



**EU REGULATION 2016/425**

### **MODEL EBANO VELCRO**

#### **GENERAL DESCRIPTION.**

Safety boot welding type, padded and tongue, with dual-density polyurethane sole.

Design B compliant with EN ISO 20345:2011. Manufacturing system with direct soling straight to the upper.



#### **SIZES AVAILABLE.**

35 – 48 EU / 2 – 13 UK

**DESIGNATION CODE.**

S3+CI+SRC (EN ISO 20345:2011) DIRECTIVE 89/686/EEC. EU REGULATION 2016/425.

**REQUIREMENTS SATISFIED.**

Ergonomics and adjustment to the user's shape. Impact resistant (200 joules). Anti-static footwear. Energy absorption in the heel. Penetration resistant. Oil resistant. Slip resistance. Resistance to water absorption and penetration. Cold insulation. Resistance to non-extreme environmental factors under expected conditions of use.

The materials from which it is made are safe and do not affect the safety or health of the user. They pose no risks or discomfort under expected conditions of use.

The materials from which it is made and the parts of the footwear that are or may come in contact with the user wearing it have no rough surfaces, sharp edges, points or protrusions that may cause injury or excessive irritation. These materials or their breakdown products do not affect the safety or health of users.

The adjustment system cannot be accidentally loosened under expected conditions of use; the footwear is tightened and loosened by Velcro, no tools are necessary.

The design makes it easy for the user to put on, and takes into account environmental factors and the actions and postures involved; the fit is adapted to the user's shape, including a variety of manufacturing sizes.

The footwear is designed to let the foot breathe naturally and to absorb perspiration. The liners are designed to absorb sweat and perspiration.

The model meets specific requirements to offer adequate protection against expected hazards and to resist environmental factors under expected conditions of use.

**The date of manufacture is stamped on the footwear (sole); the batch number for tracing purposes is marked on the label on the upper and the label on the packaging box (pair).**

With anti-penetration steel insole; Designation code S3, satisfies penetration resistance.

For models marked with P or S3, the penetration resistance of this footwear has been measured in the laboratory using a truncated nail of diameter 4.5 mm and a force of 1,100 Newton. Higher forces or nails of smaller diameter will increase the risk of penetration occurring. In such circumstances alternative preventative measures should be considered.

## DESCRIPTION OF COMPONENTS.

Black full grain cowhide with a thickness of 2.0 - 2.2 mm.

Tear strength: > 120 N.

Tensile strength: > 20 N/mm<sup>2</sup>

Water vapour permeability: > 0,8 mg/cm<sup>2</sup>h.

Cr VI content: < 3 ppm.

pH: > 3.2

Water absorption: < 20% after 60 min.

Penetration: < 0,2 gr en 60 min.

Lining: Vamp and Heel: made from anti-allergic polyamide material, highly resistant to abrasion, absorption and drying of perspiration.

Tear strength: > 18 N.

Abrasion resistance: > 51,200 dry cycles and 25,600 wet cycles.

Water vapour permeability: > 2 mg/cm<sup>2</sup>h

Tongue: Extension of the vamp.

Collar padded with interior foam. Resin-impregnated, non-stitch fabric counter.

Inner insole made of foamed material with textile support, ergonomic design based on biomechanical walking motions.

Midsole made of antistatic, foamed, low-density polyurethane that provides great cushioning. Provides thermal insulation.

Antistatic, compact polyurethane, biomechanical, non-slip design, with anti-tip pads (anti-torsion system). Improves dynamic adaptation over previous model by at least 15% (half-foot torsion and torsion of metatarsals). Provides greater absorption of forces in impact phase, step stability/uniformity and pronation control while walking.

Tear strength: > 8 N/mm.

Abrasion resistance: <100 mm<sup>3</sup>

Oil resistance: < 6%.

Resistencia a la hidrólisis: < 6 mm.

Energy absorption in the heel: > 20 J.

Non-metallic Toecap, with 200-J impact resistance; as per EN ISO 20345:2011 & EN ISO 12568:2010 standards, extra-wide last.

Non-metallic anti-penetration insole with penetration resistance > 1,100 N.

Fastening system with Velcro.

## **PROTECTS AGAINST.**

Falling objects or crushing of front part of the foot: YES.

Falls and impacts to heel of the foot: YES.

Falls due to slips: YES.

Slipping on wet or oily surfaces: YES.

Walking on pointed or sharp objects: YES. (Only models with P or S3 marking).

Effects and falls of objects on metatarsus: NO.

Injuries to toes or deformation of feet: YES.

Muscle fatigue caused by walking or standing: YES.

Work that causes vibrations: YES.

Impacts in ankle area: YES. (Does not meet requirements for AN).

Possible ankle sprains: YES.

Penetration by external materials: YES. (Only models with anti-penetration insole).

Build-up of electrostatic charges caused by movement or leakage from low-voltage machinery: YES.

Electrically insulated footwear: NO.

Electrically conducting footwear: NO.

Molten metal: NO.

Possible burns and flames: NO. (Does not meet the requirements of EN 15090).

Heat through contact with hot surfaces: NO.

Very extreme heat conditions with high need for transpiration: YES.

Exposure to cold (-10°C): YES. Exposure to cold (-30°C): NO.

Protection against dust or dirt: YES.

