant towards mild acids and alkaline.
Finishing	Hypalon lacquer coating for weather protection.
Colors	Black in color with yellow stripes on toe caps, shin, midsole and top for high visibility.