

PROTECTIVE FOOTWEAR RANGE

Goliath footwear

Welcome to the 2017 / 2018 Goliath Footwear catalogue. This range features both heavy industrial and high performance footwear for the emergency services, and brings together nearly 140 years of boot making expertise with technology partners such as GORE-TEX[®], D3O and Tencate to produce the most protective, durable and comfortable footwear solutions for workforces around the World.

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Did you know?









SUPERIOR SOLE TECHNOLOGY



Choosing a Dual Density Injected Sole construction means you have a special application, for a job role that demands long lasting high abrasion resistance performance, flexibility and comfort. The injection method that squeezes the rubber material at high pressure into the sole mould at two different densities produces a permanent high strength bond between the upper and sole as the two parts are combined.

This sole construction is suitable for fire fighting, public order, metal processing, and other specialist industrial applications that share the theme of danger or extreme environments day to day.

Protective midsole Air injected midsole — Upper/sole high bond strength High abrasion resistance Shelf life of 10 years

Specialised Rubber Compounds

YDS produces many different rubber compounds mixed with chemicals to produce the best performance for the application. The material has a heat resistance of 300°C and benefits from having a long shelf life. There are different formulas for improved slip resistance, weight, flexibility and use at different global temperatures. The rubber is formed into long strands and injected into the sole mould using the latest DESMA technology robots

Midsole

The midsole is a lower density rubber compound that has been injected with air bubbles. This material provides flexibility and shock absorption not found in direct vulcanized rubber soles. These properties increase ground contact for better slip resistance, stability and also provides cold and heat insulation improving the overall performance of the footwear for high risk applications.



High density compact rubber outsole

Resists 300°C

SRC rated slip resistance

Sole nattern tailored for each specialist application

Outsole

The outer part of the sole unit is high density compact rubber material with high abrasion resistance, protecting from nicks and cuts and durable properties lasting longer than PU alternatives. It passes the European standards most advanced slip resistance test and is rated SRC. With a heat resistance of 300 degrees throughout the sole, it is suitable for heavy industrial environments.

TECHNOLOGY PARTNERS

PUR SOLE TECHNOLOGY

NDS

This direct injected sole choice allows for even greater flexibility and comfort from the instant they are used. Designed for lower risk lighter work roles PUR soles give the wearer superb comfort and lightness with a high grip outsole. This sole choice is suitable for those patrolling or inspecting over long distances and who need a heat resistant and high grip outsole.

GORE-TEX[®] FABRICS

GORE·TEX[®] PERFORMANCE COMFORT FOOTWEAR

Dry & Comfortable

GORE-TEX[®] Performance Comfort Footwear is designed for a wide range of outdoor activities. All the materials used, from the sole to the shaft, are selected with the greatest of care and combined in a perfectly-fitting shoe. **GORE-TEX**[°] Performance Comfort Footwear is not only durably waterproof and breathable, it is also robust and hardwearing, giving you maximum protection and comfort no matter how long and demanding the work.



insoles for optimum comfort

Compatible with technically advanced

Rubber outsole for high grip and abrasion resistance

PU midsole for flexible and light comfort

Materials

This sole construction uses a high grade Hydrolysis+ PU compound designed to withstand the effects of hydrolysis breakdown which can occur in PU soles. The rubber compound used for the outsole is mixed in house and is formed into an outer skin ready to be combined with the midsole layer.

Rubber outsole for high abrasion

resistance, high

grip (SRC rated)and

300 degrees heat resistance

Midsole

The midsole is a soft PU compound. This material provides flexibility and shock absorption and is lighter in weight. These properties increase ground contact for better slip resistance and stability.

Outsole

The outer part of the sole unit is high density compact rubber material with high abrasion resistance, protecting from nicks and cuts and durable properties lasting longer than PU alternatives. It passes the European standards most advanced slip resistance test and is rated SRC. With heat resistance of 300 degrees, it is suitable for broad environments.