Protection against aggressive liquids: NO.

Water penetration through vamp due to sporadic or permanent exposure to moisture: NO.

Protection against radiation: NO.

Protection against biological agents/bacteria: NO.

## **APPLICATIONS.**

Industry and construction. Maintenance and welding. Indoor and outdoor work. Warehouses.  
Transport. Cleaning

## CONTENT OF DANGEROUS SUBSTANCES THAT MAY AFFECT THE FOOTWEAR AND COMPONENTS.

SUBSTANCE	CONTENT	LEGAL REFERENCE
Acrylamide	<1000 mg/kg	REACH REGULATION EU 366/2011
Alkylphenol and ethoxylates	<1000 mg/kg	REACH REGULATION EC 552/2009
Arsenic (compounds)	prohibited; not detectable	RD 106/1985 Decree 2484/1967
Biocides	prohibited; not detectable	Regulation EU 528/2012
Cadmium and its compounds	<100 mg/kg (polymers and costume jewellery) <1000 mg/kg (painted items)	Regulation EU 835/2012 REACH Regulation EU 494/2011
Chloroalkanes, C10-C13	<10,000 mg/kg	Regulation EU 519/2012 REACH
Chromium VI	<3 mg/kg	EN ISO 20344-7 REACH DIRECTIVE 1989/686/EEC
Dimethyl fumarate	prohibited <0.1 mg/kg	REACH Regulation EU 412/2012
Whale oil	prohibited; not detectable	Regulation EC 338/1997
Formaldehyde	<100 mg/kg	Specific regulations by country
Phthalates	<1000 MG/KG	REACH Regulation EC 552/2009
Fluorinated gases	prohibited; not detectable	Regulation EC 842/2006
Hexachloroethane	prohibited; not detectable	REACH Regulation EC 552/2009
Mercury (compounds)	prohibited; not detectable	REACH Regulation EC 552/2009
Nickel and its compounds	Released from article <0.5 µg/cm <sup>2</sup> /week	REACH Regulation EC 552/2009
Organostannic compounds	<1000 mg/kg	REACH Regulation EU 276/2010
Pentachlorophenol (PCF) and Tetrachlorophenol (TCF)	<5 mg/kg	Country-specific regulations
Lead (compounds)	prohibited; <500 mg/kg	REACH Regulation EU 836/2012
Flame retardant	prohibited; <100 mg/kg	REACH Regulation EU 757/2010
Perfluorooctane sulfonates (PFOA, PFOs)	prohibited; <10 mg/kg or 0.1% by weight	Regulation EU 757/2010
Dispersion dyes	<5 mg/kg	German regulation
Azo dyes	<30 mg/kg list of 22 amines <0.1% weight for blue dye	REACH Regulation EC 552/2009
Trichlorobenzene	<1000 mg/kg	REACH Regulation EC 552/2009
Polycyclic Aromatic Hydrocarbons (PAHs)	1 mg/kg plastic and rubber articles in contact with human skin.	REACH Regulation EU 1272/2013

### USO Y MANTENIMIENTO (REGLAMENTO UE 2016/425).

La vida útil del calzado está directamente relacionada con las condiciones de uso y calidad de su mantenimiento. Por ello, el usuario debe hacer un control regular de su estado para asegurar su eficacia. El fabricante aconseja, cambiarse de calcetines diariamente, ventilar el calzado durante su uso siempre que sea posible, y preferiblemente utilizar alternativamente dos pares de zapatos, especialmente en casos de transpiración considerable, no reutilizar el calzado de otra persona, limpiar regularmente el corte y la suela, secarlo cuando esté húmedo, sin exponerlo a temperaturas superiores a 50°C, guardarlo en un sitio seco y aireado, transportarlo en su caja de cartón, se recomienda desechar el calzado cuando se observe acentuado desgaste del relieve de la suela.

Este EPI está compuesto por unos materiales con unas cualidades que lo hacen muy resistentes al paso del tiempo si es conservado adecuadamente. Se recomienda transportar el EPI en una bolsa o caja individual. Este EPI ha sido diseñado según la Directiva 89/686/CE y REGLAMENTO UE 2016/425. Los rendimientos alcanzados en los ensayos técnicos son plenamente satisfactorios en base a la norma EN 344-7; EN ISO 20344-7. Estos rendimientos están avalados por el correspondiente certificado emitido por: Inescop (0160) o CIMAC (0465).

### CALZADO ANTIESTÁTICO Y CONDUCTOR.

Los zapatos y botas antiestáticas deberán utilizarse allí donde se precise para reducir la acumulación de cargas electrostáticas, evitando los riesgos de inflamación por chispas de diferentes sustancias y de sus vapores, así como el riesgo ligado a la no eliminación completa de la descarga eléctrica de aparatos.

La experiencia demuestra que, para cubrir las necesidades antiestáticas, el trayecto de descarga a través de un producto debe de tener en condiciones normales, una resistencia inferior a 1.000MΩ durante la vida útil del producto.

