HECKEL

EQUIPEMENT POUR L´EXTREME

2011

SAFETY FOOTWEAR // EQUIPEMENT POUR L' EXTREME /

Heckel Sécurité based in La Walck, France, has been one of the world leaders in the manufacture of safety footwear since 1970. The company's specialised expertise lie in processing rubber for use in new sole technologies with cutting-edge methods. When tough demands are placed on the materials and the user, the quality of our products will withstand the most extreme conditions.

SUMMARY

HECKEL

EQUIPEMENT POUR L´EXTREME

EQUIPEMENT POUR L‘EXTREME

It’s for this reason that our R&D activities are continuous – to identify new and innovative rubber sole technologies which will satisfy these high standards.

We are part of the uvex group and manufacture and sell personal protective equipment (PPE) for extreme applications worldwide under the Heckel brand. First and foremost for:

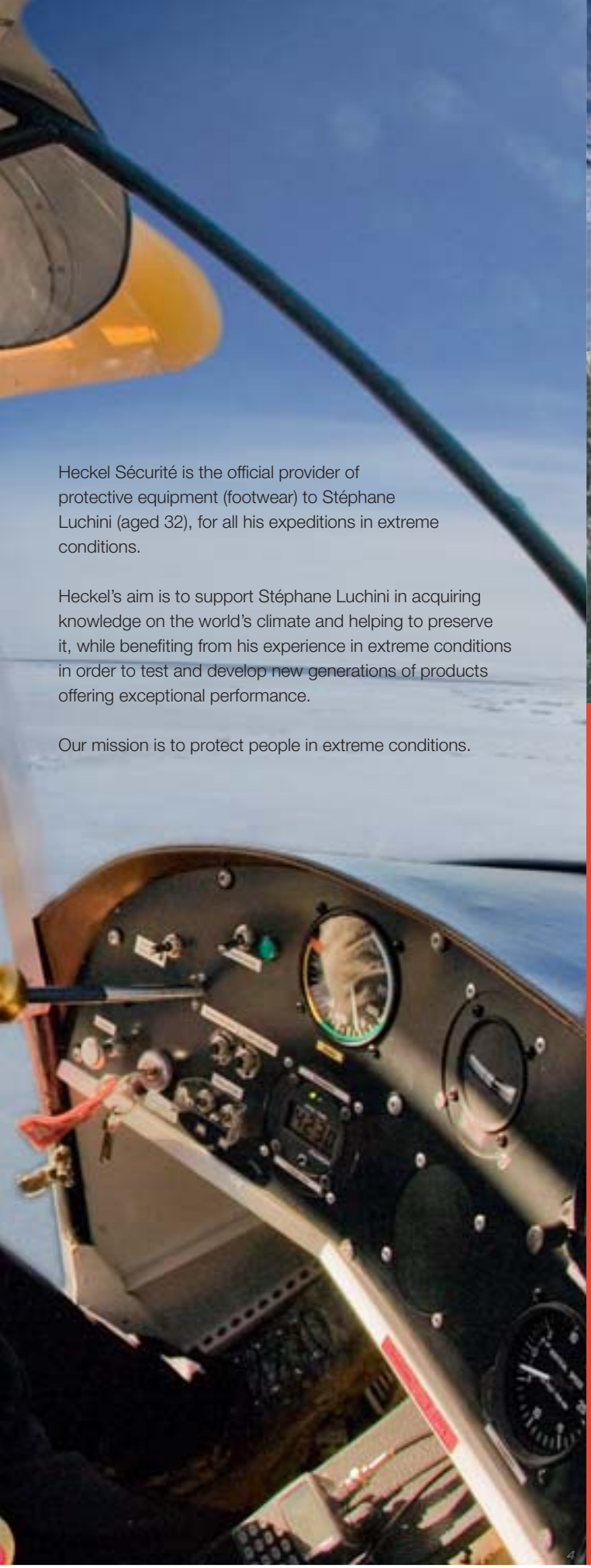
- Heavy industry,
- Light industry,
- Building and construction

Our brand strategy for the Heckel range confirms our intention to achieve market leadership in personal protective equipment for extreme applications.

The logo colour is black, symbolising the high degree of expertise we have in the manufacture of rubber soles and the performance of our products in consistently preventing injury in dangerous situations.

Our decision to use dynamic orange and red colours, signals that we take it as our responsibility, to create product solutions for extreme situations, to continue the brand development, to consistently improve current products and to develop new ones.

STEPHANE LUCHINI – SPECIALIST IN EXTREME CONDITIONS AND A CHAMPION OF THE PLANET



Heckel Sécurité is the official provider of protective equipment (footwear) to Stéphane Luchini (aged 32), for all his expeditions in extreme conditions.

Heckel's aim is to support Stéphane Luchini in acquiring knowledge on the world's climate and helping to preserve it, while benefiting from his experience in extreme conditions in order to test and develop new generations of products offering exceptional performance.

Our mission is to protect people in extreme conditions.

2010
- Air operations director on the Générali Arctic Observer expedition led by Jean-Louis Etienne in Spitzberg and Siberia.
- Piloted fire-fighting aircraft Bell 212 and AS350 B3 in Sofia Antipolis (South of France)

2009
- Served as pilot in Antarctica for the Paul Emile Victor Polar Institute on AS350 B3
- Served as pilot for mountain work on LAMA in the Pyrenees

2007 - 2008 Piloted airship for Jean-Louis Etienne expedition
- Piloted twin-engine AU30 airship, 55 m long, 19 m high
- Polar expedition, departed Paris, across Europe, the Barents Sea, the North Pole, Alaska

1998 - 2007 Served as pilot on 1st helicopter manoeuvre squadron for the French Army in Pau.
- Squadron pilot on SA 330 Puma.
- Night vision binocular flights, IFR, night VFR, mountain flying, paragliding, tactical flights, GIGN missions.
- Operations pilot for 7 overseas operations (the former Yugoslavia, Kosovo, the Ivory Coast, Chad, Darfur).
- Operation "Enduring freedom" on aircraft carrier Charles de Gaulle. Pakistan, Oman, Abu Dhabi, Dubai.

HECKEL MANUFACTURING AND TECHNOLOGICAL EXPERTISE

Heckel Sécurité has over 35 years of experience in manufacturing top-quality safety shoes.

Heckel Sécurité stands for both – innovation and tradition, and produces its state-of-the-art products in Italy and with partners around the world.

At our production sites, we combine cutting-edge technology with our trademark innovation and years of experience.

RESEARCH AND DEVELOPMENT

Working closely with scientific institutes, our innovation process focuses on thoroughly researching new types of rubber.

Heckel Sécurité has its own R&D lab where we run continuous performance tests on new solutions which our research teams have developed.