GORE-TEX" Footwear has to withstand up to 300,000 flexes (300 km/80 h) in ankle high water - no water entry allowed into the footwear from the outside. This is much stricter than EN ISO 20345/347, which requires:

- 1. 1,000 Flexes / 15 Minutes (Trough Test) and
- 2. 4,800 Flexes / 80 Minutes (DynamicTest) while 3cm2 water entry is allowed.

showing any leakage. Boots are filled with water and then spun at high speed. The huge centrifugal pressure will force the water out of the shoe or boot if there is any weakness or faults in the waterproof construction. Continual production: 2% of the daily production or three pairs of shoes per hour must be tested for 30 minutes. Prototype testing is for 60

minutes.



RAIN/SNOW

OUTER/UPPER MATERIAL PROTECTIVE KNIT **GORE-TEX® MEMBRANE** FUNCTIONAL NON WOVEN

GORE-TEX° Footwear has to withstand 240 turns/min in the centrifuge without GORE-TEX" Footwear has to achieve a certain climate comfort value depending on the specific product class.

The Whole Boot Comfort Test measures the breathablity of the whole boot. The effect of a 'sweating' artificial foot in the boot is simulated in a temperature controlled microclimate. The final climate comfort value of the tested GORE-TEX[®] footwear is determined based on the degree of water vapour diffusion and water vapour absorption of the boot.

CROSSTECH[®]

CROSSTECH® Footwear Laminate

Meeting the Demands of Rescue and Recovery

If the risk assessment of the operating environment addresses the need for durable protection against blood and body fluids, CROSSTECH® Laminates provide the solution. CROSSTECH® Laminates are the most durable blood and body fluid penetration resistant and breathable moisture barrier.

- Superior liquid penetration resistance
- Easy to care for
- Prevents perspiration build-up
- Breathable comfort

Protective leather boots made with CROSSTECH® fabric give firefighters safer mobility and better agility than heavy rubber boots. CROSSTECH[®] footwear fabric offers superior liquid penetration and thermal protection, while reducing moisture condensation for drier, more comfortable feet.







IMPACT PROTECTION

The Goliath Force boot has a revolutionary metatarsal protector using material called D30[®]. D30[®] is engineered using intelligent molecules that flow with you whilst you work providing a flexible and comfortable metatarsal guard. If energy is applied in the form of a falling object impacting with the metatarsal guard, then the molecules lock together to absorb the impact energy. This makes the footwear far more comfortable to wear than conventional metatarsal guards and also means you can bend down in the footwear without the guard cutting into your foot.

TRANSMITTED FORCE

HOW D30 MOLECULES WORK?







LOCKS ON SHOCK

RETURNS TO FLEXIBLE STATE









TENCATE TENCATE

materials that make a difference

TenCate Advance[™] offers a proven performance outer shell fabric now being used for Firefighter footwear. Its special construction, engineered from a blend of DuPont[™] KEVLAR[®] and NOMEX[®] brand fibres, provides high strength, durability and thermal protection.

- Outstanding thermal protection Exceptional thermal integrity allows the use of lightweight liners for added comfort, flexibility and performance without compromising thermal protection.
- Proven durability Built-in protection of fibre blend and rip-stop weave provides strength and flexibility even after extreme thermal exposure.
- Long-lasting dependability Proven track record in the field.
- Highly affordable Hardworking outer shell at a great price.



Tex Protection is a flexible nail proof midsole designed for increased comfort and safety

Safer than Steel

- Resists penetration even by small diameter nails
- Greater protected surface area of the foot
- Zero traceability
- Maximum flexibility and comfort
- Greater ground adherence
- Minimum weight
- Thermo and electro isolation



HIGH PERFORMANCE FOOTBED

Goliath Footwear inserts a contoured triple laver footbed into their emergency services footwear to provide extra cushioning, shock absorption and to draw moisture away from the foot.

The top blue layer has 100% polyamide fibres and is highly abrasion resistant both wet and dry.Middle layer black PU air permeable foam with open cell construction. It is of high density for good cushioning support. Base layer: Flat bottom layer which include 30% viscose, giving extra moisture absorption and desorption properties to the footbed. Removable and washable at 30°C.