Un valor de 100MΩ especificado como límite inferior de resistencia del producto en estado nuevo, con el fin de asegurar una protección segura contra una descarga eléctrica peligrosa o contra la ignición en aquellos casos en que un aparato eléctrico se avería cuando funcione a voltajes que lleguen hasta 250 V. No obstante, en ciertas condiciones conviene estar advertido de que la protección brindada por los calzados podría resultar ineficaz y de que se deben utilizar otros medios para proteger al usuario en todo momento. Durante el uso no deberá introducirse ningún elemento aislante entre la plantilla y el pie del usuario. Si se utiliza cualquier tipo de plantilla intercalada entre la planta del pie y la plantilla del calzado, es conveniente verificar las propiedades eléctricas del conjunto calzado + plantilla.

El poliuretano es una composición química de dos materiales, poliol e isocianato, estos dos productos con el paso del tiempo se descomponen por la emigración de la materia que les une. A partir de dos o tres años de su fabricación es posible que comience un deterioro de las suelas de P.U.

### NORMATIVA EUROPEA.

EN ISO 20344:2011. Recoge las exigencias y métodos de ensayo para el calzado de seguridad, protección y trabajo de uso profesional. Es la norma básica. De ellas se derivan:

EN ISO 20345:2011. Recoge las especificaciones para el calzado de seguridad de uso profesional, cuyas punteras deben resistir un impacto equivalente a una energía de 200 Julios y una compresión de 15 kN.

EN ISO 20346:2011. Recoge las especificaciones para el calzado de protección para uso profesional cuyas punteras deben resistir un impacto equivalente a una energía de 100 Julios y una compresión de 10 kN.

EN ISO 20347:2012. Recoge las especificaciones para el calzado de trabajo para uso profesional.

### CLASES DE PROTECCIÓN.

P: Resistencia a la perforación hasta 1.100 N.

WRU: Resistencia a la penetración y absorción de agua de corte. (EN ISO 20344; 0.2 g-30%).

C: Calzado con resistencia eléctrica inferior a 100 Mega ohmios.

HI: Calzado que ofrece aislamiento contra el calor del piso. (EN ISO 20344; 22°C/30 min).

E: Absorción de Energía en el tacón. (EN ISO 20344; 20 J).

CI: Calzado que ofrece aislamiento contra el frío del piso. (EN ISO 20344; 10°C/30 min).

A: Calzado que disipa cargas electrostáticas. Resistencia entre 0.1 y 1.000 Mega Ohmios.

SB: Calzado de seguridad con puntera resistente a un impacto de una energía de 200 julios y a la compresión hasta 15 KN: La suela es resistente a los hidrocarburos.

$$S1 = SB + A + E \quad ; \quad S2 = S1 + WRU \quad ; \quad S3 = S2 + P$$

SRA: Resistencia al resbalamiento sobre suelo de baldosa cerámica con detergente.

SRB: Resistencia al resbalamiento sobre suelo de acero con glicerina.

SRC: Resistencia al resbalamiento sobre suelo de baldosa cerámica con detergente y suelo de acero con glicerina.

Manufactured by CALZADOS ROBUSTA, S.L.  
Ctra. Préjano, 72 - 26580 Arnedo (La Rioja) Spain  
www.robusta.es

Thank you for choosing our footwear.

#### USE AND MAINTENANCE. (REGULATION EU 2016/425)

The useful life of safety footwear is directly related to the conditions of use and quality of maintenance. Therefore, the user must check regularly on its state to ensure its effectiveness. The manufacturer recommends changing socks daily, leaving shoes to air out whenever possible, preferably using two pairs of shoes to alternate, especially in cases of important perspiration, not reuse the shoes of another person, regularly clean the upper and sole, drying shoes out whenever they get wet and taking care not to expose the footwear to temperatures exceeding 50°C. Store the pair in a dry and airy place, preferably in its cardboard box. Discarding the shoes is recommended when accentuated wear of the relief of the sole is observed.

This PPE is made of quality materials which properties make it very resistant to the passage of time, if properly maintained. It is recommended to transport this PPE in a bag or individual box. This PPE had been designed in accordance with Directive 89/686/EEC. And REGULATION EU 2016/425. Results achieved in the technical tests fully satisfy the exigencies of the Normative EN 344-7; EN ISO 20344-7 and are guaranteed by the appropriate certificate issued by INESCOP (0160) or CIMAC (465).

#### ANTISTATIC AND CONDUCTIVE FOOTWEAR.

Antistatic footwear and boots have to be used where it is required to reduce the accumulation of electrostatic charges in order to avoid the risks of ignition due to sparks of different substances and their vapors, as well as the risk associated with the incomplete removal of the electric charges in certain machines.

Experience has shown that the discharge path through a product under normal conditions requires an impedance of less than 1.000MΩ during the service life of the product in order to fulfil the antistatic requirements.

A value of 100MΩ is considered to be the minimum impedance of a new product in order to ensure reliable protection against electric shock hazard or against ignition if a malfunction occurs in an electrical equipment carrying voltage until 250V.

However, under certain conditions the user should be aware that the protection offered by the shoes could be ineffective and that other means should be used to protect the user at all times. During the use, should not be introduced any element of insulation between the inner-footbed and the user's foot. If an intermediate sole is placed between the sole of the foot and the sole of the shoe, the electrical properties of footwear + intermediate insole must be checked.

Polyurethane is a chemical compound composed of two materials, polyol and isocyanate, these two products deteriorate due to the emigration of the material that joins them. PU soles may begin to deteriorate two or three years after their manufacturing date.