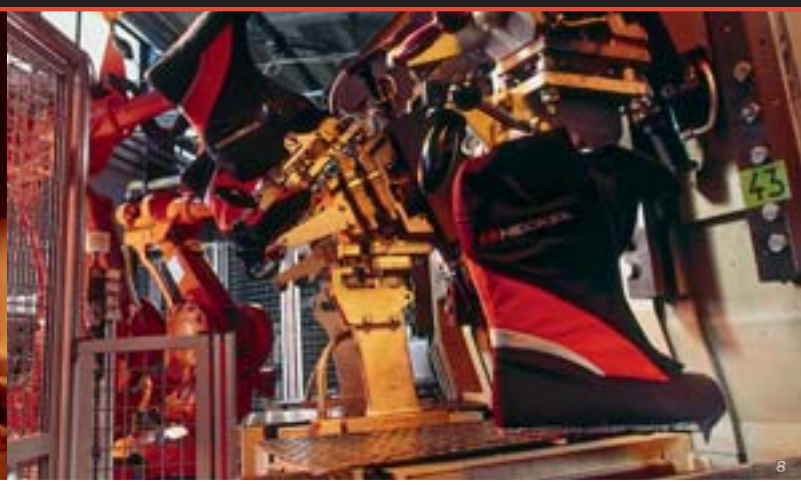
Our clients can also conduct comparative testing in our lab so they can see for themselves that our technology is not only top quality, it's also the best on the market.

MANUFACTURING PROCESS

The italian production site is devoted to manufacturing our revolutionary technology MACsole®.

We have the only production line in the world which can inject double-density rubber – combining comfort and light weight with rubber's remarkable properties, such as grip and resistance to extreme temperatures and harsh substances. Our primary mission is to guarantee faultless quality and make use of our expertise to meet goals in terms of costs, deadlines and safety.

With this in mind, we organise our production around the principle of continuous improvement, being the best in our field and developing our areas of expertise further.
Heckel Sécurité SAS is certified in line with ISO 9001 : 2000.



INNOVATION CENTRE

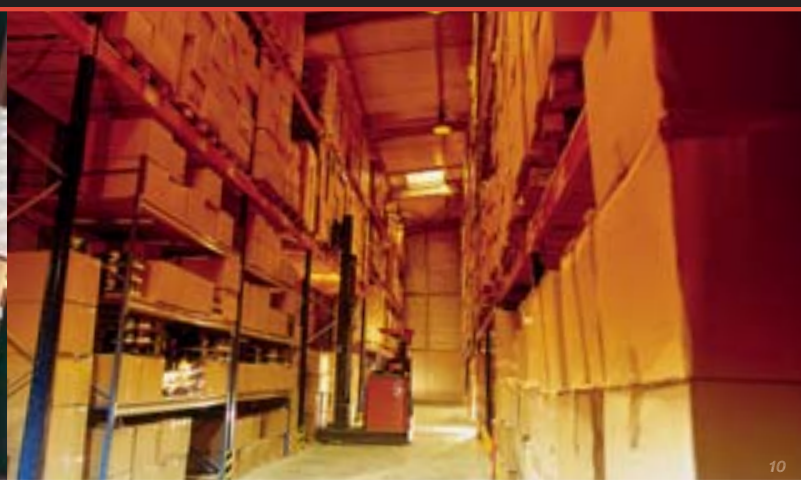
SAFETY

Safety is our mission. Our goal is for our production sites to be the very best.

We have installed a safety management system to make sure we achieve this goal. It covers everything from optimising workplace safety to providing employees with a pleasant working environment to enhance their well-being and health.

LOGISTICS

Logistics is one of our strategic focuses which we are continuously developing so we can continue to satisfy our customers. Our logistics centre supplies more than 50 countries around the world. With a surface area of 1,700 m², which amounts to 700 pallet spaces and 3,800 products available for picking, we handle 500 orders every day and a total volume of more than 6,000 items.



THE RUBBER TECHNOLOGY
MACsole®

Back in 1839, Goodyear were the first to vulcanise rubber. Since then, rubber has been a veritable success story around the globe.

Rubber is prized by many for its exceptional properties: grip, durability, elasticity, resistance to abrasion, and resistance to extreme temperatures and harsh substances.

Building on its many years of experience, Heckel Sécurité has developed revolutionary new types of rubber as part of the MACsole® brand.

GRIP

Our exclusive MACsole® rubber formula offers unrivalled grip, far exceeding the requirements of EN 13287.

MACsole® EXTREM

Heavy industry, chemical industry, outdoor work: wherever risks are high, environments harsh or conditions extreme, MACsole® EXTREM is the best-performing solution. Thanks to their MACsole® double-density rubber sole technology, all models cope with any risk without compromising on comfort. Exceptional grip, resistance to extreme temperatures ranging from -50 °C to +400 °C, resistance to aggressive chemicals and shock protection come as standard.

MACsole® ADVENTURE

The MACsole® ADVENTURE range of completely metal-free products is ideally suited to people who work outdoors, craftspeople or anyone looking for an authentic outdoor design. Its deep treads, reinforced sides and stable ankle support system make the range ideal for work in difficult conditions. MACsole® ADVENTURE products are worn by the professional rally teams sponsored by Heckel.

SOLE

EXTRAORDINARY TECHNOLOGICAL FEATURES

The tyres on a car are essential for its safety and performance. The MACsole® sole is made of a unique and exclusive 100 % rubber compound – a result of constant research in our R&D laboratory – and offers qualities of unrivalled grip, safety and longevity.

THERMAL INSULATION

The exceptional resistance of the rubber to extreme temperatures is down to exclusive Aspen Aerogels™ technology (see page 11), which guarantees unrivalled thermal insulation against both heat (burns to the sole of the foot) and cold.

SHOCK ABSORPTION

The unique and exclusive rubber material used to make each MACsole® style provides very high shock absorption qualities. The natural elastic properties of rubber ensure long-lasting shock absorption. MACsole® footwear helps to reduce the risk of accidents by reducing fatigue caused by prolonged walking or standing.

MACsole® SPORT

The MACsole® SPORT range is intended for all those working in light industry, automobile industry and service industries. Outstanding grip, extremely lightweight (one shoe weighs less than 550 g) and with excellent breathability. The design and engineering teams have been driven by these key concepts during the development of the MACsole® SPORT range.

MACsole® PLUS

Due to the MACsole® rubber technology, the MACsole® PLUS range features multiple ranges of application and extreme durability; allterrain sole profile, outstanding grip and resistance to heat, cold and abrasion. Technical performance, the various comfort features and price make the MACsole® PLUS range highly competitive.

100% METAL-FREE.
100% COMFORT AND SAFETY.

POLYCAP TOECAPS

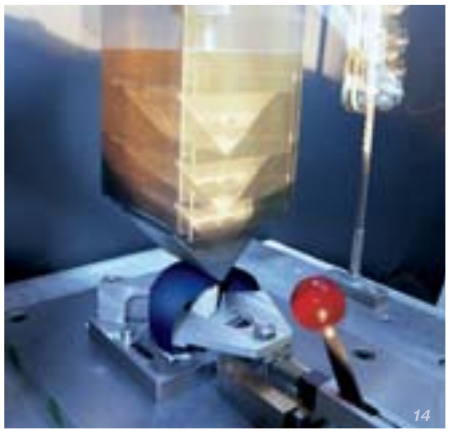
The POLYCAP (200 joules) toecap is 100 % non-magnetic and represents a real technological revolution. The toecap has an ergonomic shape, offering complete comfort and optimum safety. Its composition, unlike the traditional steel toecap, avoids the penetration and rapid build-up of cold and heat. The extra-wide toecap is more spacious and is therefore better suited to wider feet. In addition, the toecap is far lighter than the traditional steel toecap, allowing the user to work in optimum comfort and safety.

Equipped ranges:

MACsole® EXTREM
MACsole® PLUS
MACsole® ADVENTURE
FLAG Polycap
MACsole® SPORT
Some models in the FOCUS range.