BOOTS THAT WORK SINCE 1880 • WWW.GOLIATH.CO.UK



EROUNDMASTERS

Reliable, abrasion resistant footwear for heavy industrial use









SRC



- Full grain S3 water resistant cow leather
- Moisture wicking, abrasion resistant textile

5

- Steel toe cap resistant to 200 joules.
- Steel midsole
- Open cell Dual Density PU footbed
- Dual Density injected rubber sole
- High density fibre board for superior ankle support
- Ridged bump cap for extra durability
- Heat resistant sole to 300°C
- UK 5 13 inc. 6.5 and 10.5 / Continental 38 - 48
- 900 gr.







ENIS020345:2011 S3 HI CI HRO SRC

- Full grain S3 water resistant cow leather
- Moisture wicking, abrasion resistant textile
- Steel toe cap resistant to 200 joules.
- Steel midsole
- Dual Density PU footbed
- Dual Density injected rubber sole
- High density fibre board for superior ankle support
- Ridged bump cap for extra durability
- Quick release side zip feature
- Heat resistant sole to 300°C
- UK 3 13 inc. 6.5 and 10.5 /
- Continental 36 48 • 890 gr.





GENERAL INDUSTRIAL

A range for all trades, factories, warehousing, logistics, manufacturing and general industrial use

The second

5













COLOUR BLACK

• Quick release YKK side zip Lightweight aluminium toe cap

uppers

Tex penetration resistant textile

• Full grain water resistant leather

Dual density injected PU/Rubber sole

- Abrasion resistant breathable textile
- lining
- UK 3 13 / Continental 36 48

- ENIS020345:2011 S3 SRA
- Full grain leather
- Moisture wicking textile
- Steel toe cap resistant to 200 joules.
- Steel midsole • Dual Density PU footbed
- Injected PU/PU sole
- UK 3 13 inc. 6.5 and 10.5 /
- Continental 36 48
- 760 gr.

EN ISO 20345:2011 S3 HRO CI HI SRC

SPECIAL HAZARD

Application led footwear solutions

FOUNDRY WELDING / FABRICATION **METATARSAL FOOTWEAR** CHEMICAL RESISTANT FOOTWEAR **CUT RESISTANT FOOTWEAR**

*









Cut Resistance

Cut Resistance: Clause in ENISO 20345. CUT RESISTANCE (6.3.3.3) requires a cut resistance index >2.5. The Goliath cut resistant boot achieved a mean result of 9.49

Puncture resistance tested to clause 6.4 of EN 388:1994 (PUNCTURE RESISTANCE) The specification requirements for Level 4 is a Min peak force of 150N. Goliath cut resistant material achieved a Min value of 430.5 performance level 4

Test lab - Results of splash test on upper material

Chemical	Concentration	Visual assessment after 2 hour exposure	Visual assessment after 24 hour exposure	
Brine (sodium chloride)	300g/l	No change	No change	
Ferric Chloride	40%	No change	No change	
Hydrochloric acid	20%	Loss of gloss to finish Loss of gloss to finish. Slight degradation of su		
Hydrochloric acid	30%	Loss of gloss to finish Loss of gloss to finish. Splitting around the edge of the sample		
Hydrochloric acid	36%	Loss of gloss to finish. Discolouration of sample to navy blue colour	Loss of gloss to finish. Splitting around the edge of the sample	
Sulphuric acid	20%	No change	No change	
Sulphuric acid	30%	No change	Loss of gloss to finish. Discolouration of sample to navy blue colour	
Sulphuric acid	98%	Degradation of finish. Discolouration to navy blue	Partially dissolved the sample, discolouration to pink	
Sodium Hydroxide	10%	No change	Slight discolouration of sample to blue	
Sodium Hydroxide	20%	No change	Slight discolouration of sample to blue	
Sodium Hydroxide	30%	No change	Slight discolouration of sample to blue	
Sodium Hydroxide	47%	No change	Slight loss of gloss to finish	
Sodium Hypochlorite	30%	No change	Moderate bleaching of sample, no damage	
Nitric acid	69%	Degradation of finish and substrate	Severe degradation of finish and substrate, splitting at edges of sample. Brown discolouration of the sample	