#### EUROPEAN LEGISLATION.

EN ISO 20344:2011. Aggregate the requirements and test methods for safety shoes, labor protection and professional use. It is the basic rule. Derive from it:

EN ISO 20345:2011. Aggregate the specifications for safety footwear for professional use, which must resist an impact of an energy equivalent of 200 Joules and a compression of 15 kN.

EN ISO 20346:2011. Aggregate the specifications for protective footwear for professional use which must resist an impact of an energy of 100 Joules and a compression of 10 kN.

EN ISO 20347:2012. Aggregate the specifications for the professional use footwear.

#### TYPES OF PROTECTION.

P: Puncture resistance up to 1,100 N.

WRU: Resistant to water penetration and absorption of the upper. (EN ISO 20344; 0.2 g-30%).

C: Footwear providing resistance to electricity under 100MΩ.

HI: Footwear providing thermal insulation against heat. (EN ISO 20344; 22°C/30 min).

E: Energy Absorption in the heel area. (EN ISO 20344; 20 J).

CI: Footwear providing insulation against cold. (EN ISO 20344; 10°C/30 min).

A: Shoes that dissipate electrostatic charges. Resistance between 0.1MΩ and 1000 MΩ.

SB: Safety footwear for professional use with toe-cap that resist impacts until 200 Joules and compression up to 15 kN. The sole is resistant to hydrocarbons.

$$S1 = SB + A + E \quad ; \quad S2 = S1 + WRU \quad ; \quad S3 = S2 + P$$

SRA: Slip resistance on ceramic tile floor with detergent.

SRB: Slip resistance on steel floor with glycerin.

SRC: Slip resistance on ceramic tile floor with detergent and steel floor with glycerin.

### UTILISATION ET ENTRETIEN (REGLEMENT UE 2016/425).

La durée de vie de la chaussure est directement liée aux conditions d'utilisation et qualité de l'entretien. Par conséquent, l'utilisateur doit effectuer des contrôles réguliers de son état afin d'assurer son efficacité.

Dans ces conditions, le Fabricant conseille de changer quotidiennement de chaussettes, de ventiler, dans la mesure du possible les chaussures pendant l'utilisation, de préférence en utilisant alterner entre deux paires de chaussures, en particulier en cas de transpiration importante. De ne pas réutiliser les souliers d'une autre personne, de nettoyer régulièrement la tige et la semelle, de sécher la chaussure lorsqu'elle est mouillée, sans toutefois l'exposer à une température supérieure à 50°C. Conserver votre paire dans un endroit sec et aéré, dans votre boîte de carton. Il est recommandé de jeter les chaussures lorsqu'une usure accentuée du relief de la semelle est observée.

Cet EPI est composé de matériaux de qualité qui le rendent très résistant au passage du temps, s'ils sont correctement entretenus. Il est recommandé de transporter votre EPI dans un sac ou boîte individuelle. Cet EPI a été conçu conformément à la directive 89/686/CEE et REGLEMENT UE 2016/425. Les rendements obtenus lors des essais techniques satisfont pleinement la Norme EN 344-7 ; EN ISO 20344-7. Ces rendements sont repris dans le certificat correspondant délivré par l'INESCOP, (0160) et CIMAC (0465).

### CHAUSSURE ANTISTATIQUE ET CONDUCTRICE

Les chaussures et bottes antistatiques doivent être utilisées lorsqu'il est nécessaire de réduire l'accumulation de charges électrostatiques, afin d'éviter les risques d'inflammation par étincelles de divers produits et de leurs vapeurs, ainsi que ceux associés à l'élimination incomplète de la décharge électrique de certains appareillages. L'expérience démontre que, pour couvrir les exigences antistatiques, le parcours de la décharge électrique au travers d'un produit doit rencontrer, dans des circonstances normales, une résistance inférieure à 1000MΩ, et ceci durant toute la durée de vie du produit.

Une valeur de 100M Ω est spécifiée comme limite inférieure de résistance du produit dans son état neuf, afin de garantir une protection fiable contre les risques de chocs électriques ou contre l'inflammation dans les cas où un appareil électrique tombe en panne lorsqu'ils fonctionnent à des tensions allant jusqu'à 250 V. Toutefois, sous certaines conditions, il est important d'être conscient que la protection offerte par les chaussures pourrait être inefficace et que des moyens complémentaires devront être utilisés pour protéger l'utilisateur. Pendant son utilisation, ne pas introduire d'élément isolant entre la première de propreté et le pied de l'utilisateur. Si l'on utilise un quelconque type de semelle intercalaire entre la plate du pied et la semelle du soulier, il est convenable de vérifier les propriétés électriques de l'ensemble chaussures + semelle intercalaire.

Le polyuréthane est une composition chimique des deux matériaux, polyol et l'isocyanate. Avec le temps, ces deux produits se décomposent, en raison de la migration de la matière qui les unit. Les semelles en PU peuvent commencer à se détériorer à partir de deux ou trois ans après fabrication.

### LEGISLATION EUROPEENNE

EN ISO 20344:2011. Regroupe les exigences et méthodes d'essai pour l'ensemble des chaussures de sécurité et à usage professionnel. C'est la règle de base dont découlent :

EN ISO 20345:2011. Regroupe les spécificités des chaussures de sécurité et à usage professionnel dont l'embout de protection doit résister à un impact équivalent à une énergie de 200 joules et à une compression de 15 kN.