IMPACT RESISTANCE

POLYCAP toecaps significantly improve the wearer's safety compared to conventional steel toecaps. In fact, they offer better resistance.
The majority of toecaps on the market (steel, aluminium) can not offer this degree of stability.

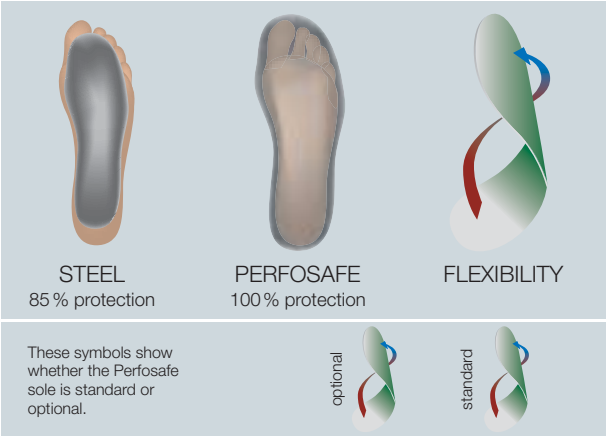


LIGHTNESS

POLYCAP toe caps provide the wearer with an extra-wide fit and half the weight of a conventional steel toecap. The wearer can work with optimum lightweight comfort.

100% METAL FREE

9 POWERFUL ARGUMENTS FOR THE POLYCAP	Polycap	Aluminium	Steel
Non-magnetic	✔	✔	✘
Side stability 1.5 t	✔	✔	✔
Residual height after 200-joule drop test ≥ 25,5 mm	✔	✘	✘
Recovery after drop test (lower risk of injury, shoe can be removed)	✔	✘	✘
Thermal insulation	✔	✘	✘
Electrical insulation	✔	✘	✘
Non-rusting	✔	✔	✘
Orthopaedic moulding	✔	✘	✘
Weight ≤ 74 g	✔	✔	✘



PERFOSAFE SOLES

Derived from bullet-proof jacket technology, the exclusive PERFOSAFE anti-perforation sole obtained by ceramising plasmatreated HT fibre fabric:

- offers penetration resistance up to 1,500 Newton compared to 1,100 Newton for steel soles;
- protects 100 % of the sole of the foot compared to 85 % with steel soles;
- offers good flexibility and considerably improves wearing comfort;
- ensures no transmission of cold or heat;
- is 100 % non-magnetic

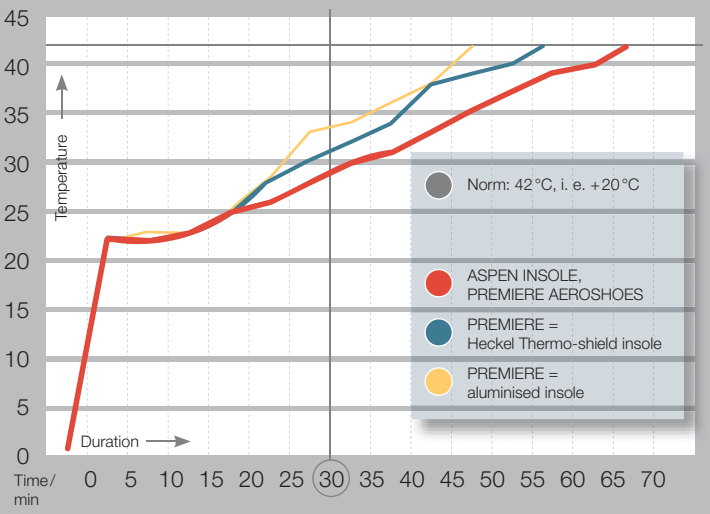
HIGH-PERFORMANCE THERMAL INSULATION

COLD WORKING SURFACES

HOT WORKING SURFACES

An aerogel is a solid structure composed of 90 % air. Aspen Aerogels™ is an insulating material with the lowest level of heat conductivity in the world. It is two to eight times more effective than traditional insulating materials.
This high-quality heat insulation solution is shock-resistant, water-repellent and resistant to the most extreme temperatures, enabling users to remain on extremely hot or cold surfaces for longer periods.

Temperature ranges



HI norm test conducted in March 2007

CONCLUSIONS

- Insulates 33 % more effectively than an aluminised insole
- Insulates 64 % more effectively than required by the relevant standard
- Insulates for 117 % longer than required by the relevant standard

aspen aerogels™ CARPENTER

GUARANTEED TO KEEP YOU DRY

WHAT IS A GORE-TEX® MEMBRANE?

GORE-TEX® membranes are microporous and are often used in footwear. These pores are small enough to prevent water droplets from entering the shoe, but large enough to allow the evaporation of water vapour from inside, enabling perspiration to escape.
Waterproof and breathable, GORE-TEX® allows moisture (perspiration) to evaporate, keeping your feet dry and comfortable at all times.
XCR® technology is ideal for both outdoor and indoor wear, offering you superior comfort, even if you have to spend hours on your feet.
In order to guarantee the ideal climate for your foot, each and every component (leather, textiles) is developed from highly breathable materials and is subject to exceptionally strict testing all the way along the production chain – from the prototype right down to the finished product.

MAC sole EXTREM

RUBBER TECHNOLOGY FOR EXTREME APPLICATIONS

18

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MACsole® EXTREM

Heavy industry, chemical industry, outdoor work: wherever risks are high, environments harsh or conditions extreme, **MAC**sole® EXTREM is the best-performing solution. Thanks to their **MAC**sole® double-density rubber sole technology, all models cope with any risk without compromising on comfort. Exceptional grip, resistance to extreme temperatures ranging from -50 °C to +400 °C, resistance to aggressive chemicals and shock protection come as standard.

WORKING IN COLD ENVIRONMENTS

RISKS // SOLUTIONS

Extremely cold weather conditions

Multilayer PU membrane, Aspen Aerogels™ inserts and polar lining for thermal insulation in temperatures as low as approximately –50 °C. Water-resistant, abrasion-resistant protective Cordura gaiters with fleece lining. Heckel thermo-shield insoles with Aspen Aerogels™. Aluminium in the toe and heel for greater insulation.

Water from ice, snow and rain

Liquid-resistant leather exterior and water-resistant gaiter system with waterproof, cold-resistant zip. Adjustable elasticated collar.

Slippery surfaces (ice, snow)

*Highly abrasion-resistant **MAC**sole® EXTREM rubber sole with special rubber blend and improved tread for exceptional grip on ice and snow. Crampons or spikes can also be attached if desired.*

Occupational hazards

POLYCAP plastic toecap and metal-free, penetration-resistant PERFOSAFE midsole. Improved lacing system to increase stability when walking.

Extreme material requirements on the job

*Extremely hard-wearing, abrasion-resistant **MAC**sole® EXTREM rubber sole and highly abrasion-resistant Cordura gaiter system. Sole resistant against oil, acids, alkalis and hydrocarbons. Cold and heat-resistant temperatures ranging from approximately –50 °C to +400 °C.*

MACPOLAR EXTREM

standard

/ Sizes 36–48 // EN ISO 20345:2004 + A1:2007–S3 CI HI HRO SRA

Art. no.: 6269536

RISKS // *SOLUTIONS*

Exposure to cold

Aspen Aerogels™ technology guarantees unrivalled insulation against cold. Derived from space research this revolutionary technology acts like a shield against heat (see page 11).

Exposure to bad weather

MACBALTIC boots are completely made of water and oil-repellent leather, highly supple and full-grain, which slows down the penetration of water, a threefold superiority to conventional leather.