CUT RESISTANT BOOT ENISO2O345:2011 S3 CR CI HI HRO SRC DDR PRODUCT CODE Full grain cow leather SDR10CSI-GB Full cut resistant lining to protect from sharp objects SRC COLOUR BLACK Steel toe cap resistant to 200 joules. Steel midsole Open cell Dual Density PU footbed Injected Dual Density rubber sole • Ridged bump cap for extra durability Heat resistant sole to 300°C UK 5 - 13 inc. 6.5 and 10.5 / Continental 38 - 48 • 890 gr. **V** GLASS PROCESSING

ENISO20345:2011 S3 SRA

- Chemical resistant upper
- Moisture wicking textile lining
- Steel toe cap resistant to 200 joules.

7

- Steel midsole
- Open cell Dual Density PU footbed
- Injected Dual Density PU sole
- Back seam taped to prevent ingress of liquid
- UK 3 13 / Continental 36 48
- 670 gr.

🛜 CHEMICAL PLANT

STANDARDS TESTING

CE

CE Mark

Goliath Safety Footwear has been tested by **SATRA** Technology centre to the Directive for Personal Protective Equipment (PPE) Directive No.89/686/EEC and carries the CE mark accordingly.

Goliath Footwear is accredited as follows;

- EN ISO 9001:2008 Quality Management Systems
- EN ISO 14001: 2004 Environmental Management Systems
- TS18001:2008 Occupational Health and Safety Management Systems.

Guarantee of Quality

All our Safety footwear is manufactured to EN specifications as indicated and fully complies with the appropriate standard and the statutory requirements where applicable. However, we do reserve the right to amend design and material specifications, where necessary.

A member of BSIF

Goliath Footwear is a member of the British Safety Industry Federation which is the lead association for PPE regulations in the UK. The federation is recognised as a competent authority by the Health and Safety Executive

Goliath footwear test all our footwear to the latest European safety standards using Goliath Footwear's SATRA accredited laboratory facilities and SATRA's independent technology centre. We continue to test our products to ensure consistent quality so that our footwear is right for the job straight out of the box.

We test for the following properties:

- Construction quality
- Toe protection to 200 joules
- Toe cap length
- Impact resistance
- Compression resistance
- Energy absorption of seat region
- Upper/outsole bond strength
- Electrical resistance
- Antistatic properties

We test the footwear upper for:

- Tear strength
- Tensile strength
- Water absorption & penetration
- Water vapour permeability and coefficient
- pH value
- Lining abrasion resistance & pH
- Insole thickness
- Insole water absorption & desorption
- Insole abrasion resistance.

We test the footwear outsole for:

- Cleated area
- Thickness
- Cleat height
- Tear strength
- Abrasion resistance
- Flexing resistance
- Outsole/interlayer bond strength
- Resistance to fuel-oil
- Slip resistance
- Hydrolysis

DDR

ROSSTECH

TALOS

PRODUCT CODE

NFSR1116 TALOS

NFSR1116 EXTR

BLACK

630

EN ISO 15090:2012 F2A HI3 P T CI AN SRC AS/NZ 4821:2006

EN ISO 20345:2011 S3 CI HI HRO WR SRCC

- Flame retardant hydrophobic, water resistant, breathable full grain cow hide leather (2.5 - 2.7mm)
- Dual density rubber injected sole technology. Flame resistant rubber compound.
- CROSSTECH[®] seam sealed membrane based on ePTFE. 100% waterproof and breathable to keep the wearer dry and comfortable at all times. Provides liquid penetration resistance against blood and body fluids and common chemical resistance.
- YKK quick release front zip
- Flex areas
- Cut resistant area
- Steel toe cap
- Tex penetration resistant textile.
- UK 2 15 / Continental 35 50