EN ISO 20346:2011. Regroupe les spécificités des chaussures de sécurité et à usage professionnel dont l'embout de protection doit résister à un impact équivalent à une énergie de 100 joules et à une compression de 10 kN.

EN ISO 20347:2012. Regroupe les spécificités des chaussures de travail à usage professionnel.

### TYPES DE PROTECTION

P: Résistance à la perforation jusqu'à 1100 N.

WRU: Résistance à l'absorption et la pénétration de l'eau de la tige. (EN ISO 20344; 0.2 g-30%).

C: Chaussure ayant une résistance électrique inférieure à 100 MΩ.

HI: Chaussure offrant une isolation contre la chaleur à travers de la semelle. (EN ISO 20344; 22°C/30 min).

E: Absorption de l'énergie au niveau du talon. (EN ISO 20344; 20 J).

CI: Chaussure offrant une isolation contre le froid à travers de la semelle. (EN ISO 20344; 10°C/30 min).

A: Chaussure dissipant les charges électrostatiques. Résistance entre 0,1MΩ et 1000MΩ.

SB: Chaussure de sécurité pourvue d'un embout résistant à l'impact d'une énergie de 200 joules et à la compression jusqu'à 15 kN. La semelle est résistante aux hydrocarbures.

$$S1 = SB + A + E \quad ; \quad S2 = S1 + WRU \quad ; \quad S3 = S2 + P$$

SRA: Résistance au glissement sur carrelage céramique et détergent.

SRB: Résistance au glissement sur surface en acier et glycérine.

SRC: Résistance au glissement sur carrelage céramique et détergent + sur surface en acier et glycérine.



### VERWENDUNG UND WARTUNG. (VERORDNUNG EU 2016/425)

Die Lebensdauer von Sicherheitsschuhe steht in direktem Zusammenhang mit dem Gebrauch, den man davon macht und ihre Pflege. Daher empfiehlt sich, das tagliche wechsein der Stumpfe, das Lufeten der Schuhe wenn immer moglich, kein ununterbrochenes tragen, das auftragen einer guten Schuhcreme um das Leder zu schutzen, das trocknen nach dem Nasswerden und die Schuhe nicht allzuhohen Temperaturen aussetzen, die dem Leder schaden konnen.

Dieses Modell besteht aus hochwertige Materialien, die es sehr widerstandsfahig gegen Abnutzung machen, eine angemessene Pflege ist Voraussetzung. Es ist ratsam, diese Schuhe in einer separaten Tasche oder eine Kartonschachtel zu transportieren. Dieses Modell wurde nach der Richtlinie 89/686/CE und VERORDNUNG EU 2016/425 hergestellt. Die Sicherheitsprufung dieser Schuhe wurde durch ds INESCOP, (0160) und CIMAC (0645).

### ANTISTATISCHES UND NICHT LEITENDES SCHUHWERK.

Die antistatische Schuhe und Stiefeln sollten dort zum Einsatz kommen, wo die elektrostatische Ladung reduziert werden soll. Funken konnen entstehen bei einer nicht vollstandigen Entladung bestimmter Gerate, das Entflammbarkeitsrisiko von verschiedener Substanzen durch Funken kann so vermieden werden. Die Erfahrung zeigt, dass um die antistatischen Kriterien zu erfullen, ein Product unter normaler Gegebenheiten wahrend der gesamten Lebensdauer einen Widerstands-Wert unter 100 MOhm aufweisen sollten. 100 KOhm wurden aus unterer.

Widerstands-Wert eines Neuprodukts festgelegt, um einen sicheren Schutz gegen eine gefahliche elektrische Aufladung oder den elektrischen Ruckschlag von elektrogeraten, die bei einem Betrieb von 250V einen Schaden erleiden, zu gewahrleisten. Jedoch sollte man bedenken, dass der vom Schuh geleistete Schutz unter bestimmten Bedingungen unwirksam sein kann und es sollten stets andere Sicherheitsmassnahmen zum Schutz des Verbrauchers ergriffen werden. Wenn es wird eine Einlegesohle zwischen der Fusssohle und der Schuhsohle verwendet, sollten die elektrischen Eigenschaften der Gesamtheit Schuh +Sohle nochmals uberpruft werden.

### EUROPAISCHE VORSCHRIFTEN FUR SCHUTZ UND SICHERHEIT AN FUSS UND BEIN.

EN ISO 20344:2011. Grundlegende Norm uber und Prufverfahren fur Sicherheitsschuhe und Arbeitsschuhe. Davon werden folgende Vorschriften abgeleitet:

EN ISO 20345:2011. Anforderungen und Spezifikationen fur Sicherheits- und Berufsschuhe, deren Zehenschutzkappe uber eine Widerstandskraft von 200 Joule und einer Kompression von 15 kN verfugen muss.

EN ISO 20346:2011. Anforderungen und Spezifikationen fur Sicherheits- und Berufsschuhe, deren Zehenschutzkappe uber eine Widerstandskraft von 100 Joule und einer Kompression von 10 kN verfugen muss.

EN ISO 20347:2012. Anforderungen und Spezifikationen fur Berufsschuhe,

### SCHUTZARTEN.

P: Durchtrittssicherheit bis zu 1.100 N.