Slippery floors

The MACsole® EXTREM rubber sole with its outstanding grip (see page 8) retains its grip performance down to –50 °C.

MACBALTIC EXTREM

standard

/ Sizes 38–48 // EN ISO 20345:2004 + A1:2007–S3 HRO HI CI SRC

Art. no.: 6269510

MAC sole EXTREM

RUBBER TECHNOLOGY FOR EXTREME APPLICATIONS

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MACsole® EXTREM

Heavy industry, chemical industry, outdoor work: wherever risks are high, environments harsh or conditions extreme, **MAC**sole® EXTREM is the best-performing solution. Thanks to their **MAC**sole® double-density rubber sole technology, all models cope with any risk without compromising on comfort. Exceptional grip, resistance to extreme temperatures ranging from -50 °C to +400 °C, resistance to aggressive chemicals and shock protection come as standard.

STEELWORKS

RISKS // SOLUTIONS

Hot ground, occasional contact

MACsole® resistant to heat on occasional contact > 400 °C (better than the HRO standard).

Hot ground, constant exposure to risk of burns to the soles of the feet

See MACMAGMA EXTREM solution on page 20 and MACRANGER POLYCAP EXTREM solution on page 19.

Excessive perspiration

Aeroshoes® insole protects against perspiration, fungal infections and odour.

MACFOREST EXTREM

optional

/ Sizes 36–48 // EN ISO 20345:2004 + A1:2007–S3 HRO HI SRC

Art. no.: 6269513

MACSILVER EXTREM

optional

/ Sizes 36–48 // EN ISO 20345:2004 + A1:2007–S3 HRO HI CI SRC

Art. no.: 6269500

FOUNDRY WORKS

RISKS // SOLUTIONS

Flying sparks of molten metal

- *Anti-sparks tongue for **MAC**RANGER POLYCAP*
- *No visible metal parts (eliminates any risk of burns)*
- *Self-extinguishing NOMEX® thread for enhanced durability*
- *Quick-Out system to enable the foot to be withdrawn from the shoe in less than 2 seconds*

Hot ground, occasional exposure to risk of burns to the soles of the feet

***MAC**sole® resistant to heat on occasional contact > 400 °C (better than the HRO standard).*

*For the **MAC**RANGER POLYCAP:*
Exclusive Aspen Aerogels™ technology (see page 11)
Rise of temperature inside the shoe by 22 °C after 80 minutes in a sand bath at 150 °C.

Magnetic fields

100 % METAL FREE technology (see page 10), non-metal toecap and penetration-resistant insole.

Frequent movements, risk of sprains and slipping

***MAC**sole® for outstanding grip.*

Excessive perspiration

Aeroshoes® insole (see page 61).

*MAC*DERRICK NOMEX EXTREM

optional

/ Sizes 36–48 // EN ISO 20345:2004 + A1:2007–S3 HRO HI SRC

Art. no.: 6269509

*MAC*RANGER POLYCAP EXTREM

standard

/ Sizes 36–48 // EN ISO 20345:2004 + A1:2007–S3 HRO HI CI SRC

Art. no.: 6269514

ASPHALTING, WORKING ON HOT SURFACES

RISKS // *SOLUTIONS*

Risk of burns on the soles of the feet

Exclusive Aspen Aerogels™ technology (see page 11) ground > 150 °C: temperature rises by 22 °C inside the shoe after 80 minutes in a sand bath (2.5 times better than the HI standard).

Cleaning footwear after contact with diesel

The upper is made of a special leather, highly resistant to contact with diesel.

Wear of the front part

The MACMAGMA style is equipped with a toecap covered with DUAL ORIGINAL®.

MACMAGMA EXTREM

/ Sizes 36–48 // EN ISO 20345:2004 + A1:2007–S3 HRO HI CI SRC

Art. no.: 6269521

For other models suitable for work on bituminous mixtures, see the NITEX range page 61.

WELDING

MACWELD 3 EXTREM

/ Sizes 38–48 // EN ISO 20345:2004 + A1:2007–S3 HRO HI CI SRC

Art. no.: 6269512

MACWELD 2 EXTREM

/ Sizes 38–48 // EN ISO 20345:2004 + A1:2007–S3 HRO HI CI SRC

Art. no.: 6269511

RISKS // SOLUTIONS

Risk of flying sparks of fiery particles onto the upper

The uppers are sewn with self-extinguishing NOMEX® thread, and are fit with an anti-sparks tongue and a system which allows the quick unhooking of loops.

Sole in contact with fiery particles

MACsole® EXTREM resistant to heat on occasional contact > 400 °C (better than the HRO standard).

Working in a crouched or kneeling position

MACsole® styles are equipped with a toecap covered with DUAL ORIGINAL®.

For other models suitable for welding work, see the MACsole® PLUS range page 47.

RISKS OF CUTS

RISKS // SOLUTIONS

Risk of cuts on the feet due to sharp objects (broken glass, metal etc.)

MACsole® anti-cut technology (CR standard):
1/ KEVLAR®-lined upper.
2/ perforation resistant steel sole.
3/ POLYCAP toecap (see page 10).

Possible contact with hot surfaces (glass industry)

MACsole® resistant to occasional contact with heat > 400 ºC (better than the HRO standard).

MACCUT STEEL EXTREM

/ Sizes 38–48 // EN ISO 20345:2004 + A1:2007–S3 HRO HI CR SRC

Art. no.: 6269537

METATARSAL PROTECTION

MACCANYON INTEGRAL EXTREM

optional

/ Sizes 38–48 // EN ISO 20345:2004 + A1:2007–S3 HRO M HI SRC

Art. no.: 6269530

MACFOREST INTEGRAL

/ Sizes 38–48 // EN ISO 20345:2004 + A1:2007–S3 HRO M HI SRC

Art. no.: 6269531

RISKS // SOLUTIONS

Risk of objects falling on the metatarsus, risk of cuts from high pressure cleaners (> 1.500 bar cleaning of chemical tanks)

META-POLYCAP technology:
- *Metatarsal protection in accordance to standard EN 20345 cat. M.*
- *Resistant to high pressure cleaners: 3 seconds at 1.500 bar.*
- *Permanently fastened to the shoe (not removable).*
- *POLYCAP toecap (see page 10).*

Harsh environment:
- **Highly abrasive and humid (quarries)**
- **Occurence of chemicals**

Full-grain leather upper and leather tongue gusset, both covered with DUAL ORIGINAL®.
MACsole®: highly resistant to abrasion and chemicals,very good grip.

Risk of burns to the sole of the foot:

The MACFOREST INTEGRAL model is equipped with an insulating Alutherm sole.

CHEMICAL WORKS
PETRO-CHEMICAL
OFF-SHORE

MACDERRICK NOMEX EXTREM

/ Sizes 36–48 // EN ISO 20345:2004 + A1:2007–S3 HRO HI SRC

Art. no.: 6269509

RISKS // SOLUTIONS

Exposure to bad weather, milieu salin working offshore in a saline environment

MACDERRICK and MACLIVERPOOL are completely made of water and oil-repellent leather, highly supple and full-grain, which slows down the penetration of water, a threefold superiority to conventional leather. The MACLIVERPOOL style is made of full-grain oiled leather, highly resistant to water penetration and equipped with a waterproof tongue gusset and anti-corrosion treated metal eyelets.