FIRE

POSEIDON

PRODUCT CODE FB300GTX Poseidon FB300GTX EXTR

OLOUR

EN ISO 15090:2012 F2A HI3 P T CI AN SRC AS/NZ 4821:2006

EN ISO 20345:2011 S3 CI HI CR HRO WR SRC

- Flame retardant hydrophobic, water resistant, breathable full grain cow hide leather (2.5 - 2.7mm)
- Dual density rubber injected sole technology. Flame resistant rubber compound.
- GORE-TEX[®] Performance Comfort Footwear
- Steel toe cap
- Flex areas
- Cut resistant area
- Steel midsole
- UK 2 15 / Continental 35 50

US

EN ISO 15090:2012 F2A HI3 P T CI AN SRC AS/NZ 4821:2006

EN ISO 20345:2011 S3 CI HI HRO WR SRC

- Flame retardant hydrophobic, water resistant, breathable full grain cow hide leather (2.5 - 2.7mm)
- Dual density rubber injected sole technology. Flame resistant rubber compound.
- GORE-TEX[®] Performance Comfort Footwear
- Quick release side YKK zip
- Flex areas
- Cut resistant areaSteel midsole
- UK 3 13 / Continental 36 48

BLACK

PRODUCT CODE F2AR1352

> COLOUR BLACK

MARKATE

EN ISO 15090:2012 F2A HI3 P T CI AN SRC AS/NZ 4821:2006

EN ISO 20345:2011 S3 CI HI HRO SRC

- Flame retardant hydrophobic, water resistant, breathable full grain cow hide leather (2.5 2.7mm)
- Dual density rubber injected sole technology. Flame resistant rubber compound.
- TenCate Flame retardant, water resistant, lightweight and breathable textile panels
- Polyester 65% coolmax 35% drawing moisture away to keep cool.
- Aluminium toe cap
- Tex protective midsole
- UK 3 13 / Continental 36 48

DDR

TEX

leather (2.5mm - 2.7mm) Fire retardant laces and stitching Downwards facing seams for SRC

- petrol run off 35mm cut resistant strip above the sole and across the front of the boot
- Steel toe cap
- Ankle protector
- Tex penetration resistant textile . Highly breathable sweat and absorbent and abrasion resistant knitted fabric lining to keep the
- wearer dry and comfortable at all times.
- UK 3 15 / Continental 36 50

FUBLIC ORDER

PRODUCT CODE HPAM1300

BLACK

TEX

ISSTECH" n o MTI

EN ISO 20345:2011 S3 HRO CI HI SRC

- Full grain water resistant leather
- Quick release YKK side zip
- Lightweight aluminium toe cap
- Tex protection resistant textile
- Dual density injected PU / Rubber
- Abrasion resistant breathable textile lining
- UK 3 13 / Continental 36 48

ENISO20345:2011 S1 P SRA

- Suede and textile
- Moisture wicking textile lining
- Steel toe cap resistant to 200 joules
- Steel midsole
- Open cell Dual Density PU footbed
- Injected PU/PU sole
- Quick release elastic lace and toggles for rapid release if trapped
- UK 7 13 / Continental 41 48
- 670 gr.

SAFETY & PROTECTIVE FOOTWEAR

This type of footwear protects the wearer's toes against risk of injury from falling objects and crushing when worn in work environments where potential hazards occur.

Safety footwear can be recognised by the safety standards:

EN ISO 20345:2011 - Safety Footwear EN ISO 15090:2012 - Footwear for Firefighters AS/NZS4821:2006 - Australian Standard Protective Footwear for Firefighters

Details of full standard available on request.