WRU: Wasserdurchtritt und Wasseraufnahme. (EN ISO 20344; 0.2 g-30%).

C: Leitfahige Schuhe. (EN ISO 20344-<100 M).

HRO: Sohle mit Verhalten gegenuber Kontaktwarme. (EN ISO 20344; 300 C/ 1 min).

E: Energieaufnahmevermogen im Fersenbereich. (EN ISO 20344; 20 J).

CI: Kalteisolierung.

A: Antistatische Schuhe, Widerstand zwischen 0,1 MOhm. Und 100 MOhm.

SB: Schuhe mit Zehenschutzkappe (200 Joule und einem Druck bis zu 15 KN) ohne spezielle Anforderungen. Die Sohle ist Kraftstoffbestandigkeit.

$$S1 = SB + A + E \quad ; \quad S2 = S1 + WRU \quad ; \quad S3 = S2 + P$$

SRA: Rutschhemmung auf Boden aus Keramikfliesen mit SLS (Natriumlaurylsulfatlosung).

SRB: Rutschhemmung auf Stahlboden mit Glycerol.

SRC: Rutschhemmung auf Boden aus Keramikfliesen mit SLS und auf Stahlboden mit Glycerol.

## USO E MANUTENÇÃO. REGLAMENTO UE 2016/425

A vida útil do calçado está diretamente relacionada às condições de uso e qualidade da manutenção. Portanto, o usuário deve proceder a verificações regulares sobre o estado para garantir a sua eficácia.

Nessas condições, o fabricante aconselha mudar de meias diariamente, arejar o calçado durante a utilização, sempre que possível, de preferência com alternância entre dois pares de sapatos, especialmente em casos de transpiração importante, não reutilizar os sapatos de outra pessoa, limpar regularmente o corte e a sola, secar quando molhadas, não expor a temperaturas superiores a 50°C, armazenamento em local seco e arejado, em sua caixa de papelão. É recomendado descartar os sapatos quando se observa desgaste acentuado do relevo da sola.

OEPI se compõe materiais de qualidade com certas propriedades que o tornam muito resistente à passagem do tempo, se forem devidamente mantidas.

E recomendado levar o EPI num saco ou caixa individual. O EPI foi concebido em conformidade com a Diretiva 89/686/CEE e REGLAMENTO EU 2016/425. Os rendimentos obtidos nos ensaios técnicos são plenamente satisfatórios com base à Norma EN 344-7; EN ISO 20344-7. Estes retornos são suportados pelo certificado adequado emitido por INESCOP (0160) e CIMAC (0465).

## CALÇADO ANTIESTÁTICO E CONDUCTOR.

O calçado antiestático deve de ser usado onde é necessária para reduzir o acúmulo de cargas eletrostáticas, evitando riscos de ignição por faísca de substâncias diferentes e seus vapores, e os riscos associados com a não remoção completa das cargas elétricas das máquinhas.

A experiência mostra que para atender as necessidades antiestático, o caminho de descarga através de um produto deve estar em condições normais, uma baixa resistência ao 1.000MΩ durante a vida útil do produto.

O valor de 100MΩ é o limite de resistência do produto em estado de novo, a fim de assegurar uma proteção fiável contra riscos de choque elétrico ou contra ignição nos casos em que um aparelho quebra quando operando em tensões que chegam até 250 V. No entanto, sob certas condições, o usuário deve estar ciente de que a proteção conferida pelo calçado pode ser ineficaz e que outros meios devem ser utilizados para proteger o usuário em todos os momentos. Durante o uso não deve apresentar qualquer elemento de isolamento entre o modelo e o pé do usuário. Se você usar qualquer tipo de elemento impressada entre a sola e a palmilha do calçado é aconselhável verificar as propriedades elétricas dos calçados + palmilha.

O poliuretano é uma composição química dos dois materiais, polioli e isocianato, estes dois produtos ao longo do tempo são decompostos pela migração do material que os une. Depois de dois ou três anos de fabricação podem começar a deteriorar-se as solas PU.

## LEGISLAÇÃO EUROPEIA.

EN ISO 20344:2011 Junta os requisitos e métodos de ensaio para calçados de segurança, proteção do trabalho e para uso profissional. É a regra básica. Dele derivam:

EN ISO 20345:2011. Junta as especificações para o calçado de segurança para uso profissional, a biqueira deve resistir a um impacto levando a uma energia equivalente a 200 Joules e compressão de 15 kN.

EN ISO 20346:2011. Junta as especificações para o calçado de proteção para utilização profissional, a biqueira deve resistir a um impacto levando a uma energia equivalente a 100 Joules e compressão de 10 kN.

EN ISO 20347:2012. Junta as especificações para o calçado de trabalho para uso profissional.

## CLASES DE PROTEÇÃO.

P: Resistência à perfuração de até 1.100 N.

WRU: Resistência à penetração de água e absorção do corte. (EN ISO 20344; 0.2 g-30 %).

C: Calçado com menor resistência elétrica A100 MΩ.

HI: Calçado que proporciona isolamento contra o calor do chão. (EN ISO 20344; 22°C/30 min).

E: A absorção de energia no calcanhar. (EN ISO 20344; 20 J).

CI: Calçado que proporciona isolamento contra o chão frio. (EN ISO 20344; 20 J).