Exposure to numerous damaging products: oil, hydrocarbons, miscellaneous chemicals

MACsole®: highly resistant to most chemicals.

Risk of hydrolysis of the sole (Offshore, subtropical regions)

MACsole®: in double-density injection-moulded rubber, resists hydrolysis.

Walking on oily floors, high risk of sprains and slipping

MACsole® for outstanding grip (see page 9).

Risk of contact with hot surfaces

MACsole® sole resistant to heat on occasional contact > 400 °C (better than the HRO standard).

MACLIVERPOOL EXTREM

/ Sizes 38–48 // EN ISO 20345:2004 + A1:2007–S3 HRO HI SRC

Art. no.: 6269518

ALLROAD

MACLAND EXTREM

/ Sizes 36–48 // EN ISO 20345:2004 + A1:2007–S3 HRO HI SRC

Art. no.: 6269503

RISKS // SOLOUTIONS

Risk of slipping and sprains, wet grass, wet roads

Damp conditions, work at height, presence of oil (on the ground).
Extremely high-grip MACsole® EXTREM sole (page 8).

Contact with heat

MACsole® EXTREM sole in rubber, resistant to cold and hot wood chips (resistant to occasional contact with heat > 400° C – exceeds HRO standard).

Exposure to liquids

Heel shaft in finest quality, brown, water-repellent, nubuck leather.
Water-tight gusset.

Frequent movements

Supple sole and heel shock absorption system thanks to double-density MACsole® EXTREM sole.

MACRANCH EXTREM

/ Sizes 36–48 // EN ISO 20345:2004 + A1:2007–S3 HRO HI SRC

Art. no.: 6269502

MECHANICAL ENGINEERING INDUSTRIES

OUTDOOR DAMP ENVIRONMENTS, GREEN AREAS

WORKING ON ROUGH GROUNDS

ROOFING, ROOF SEALING WORK

RISKS // SOLUTIONS

Slippery surfaces and risk of sprains, wet grass, wet roads, working at heights, oily surfaces

Extremely high-grip MACsole® EXTREM sole (page 8).

Contact with heat (blowtorching), metal shavings

MACsole® EXTREM rubber sole, resistant to hot and cold metal shavings (heat-resistant for occasional contact with temperatures of up to 400 °C – exceeds the HRO norm).(MACCRISTAL, MACDOCKER, MACSILVER)

Contact with oil/splashes of oil

Finest-quality, water-repellent leather upper and waterproof tongue.
Finest-quality, water and oil-repellent leather upper, slowing water penetration by up to three times in comparison to classic leather, waterproof tongue, minimal number of seams, waterproofed seams on the MACLIVERPOOL.

Constant movement

Sole flexibility and heel shock absorption system thanks to double-density MACsole® EXTREM.

Occasional welding

Leather upper and tongue on the MACSILVER and MACDOCKER.

Working while crouching down or kneeling

Toecaps in DUAL ORIGINAL® on the MACSILVER BR.

Abrasion

Reduced number of seams, toecaps in DUAL ORIGINAL® on the MACSILVER BR and MACDOCKER.

A /

B /

A / MACSILVER EXTREM

/ Sizes 36–48 // EN ISO 20345:2004 + A1:2007–S3 HRO HI CI SRC

Art. no.: 6269500

B / MACSILVER BR EXTREM

standard

/ Sizes 38–48 // EN ISO 20345:2004 + A1:2007–S3 HRO HI SRC

Art. no.: 6269524

MACCRISTAL EXTREM

/ Sizes 36–48 // EN ISO 20345 2004 + A1:2007–S3 HRO HI CI SRC

Art. no.: 6269501

MACDOCKER EXTREM

/ Sizes 36–48 // EN ISO 20345:2004 + A1:2007–S3 HRO HI CI SRC

Art. no.: 6269504

MACLIVERPOOL EXTREM

standard

/ Sizes 38–48 // EN ISO 20345:2004 + A1:2007–S3 HRO HI SRC

Art. no.: 6269518

MAC sole ADVENTURE

THE RUBBER TECHNOLOGY FOR MULTIPURPOSE APPLICATIONS

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30

MACsole® ADVENTURE

The **MAC**sole® ADVENTURE range of completely metal-free products is ideally suited to people who work outdoors, craftspeople or anyone looking for an authentic outdoor design. Its deep treads, reinforced sides and stable ankle support system make the range ideal for work in difficult conditions. **MAC**sole® ADVENTURE products are worn by the professional rally teams sponsored by Heckel.

HUMID OUTDOOR ENVIRONMENTS, GREEN AREAS

RISKS // SOLUTIONS

Exposure to wet weather conditions

Textile upper lined with GORE-TEX® to ensure superior breathability and lasting waterproof characteristics.

Slippery surfaces and risk of sprains: slopes, wet grass, wet roads

*Good grip thanks to **MAC**sole® ADVENTURE rubber sole.*
All-terrain sole with deep treads.
Provides stable support for the ankle.

Rough, uneven ground

Toecaps.
Reinforced heel and sides.

Constant movement

*Very supple **MAC**sole® ADVENTURE sole, combined with the puncture-resistant PERFOSAFE sole.*
Light.
Shock absorption system.

Wearing comfort

POLIYOU: ergonomically shaped PU insole with shock absorption system to protect the heel and the sole of the foot.
Perfectly comfortable POLYCAP toecap.

Required metal-free properties

100 % metal-free technology, with POLYCAP and PERFOSAFE.

MACEXPEDITION LOW

standard

100% METAL FREE

GORE-TEX

/ Sizes 36–48 // EN ISO 20345:2004 + A1:2007 – S3 HRO WR SRC

Art. no.: 6265501

MACEXPEDITION

standard

100% METAL FREE

GORE-TEX

/ Sizes 36–48 // EN ISO 20345:2004 + A1:2007 –S3 HRO WR SRC

Art. no.: 6265500

RISKS // *SOLUTIONS*

Exposure to liquids (oil, water, etc.)

Finest-quality leather upper prevents absorption of liquids.
***MAC**sole® ADVENTURE rubber sole highly resistant to hydrocarbons.*

Slippery surfaces and risk of sprains

*Good grip thanks to **MAC**sole® ADVENTURE rubber sole.*
All-terrain sole with deep treads.
Provides stable support for the ankle.

Rough, uneven ground

Toecaps.
Reinforced heel and sides.

Constant movement

*Very supple **MAC**sole® ADVENTURE sole, combined with the puncture-resistant PERFOSAFE sole.*
Shock-absorption system.

Wearing comfort

CELL TECH: ergonomically shaped EVA insole to wick perspiration away effectively.
Perfectly comfortable POLYCAP toecap.

Required metal-free properties

100 % metal-free technology, with POLYCAP and PERFOSAFE.

MACCROSSROAD LOW

standard 100% METAL FREE

/ Sizes 36–48 // EN ISO 20345:2004 + A1:2007–S3 HRO SRC

Art. no.: 6265503

WORKING ON ROUGH GROUNDS AND IN WET ENVIRONMENTS (OIL, WATER, ETC.)

MACCROSSROAD

standard

100% METAL FREE

/ Sizes 36–48 // EN ISO 20345:2004 + A1:2007–S3 HRO SRC

Art. no.: 6265502

RISKS // *SOLUTIONS*

Excessive perspiration

Upper made of suede and highly breathable textiles.