The classification system used to identify the protection provided by the footwear is listed below:

Type Classification	Type Classification Description
SB	EN ISO 20345:2011 Safety Footwear. Toe protection 200 Joules, Compression resistance, 15000 Newtons.
51	EN ISO 20345:2011 Safety Footwear. Toe protection 200 Joules, Compression resistance, 15000 Newtons. Closed seat region (fully enclosed heel), antistatic properties and energy absorption of seat region.
52	EN ISO 20345:2011 Safety Footwear. Toe protection 200 Joules, Compression resistance, 15000 Newtons. Closed seat region (fully enclosed heel), antistatic properties, energy absorption of seat region, water penetration and water absorption resistance.
53	EN ISO 20345:2011 Safety Footwear. Toe protection 200 Joules, Compression resistance, 15000 Newtons. Closed seat region (fully enclosed heel), antistatic properties, energy absorption of seat region, water penetration and water absorption resistance, penetration resistance and cleated outsole.
PB	EN ISO 20346:2011 Protective Footwear. Toe protection 100 Joules, Compression resistance, 10000 Newtons.
P1	EN ISO 20346:2011 Protective Footwear. Toe protection 100 Joules, Compression resistance, 10000 Newtons. Closed seat region (fully enclosed heel), antistatic properties and energy absorption of seat region.
P2	EN ISO 20346:2011 Protective Footwear. Toe protection 100 Joules, Compression resistance, 10000 Newtons. Closed seat region (fully enclosed heel), antistatic properties, energy absorption of seat region, water penetration and water absorption resistance.
РЗ	EN ISO 20346:2011 Protective Footwear. Toe protection 100 Joules, Compression resistance, 10000 Newtons. Closed seat region (fully enclosed heel), Antistatic properties, energy absorption of seat region, water penetration and water absorption resistance, and penetration resistance.
GOLIATH	FOOTWEAR

SIZE CONVERSION

UK	2	3	4	5	6	6.5	7	8	9	10	10.5	11	12	13	14
USA	4	4.5	5	6	7	7.5	8	9	10	11	11.5	12	13	14	15
EUROPE	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49

Please note that there is no real standard for converting shoes.

Your best option is to always have your foot measured at a local distributor or select from the two closest sizes to your estimated size.

INTERNATIONAL STANDARDS EXPLAINED

The following table shows the European standards versus other standards in the USA and Canada.

	EUROPE	USA	CANADA
STANDARD	EN ISO 20347:2012	ASTM F2412-05 & ASTMF2413 - 05	C SA Z195:02
TOE CAP IMPACT RESISTANCE	200 joules	101 joules	125 joules
TOE CAP COMPRESSION	15,000 Newton of compression force	11,121 Newton of Compression Force	NO test
PENETRATION RESISTANCE	Minimum force 1100 N	Minimum force is 1200 N	Minimum force is 1200 N
	CE	ANS	SP

Slip Resistance

-					
	Marking symbols and specifications				
Marking	Footwear slip	Minimum Coeffic 1328	ficient of Friction by EN ISO 3287:2007		
	resistant on:	Forward heel slip	Forward fat slip		
SRA	ceramic tile with SLS ¹	0.28	0.32		
SRB	steel with glycerol	0.13*	0.18 [*]		
	ceramic tile with SLS ¹	0.28	0.32		
JRU	and steel with glycerol	0.13*	0.18*		
* lower requirements are permitted to the end of 2008: heel 0.12 and flat 0.16 ¹ water with 0.5% sodium lauryl sulphate					

Additional Property Code	Additional Property Code Description
AN	Ankle Protection
CR	Cut Resistance
WR	Water Resistance

Conductive: When measured in accordance with EN ISO 20344:2011, 5.10, after conditioning in a dry atmosphere (EN ISO 20344:2011, 5.10.3.3a)), the electrical resistance shall not be

Antistatic: When measured in accordance with EN ISO 20344:2011, 5.10, after conditioning in a dry and wet atmosphere (EN ISO 20344:2011, 5.10.3.3a) and b)), the electrical resistance

Cold Insulation of the Sole Complex: 30 minutes at -17°C, change in temperature up to 10°C

Heat Insulation of the Sole Complex: 30 minutes at 150°C, change in temperature up to 22°C

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