A: Sapatos que dissipa cargas eletrostáticas. Resistência entre 0,1MΩ e 1000MΩ.

SB: Calçado de Seguridade com biqueira resistente a uma energia de impacto de 200 joules e compressão de até 15 KN: A sola é resistente aos hidrocarbonos.

$$S1 = SB + A + E \quad ; \quad S2 = S1 + WRU \quad ; \quad S3 = S2 + P$$

SRA: Resistência ao deslizamento num piso de telha cerâmica com detergente.

SRB: Resistência ao deslizamento num piso de aço com glicerina.

SRC: A resistência ao deslizamento num piso de telha cerâmica com detergente e piso de aço com glicerina.

## USO E MANUTENZIONE. REGOLAMENTO UE 2016/425

La durata delle calzature 3 direttamente legato alle condizioni di utilizzo e qualit3 della manutenzione. Pertanto, l'utente deve effettuare controlli regolari sul tuo stato di garantire la sua efficacia. Se si notano danni durante il suo utilizzo, riparazione o modifica, se possibile, o altrimenti sarebbero buttati via. Il produttore consiglia, calzini cambio giornaliero, ventilare le calzature per l'uso, ove possibile, preferibilmente utilizzando alternano tra due paia di scarpe, soprattutto nei casi di sudore notevole, non riutilizzare i panni di un'altra persona, pulire regolarmente il taglio e la unica, secca quando bagnato, non esporre a temperature superiori a 50°C, conservare in un luogo asciutto e ventilato nella vostra scatola di cartone, eliminare le scarpe sono suggeriti quando l'usura si osserva accentuato rilievo della suola.

L'EPI 3 composto di materiali con determinate propriet3 che lo rendono molto resistente al passaggio del tempo, se correttamente gestito.

EPI si consiglia di prendere una borsa o box individual. L'EPI 3 stato progettato in conformit3 della direttiva 89/686/CEE e REGOLAMENTO UE 2016/425. rendimenti conseguiti nelle prove tecniche sono del tutto soddisfacenti basa sulla norma EN 344-7; EN ISO 20344-7. Queste dichiarazioni sono supportate da un adeguato certificato rilasciato da INESCOP (0160) e CIMAC (0465).

## CALZATURE ANTISTATICO E CONDUTTORE.

Il calzature antistatiche essere utilizzato quando 3 necessario per ridurre l'accumulo di cariche elettrostatiche, evitando i rischi di accensione a causa di scintille di diverse sostanze e dei loro vapori, e il rischio legati alla mancata rimozione completa delle macchine scariche elettriche.

L'esperienza dimostra che per soddisfare le esigenze antistatico, il percorso di scarica attraverso un prodotto deve essere in condizioni normali, una ridotta resistenza alle 1.000MΩ per tutta la durata del prodotto.

Un valore specificato come 100MΩ limite inferiore della resistenza del prodotto allo stato nuovo, al fine di garantire una protezione affidabile contro i rischi di scosse elettriche o contro l'accensione nei casi in cui un apparecchio che si rompe durante il funzionamento a tensioni che arrivano fino a 250 V. Tuttavia, a determinate condizioni, devono essere consapevoli che la tutela accordata dalla scarpe potrebbe essere inefficace e che altri mezzi devono essere utilizzati per proteggere l'utente in ogni momento. Durante l'uso, non introdurre alcun elemento di isolamento tra la calzata e il piede dell'utente. Se si utilizza qualsiasi tipo di modello inserita tra la suola e il sottopiede della calzatura 3 consigliabile controllare le propriet3 elettriche di tutte le calzature + calzatura.

Poliuretano 3 una composizione chimica dei due materiali, poliolo e isocianato, questi due prodotti nel corso del tempo sono decomposti dalla migrazione del materiale che li lega. Dopo due o tre anni di produzione pu3 iniziare deterioramento della suole PU.

## LEGISLAZIONE EUROPEA.

EN ISO 20344:2011. raggruppa i requisiti e metodi di prova per calzature di sicurezza, la protezione del lavoro e di uso professionale. E 'la regola di base. Che ne deriva:

EN ISO 20345:2011. raggruppa le specifiche per le calzature di sicurezza per uso professionale, che deve sopportare un impatto che porti ad un equivalente di energia di 200 Joule e la compressione di 15 kN.

EN ISO 20346:2011.raggruppa le specifiche per le calzature di protezione per uso professionale che deve resistere a un impatto che porti ad un equivalente di energia di 100 Joule e la compressione di 10 kN.

EN ISO 20347:2012 .raggruppa le specifiche per le calzature di lavoro per uso professionale.

## CLASSI DI PROTEZIONE.

P: resistenza alla perforazione fino a 1.100 N.

WRU: Resistenza alla penetrazione dell'acqua e l'assorbimento di taglio (EN ISO 20344; 0.2 g-30 %).

C: Calzature con bassa resistenza elettrica A100 Megaohmios.

HI: calzature che fornisce l'isolamento contro il calore dal pavimento. (EN ISO 20344; 22° C / 30 min).

E: L'assorbimento di energia nel tallone. (EN ISO 20344; 20 J).

CI: calzature che fornisce l'isolamento contro il freddo pavimento.(EN ISO 20344; 10°C/30 min).