Slippery surfaces and risk of sprains

*Good grip thanks to **MAC**sole® ADVENTURE rubber sole.*
All-terrain sole with deep treads.
Provides stable support for the ankle.

Rough, uneven ground

Toecaps.
Reinforced heel and sides.

Constant movement

*Very supple **MAC**sole® ADVENTURE sole, combined with the puncture-resistant PERFOSAFE sole.*
Shock-absorption system.

Wearing comfort

CELL TECH: ergonomically shaped EVA insole to wick perspiration away effectively.
Perfectly comfortable POLYCAP toecap.

Required metal-free properties

100 % metal-free technology, with POLYCAP and PERFOSAFE.

MACWILD LOW

standard 100% METAL FREE

/ Sizes 36–48 // EN ISO 20345:2004 + A1:2007–S1 P HRO SRC

Art. no.: 6265505

WORKING ON ROUGH GROUNDS AND IN DRY ENVIRONMENTS

MACWILD

standard

100% METAL FREE

/ Sizes 36–48 // EN ISO 20345:2004 + A1:2007–S1 P HRO SRC

Art. no.: 6265504

MAC sole SPORT

RUBBER TECHNOLOGY FOR LIGHT INDUSTRY

MACsole® SPORT

The **MAC**sole® SPORT range is intended for all those working in light industry, automobile industry and service industries. Outstanding grip, extremely lightweight (one shoe weighs less than 550 g) and with excellent breathability.
The design and engineering teams have been driven by these key concepts during the development of the **MAC**sole® SPORT range.

WORKING WITH LIQUIDS (OIL, WATER ETC.)

RISKS // SOLUTIONS

Contact with liquids (oil, water etc.)

Upper in full-grain leather resistant to liquids.
MACsole® rubber sole, resistant to hydrocarbons.

Risk of slipping and sprains

MACsole® with outstanding grip (see page 9).

Frequent movements

The styles of the MACsole® SPORT range weighs less than 550 g per foot and reduces walking fatigue. The POLYCAP and PERFOSAFE technologies (see page 10) are improvements of the standard in terms of resistance to impact and penetration, at the same time offering lightweight flexibility.

Requirement to be non-magnetic

100 % METAL FREE technology with POLYCAP and PERFOSAFE (see page 10).

Foot comfort

Extra wide fit.
CELL TECH insole.

MACJUMP

standard 100% METAL FREE

/ Sizes 36–48 // EN ISO 20345:2004 + A:2007– S3 HRO SRA

Art. no.: 6267006

MACPULSE

standard 100% METAL FREE

/ Sizes 36–48 // EN ISO 20345:2004 + A1:2007– S3 HRO SRA

Art. no.: 6267005

DRY ENVIRONMENTS

MACMOVE

/ Sizes 36–48 // EN ISO 20345:2004 + A1:2007– S1 P HRO SRA

Art. no.: 6267004

RISKS // SOLUTIONS

Excessive perspiration

Highly breathable suede upper.

Risk of slipping and sprains

MACsole® with outstanding grip (see page 9).

Frequent movements

The styles of the MACsole® SPORT range weighs less than 550 g per foot and reduces walking fatigue. The POLYCAP and PERFOSAFE technologies (see page 10) are improvements of the standard in terms of resistance to impact and penetration, at the same time offering lightweight flexibility.

Requirement to be non-magnetic

100 % METAL FREE technology with POLYCAP and PERFOSAFE (see page 10).

Foot comfort

Extra wide fit.
CELL TECH insole.

DRY ENVIRONMENTS

RISKS // SOLUTIONS

Excessive perspiration

Highly breathable suede upper.

Risk of slipping and sprains

MACsole® with outstanding grip (see page 9).

Frequent movements

The styles of the MACsole® SPORT range weighs less than 550 g per foot and reduces walking fatigue. The POLYCAP and PERFOSAFE technologies (see page 10) are improvements of the standard in terms of resistance to impact and penetration, at the same time offering lightweight flexibility.

Requirement to be non-magnetic

100 % METAL FREE technology with POLYCAP and PERFOSAFE (see page 10).

Foot comfort

Extra wide fit.
CELL TECH insole.

MACSPEED

/ Sizes 36–48 // EN ISO 20345:2004 + A1:2007 – S1 P HRO SRA

Art. no.: 6267003

WARM ENVIRONMENTS

MACAIR

standard

100% METAL FREE

/ Sizes 36–48 // EN ISO 20345:2004 + A1:2007 – S1 P HRO SRA

Art. no.: 6267002

MACSPEED PERFO

standard

100% METAL FREE

/ Sizes 36–48 // EN ISO 20345:2004 + A1:2007– S1 P HRO SRA

Art. no.: 6267001

RISKS // SOLUTIONS

Hot environments, excessive perspiration

Suede upper with large perforations to allow the foot to breathe.

Risk of slipping and sprains

MACsole® with outstanding grip (see page 9).

Frequent movements

The styles in the MACsole® SPORT range weighs less than 550 g per foot and reduces walking fatigue.
The POLYCAP and PERFOSAFE technologies (see page 10) are improvements of the standard in terms of resistance to impact and penetration, at the same time offering lightweight flexibility.

Requirement to be non-magnetic

100 % METAL FREE technology with POLYCAP and PERFOSAFE (see page 10).

Foot comfort

Extra wide fit.
CELL TECH insole.

MAC sole PLUS

RUBBER TECHNOLOGY – MULTI-PURPOSE AND ECONOMICAL

MACsole® PLUS

Due to the **MAC**sole® rubber technology, the **MAC**sole® PLUS range features multiple ranges of application and extreme durability; allterrain sole profile, outstanding grip and resistance to heat, cold and abrasion. Technical performance, the various comfort features and price make the **MAC**sole® PLUS range highly competitive.

MULTIPURPOSE AND ECONOMICAL

MACSTOPAC

optional

/ Sizes 38–47 // EN ISO 20345:2004+A1:2007 – S1/S1 P HRO SRC

Art. no.: 6253017 (S1) / 6263033 (S1 P)

MACSTOPAC BLACK

optional

/ Sizes 36–47 // EN ISO 20345:2004+A1:2007– S1/S1 P HRO SRC

Art. no.: 6253011 (S1) / 6263011 (S1 P)

MACSTOPAC BLACK BR

optional

/ Sizes 38–47 // EN ISO 20345:2004+A1:2007– S1 P HRO SRC

Art. no.: 6263019

RISKS // SOLUTIONS

Exposure to numerous damaging products: oil, hydrocarbons, miscellaneous chemicals

MACsole®: highly resistant to hydrocarbons and most chemicals.

Risk of hydrolysis of the sole (Offshore, sub-tropical regions)

MACsole® rubber resistant to hydrolysis.

Walking on oily floors, high risk of sprains and slipping

MACsole® for outstanding grip (see page 9).

Cold environment or risk of contact with hot surfaces

MACsole® resistant to heat on occasional contact (> 400 °C better than the HRO standard) and resistant to cold (-40 °C).

Foot comfort

Extra-wide fit (see page 10). Non-magnetic POLYCAP toecap does not transmit cold.

Premature wear of the front part

Rubber covered toecap of MACSTOPAC BLACK BR.

MACALLEGRON

optional

/ Sizes 36–47 // EN ISO 20345:2004+A1:2007– S1/S1 P HRO SRC

Art. no.: 6253012 (S1) / 6263012 (S1 P)

DRY / HUMID ENVIRONMENTS

MACFORESTIER

optional

/ Sizes 38–47 // EN ISO 20345:2004+A1:2007– S3 HRO SRC

Art. no.: 6263015

MACRORIG BROWN

optional

/ Sizes 38–47 // EN ISO 20345:2004+A1:2007– S3 HRO SRC

Art. no.: 6263020

RISKS // SOLUTIONS

Exposure to bad weather, contact with liquids (oil, hydrocarbons etc.)

Choose MACRORIG BROWN or MACFORESTIER, each with a full-grain leather upper and a waterproof tongue gusset.

Cold environment or risk of contact with hot surfaces

MACsole® resistant to contact heat (> 400 °C better than the HRO standard) and resistant to cold (–40 °C).

Risk of slipping and sprains

MACsole® for outstanding grip (see page 9).

Risk of hydrolysis of the sole (offshore, sub-tropical regions)

MACsole® rubber resistant to hydrolysis.

Risk of hydrolysis of the sole

Non-magnetic POLYCAP toecap does not conduct cold (see page 10).

WELDING

RISKS // SOLUTIONS

Risk of flying sparks or fiery particles onto the upper

The uppers are sewn with self-extinguishing NOMEX® thread and are fit with an anti-sparks tongue and a quick-release buckle.

Sole in contact with fiery particles

MACsole® resistant to heat on occasional contact (> 400 °C better than the HRO standard – page 9).

Premature wear of the front part

Rubber covered toecap.

MACRORIG NOMEX BR

optional

/ Sizes 38 – 47 // EN ISO 20345:2004 + A1:2007 – S3 HRO SRC

Art. no.: 6263018

MACFONDEUR BR

optional

/ Sizes 38 – 47 // EN ISO 20345:2004 + A1:2007 – S3 HRO SRC

Art. no.: 6263013

MACRANGER FONDEUR BR

optional

/ Sizes 38 – 47 // EN ISO 20345:2004 + A1:2007 – S3 HRO SRC

Art. no.: 6263014

For other models suitable for welding work, see the MACsole® EXTREM range page 21.

FOCUS

40

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FOCUS

The FOCUS range is versatile, strong and economical. It was developed to meet the demands of professions ranging from construction and light building work to light industry. Fitted with a double-density rubber sole, the most up-to-date models integrate the latest technology to offer their users optimum performance.

CONSTRUCTION, INDUSTRY, OUTDOOR WORK

RISKS // SOLUTIONS

Outdoor work, contact with liquids

Heel shaft in finest quality grained leather, ultra-resistant to liquid penetration (water, hydrocarbons, etc.).
Interior textile lining enabling perspiration to evaporate.

Comfortable to wear, frequent movements

Double-density rubber sole for perfect shock absorption.
Anatomical EVA and Mesh insole.
Padded heel shaft and tongue.
Wide fit.

Suitable for crouching or kneeling work

Anti-abrasion covered end piece.

Required visibility

Reflectors on external side sections of heel shaft.

NEW

Available from January 2011

NEW

Available from January 2011

FOCUS LOW

/ Sizes 36–48 // EN ISO 20345:2004+A1:2007– S3 SRA

Art. no.: 6263701

FOCUS HIGH

/ Sizes 36–48 // EN ISO 20345:2004+A1:2007– S3 SRA

Art. no.: 6263700

RISKS // SOLUTIONS

Hot environments, excessive perspiration

Heel shaft in ultra-breathable suede leather.
Perforations for perfect ventilation.
Interior textile lining enabling perspiration to evaporate.

Comfortable to wear, frequent movements

Double-density rubber sole for perfect shock absorption.
Anatomical EVA and Mesh insole.
Padded heel shaft and tongue.
Wide fit.

Non-magnetic requirement

100 % METAL FREE model fitted with POLYCAP toecap.

Required visibility

Reflectors on external side sections of heel shaft and at level of laces.

FOCUS PERFO

/ Sizes 36–48 // EN ISO 20345:2004+A1:2007– S1 SRA
Art. no.: 6253703

WARM ENVIRONMENTS

RISKS // SOLUTIONS

Very hot environments, excessive perspiration

Heel shaft in finest quality, ultra-breathable suede leather.
Large perforations to provide optimum ventilation.
Textile insert on tongue and interior textile lining enabling perspiration to evaporate.

Comfortable to wear, frequent movements

Double-density rubber sole to ensure perfect shock absorption.
Anatomical EVA and Mesh insole.
Padded heel shaft and tongue.
Velcro closure to ensure perfect fit for shape of foot, while providing optimum support for the foot.
Wide fit.

Non-magnetic requirement

100 % METAL FREE model with toecap.

FOCUS SANDAL

/ Sizes 36–48 // EN ISO 20345:2004+A1:2007– S1 SRA
Art. no.: 6253702

CONSTRUCTION, INDUSTRY, OUTDOOR WORK

RISKS // SOLUTIONS

Outdoor work, contact with liquids

Water-repellent leather and gusset very resistant to the penetration.
*For the models **FOCUS** 300 – 500 and **GUARDIAN** 1 & 2: oiled treated full-grain leather highly resistant to water penetration.*

Work on all types of surface, risk of sprains

Wide and deep sole profile for optimal slip-resistance and comfort.

Cold temperatures

*Fur-lining on the **GUARDIAN** 2.*

FOCUS 300

/ Sizes 39–47 // EN ISO 20345 – S3 CI

Art. no.: 6263643

FOCUS 500

/ Sizes 39–47 // EN ISO 20345 – S3 CI

Art. no.: 6263645

GUARDIAN 2

LINED

/ Sizes 39–47 // EN 345 – S3 CI

Art. no.: 6263615

GUARDIAN 1

UNLINED

/ Sizes 39–47 // EN 345 – S3 CI

Art. no.: 6263616

- Extra large sole
- Profile with lots of notches with stippled studs on the outside and a large surface area
- Thick comfort layer
- Multilayer wrap-around sole

FLAG

FLAG

The FLAG range offers elegance, flexibility and safety. Suitable for use in light industry and green spaces, its double-density rubber sole, combined with the non-magnetic POLYCAP toecap and anti-perforation PERFOSAFE sole, guarantees comfort, stability and complete protection.
A classic from HECKEL.

MULTI PURPOSE IN INDUSTRY, CONSTRUCTION, OUTDOOR WORK

RISKS // SOLUTIONS

Presence of oils, outdoor work

Full grain leather highly resistant to abrasion and penetration of water.
Lined waterproof leather gusset.
Textile inner lining to reduce problems of perspiration.
Anatomical form of the edging & padding to reinforce comfort.

Comfort, constant movement

Light, extra comfortable, ultra shock-resistant POLYCAP toecap.
Exceptionally hygienic sole.

Working while crouching down or kneeling

*Anti-abrasion toecap on the **FLAG** DUNE model.*

FLAG DUNE

/ Sizes 38–48 // EN ISO 20345:2004 + A1:2007– S3 CI SRC
Art. no.: 6263656

FLAG TITANE PERFOSAFE

standard

/ Sizes 38–48 // EN ISO 20345:2004 + A1:2007– S3 CI SRC
Art. no.: 6263648

FLAG COBALT PERFOSAFE

standard

/ Sizes 38–48 // EN ISO 20345:2004 + A1:2007– S3 CI SRC
Art. no.: 6263649

WARM AND DRY ENVIRONMENTS

FLAG NANCY AERO

standard

/ Sizes 38–48 // EN ISO 20345:2004 + A1:2007 – S1 P SRC

Art. no.: 6263650

FLAG NANCY

/ Sizes 38–48 // EN ISO 20345:2004 + A1:2007 – S1 P SRC

Art. no.: 6263653

RISKS // SOLUTIONS

Problem of perspiration

Ultra-breathable suede leather.
*Large perforation for a better respirability (**FLAG** NANCY AERO).*
Anatomical form of the edging & padding to reinforce comfort.
Inner lining to reduce problems of perspiration.

Comfort, constant movement

Light, extra comfortable, ultra shock-resistant POLYCAP toecap.
*Puncture-resistant PERFOSAFE midsole as standard on the **FLAG** NANCY AERO.*
Exceptionally hygienic sole.

XXL

XXL

The XXL range is the optimum solution for people working in the heavy construction industry and in quarries. Its high coverage sole in double-density rubber, together with leathers highly resistant to abrasion and liquid penetration, provides protection for users up to 360° C.

CONSTRUCTION AND CIVIL ENGINEERING

XXL TETRA

/ Sizes 38–48 // EN 345 – S3 CI

Art. no.: 6263612

XXL ALPHA

/ Sizes 38–48 // EN 345 – S3 CI

Art. no.: 6263611

RISKS // SOLUTIONS

Exposure to risk of splashes

Gusset tongue and S3 leather prevent liquids from penetrating.
Working when kneeling.
The XXL sole has a wrap-around shape which protects against:
– The front of the shoe wearing out too quickly
– External factors: humidity, abrasive objects, etc.
– Sprains: the foot is cushioned by the moulded sole, which gives the heel excellent support

Walking on various types of ground, irregular surfaces, strong risk of slipping or sprains

The XXL sole has large, deep-cut mouldings for good grip.

NITEX WORK ON BITUMINOUS MIXTURES

NITEX ASPHALT MASTER

/ Sizes 38–47 // EN 345 – SB HI or inox SB P HI

Art. no.: 6252109

For other models suitable for work on bituminous mixtures, see the MACsole® EXTREM range page 20.

RISKS // SOLUTIONS

Risk of burns to sole (ground > 150 °C)

Soles conform to the HI norm for insulation against heat:
*The **NITEX** sole (green) records an increase in temperature of only 17 °C after 30 minutes on a surface at 150 °C.*
The HI norm stipulates a measurement of 22 °C or lower.

Risk of sole being damaged on bituminous mixtures

*The model **NITEX** ASPHALT MASTER is equipped with a plain sole.*
It is not suitable for use in situations where there is a risk of slippage.

- Insulates against cold
- Prevents perspiration
- Prevents unpleasant odours
- Prevents bacterial and fungal infections
- Thermally moulded to fit the foot perfectly
- Cushions impacts
- AEROSHOES® exclusive in MACsole® EXTREM

HECKEL AEROSHOES MOLDED

/ Sizes 36–48

Art. no.: 6015131 to 6015143

ACCESSORIES

- ASPEN technology
- Insulation against heat/the cold
- Technical properties detailed on page 11

HECKEL THERMO SHIELD

/ Sizes 36–48

Art. no.: 6015147 to 6015159

POINT-OF-SALE EQUIPMENT

This display unit comes in a unique pack including an assembly kit along.

HECKEL DISPLAY UNIT
Art. no.: 6300009

HECKEL DISPLAY UNIT
Art. no.: 6300010

TECHNOLOGICAL INDEX

NOMEX™

Self-extinguishing thread with high performance heat and flame-resistant properties, ideal in the case of burns due to small projections of melted metal, excellent resistance to chemical products.

DUAL® ORIGINAL

Leather covered with a protecting film of polyurethane for improved lasting protection against scuffing, kicking, dragging.

PARAPLUIE

Leather resistant to water penetration (60 minutes).

Repellent leather resistant to water penetration (up to 3 hours).

Picture credits:
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Heckel Sécurité: page 11 – pict. 16; page 16/17 – pict. 23; page 54/55 – pict. 44.
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STANDARDS

- Manufacturer's identification mark
- Manufacturer's type dsignation
- Number of European standard
- Symbol for protection
- CE symbol
- Size
- Article number
- Date of manufacture

Footwear symbols for industrial usage

Basic requirements/additional requirements/ categories e.g. for leather shoes	Safety footwear EN ISO 20345 or EN 345-1	Protective footwear EN ISO 20346 or EN 346-1	Occupational footwear EN ISO 20347 or EN 347-1
Basic requirements for shoes and impact resistance of toecaps	SB 200 Joule	PB 100 Joule	OB No requirement
Additional requirements: Closed heel Antistatic Energy absorption around heel	S1	P1	O1 + fuel-resistant sole
Additional requirements: as above, plus Water penetration Water absorption	S2	P2	O2
Additional requirements: as above, plus Penetration resistance Cleated outsole	S3	P3	O3
Basic requirements/additional requirements/ categories e.g. for shoes made from PVC or PU			
Basic requirements for shoes and impact resistance of toecaps	SB 200 Joule	PB 100 Joule	OB No requirement
Additional requirements: Antistatic Energy absorption around heel	S4	P4	04
Penetration resistance Cleated outsole	S5	P5	O5

The choice of a particular shoe depends on the type of occupational risk. As with all the footwear, additional requirements may exist (e.g. in terms of heat and cold insulation, penetration resistance or electrical resistance via ESD). These shoes are then marked accordingly.

The testing principles for all basic and additional requirements are specified in DIN EN 344-1 / -2 and EN ISO 20344.

One of the three following requirements must be met and labelled in the shoe for all newly certified models from December 2007

Label	Characteristics tested	Test conditions	Friction coefficient
SRA	Slip resistance on ceramic tile floors with sodium lauryl sulfate solution (SLS)	Forward slip of the heel Forward slip on a flat surface	No less than 0.28 No less than 0.32
SRB	Slip resistance on steel floors with glycerol	Forward slip of the heel Forward slip on a flat surface	No less than 0.12 No less than 0.16 Up to 31/12/08
		Forward slip of the heel Forward slip on a flat surface	No less than 0.13 No less than 0.18 From 01/01/09
SRC	Slip resistance on ceramic tile floors with sodium lauryl sulfate solution and on steel floors with glycerol	Includes all test conditions cited under a. and b.	

Additional requirements for special applications with corresponding symbols

SYMBOLE	RISQUE COUVERT	EN ISO 20345:2004 or EN 345					EN ISO 20347 or EN 347			
		SB	S1	S2	S3	S5	OB	O1	O2	O3
–	Basic	■	■	■	■	■	■	■	■	■
P	Penetration resistance	■	■		■	■	■	■		■
A	Antistatic footwear	■	■	■	■	■	■	■	■	■
E	Energy absorption around heel	■	■	■	■	■	■	■	■	■
HI	Heat insulation	■	■	■	■	■	■	■	■	■
CI	Cold insulation	■	■	■	■	■	■	■	■	■
WRU	Water resistance of upper	■		■	■		■		■	■
HRO	Heat resistance of outsole (+300 °C/min)	■	■	■	■	■	■	■	■	■
WR	Whole shoe waterproof	■	■	■	■		■	■	■	■
M	Metatarsal protection	■	■	■	■		■	■	■	■
CR	Cut resistant	■	■	■	■	■	■	■	■	■

■ Meets the specified requirement

■ Requirement can be met but is not stipulated

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