A: Scarpe che dissipa le cariche elettrostatiche. Resistenza tra 0,1MΩ e 1000MΩ.

SB: calzature di sicurezza con punta resistente ad una energia di impatto di 200 Joule e di compressione fino a 15 KN: La suola 3 resistente agli idrocarburi.

$$S1 = SB + A + E \quad ; \quad S2 = S1 + WRU \quad ; \quad S3 = S2 + P$$

SRA: Resistenza a scivolare sul pavimento di piastrelle in ceramica con un detergente.

SRB: Resistenza a scivolare sul pavimento in acciaio con glicerina.

SRC: Resistenza a scivolare sul pavimento di piastrelle in ceramica con un detergente e pavimento in acciaio con glicerina.

“La resistencia a la perforación de este calzado se ha medido en laboratorio con un clavo truncado de 4,5 mm de diámetro, ejerciendo una fuerza de 1100 N. Si se dan fuerzas mayores o clavos de menor diámetro aumentará el riesgo de que se produzca perforación. En tales circunstancias, deberían contemplarse medidas preventivas alternativas.

Actualmente se encuentran disponibles dos tipos genéricos de plantas resistentes a la perforación para calzado de protección: las plantas metálicas y las plantas no metálicas. Ambos tipos cumplen los requisitos de resistencia a la perforación establecidos por la norma marcada en el calzado, pero cada uno de ellos tiene ventajas o desventajas adicionales, entre las que se encuentran las siguientes:

**Plantas metálicas:** les afecta menos la forma del objeto afilado (es decir, el diámetro, la geometría, cómo de afilado sea el objeto), pero debido a las limitaciones del proceso de fabricación de calzado, no cubre toda la superficie inferior del zapato.

**Plantas no metálicas:** pueden ser más ligeras, más flexibles y ofrecer una mayor superficie de cobertura con respecto a las plantas metálicas, pero su resistencia a la perforación puede variar, dependiendo más de la forma del objeto afilado (es decir, el diámetro, la geometría, cómo de afilado sea el objeto).

Para más información sobre el tipo de planta resistente a la perforación que incorpora su calzado, contacte con el fabricante o proveedor que se indica en estas instrucciones”.

*“The penetration resistance of this footwear has been measured in the laboratory using a truncated nail of diameter 4,5 mm and a force of 1100 N. Higher forces or nails of smaller diameter will increase the risk of penetration occurring. In such circumstances alternative preventative measures should be considered.*

*Two generic types of penetration resistant insert are currently available in PPE footwear. These are metal types and those from non-metal materials. Both types meet the minimum requirements for penetration resistance of the standard marked on this footwear but each has different additional advantages or disadvantages including the following:*

**Metal:** *Is less affected by the shape of the sharp object / hazard (the diameter, geometry, sharpness) but due to shoemaking limitations does not cover the entire lower area of the shoe.*

**Non-metal** – *May be lighter, more flexible and provide greater coverage area when compared with metal but the penetration resistance may vary more depending on the shape of the sharp object / hazard (the diameter, geometry, sharpness).*

*For more information about the type of penetration resistant insert provided in your footwear please contact the manufacturer or supplier detailed on these instructions”.*

Factor de riesgo del entorno de trabajo	PROTECCION DEL CALZADO	LIMITES DE PROTECCION EN ISO 20345	LIMITES PROTECCION EN ISO 20347
Riesgos mecánicos: -Caída de objetos -compresión	-Tope  -Protección del metatarso  -Protección del tobillo	Resistencia impacto 200 J Resistencia compresión 15 KN 100 J  ≤ 10Kn valor medio y ≤15kn valor máximo	NO PROTEGE  100 J  ≤ 10Kn valor medio y ≤15kn valor máximo
Objetos punzantes Corte -objetos punzantes -sierra cadena	-Resistencia perforación  -Resistencia al corte -Resistencia corte sierra cadena	1.100 N clavo de 4.5 mm  Índice: ≥2.5 En función categoría y velocidad en m/s	1.100 N clavo de 4.5 mm  Índice: ≥2.5 En función categoría y velocidad en m/s
Vibración o choque (periodo largo andando y de pie)	Absorción de energía	20 J	20 J
Resbalamiento/deslizamiento	Resistencia al deslizamiento: Acero Baldosa	Tacón: 0.13; Plano 0.18 Tacón: 0.28; Plano 0.32	Tacón: 0.13; Plano 0.18 Tacón: 0.28; Plano 0.32
Riesgos eléctricos: -Trabajo eléctrico -Choque eléctrico	-Aislamiento eléctrico	Norma EN 50321	Norma EN 50321
-Electricidad inducida (manejo combustible, sustancias inflamables)	Calzado antiestático	0.1-1000 MΩ en seco y húmedo	0.1-1000 MΩ en seco y húmedo
Manipulación de explosivos	Calzado conductor	<0.1 MΩ en seco y húmedo	<0.1 MΩ en seco y húmedo
Calor: -Ambiente -Superficie caliente	Aislamiento al calor Resistencia al calor por contacto	HI: 22°C en 30 min HRO: 300°C en 1 min.	HI: 22°C en 30 min HRO: 300°C en 1 min.
-Llama	-Resistencia a la llama  -Aislamiento frente al calor  -Resistencia al calor por contacto  -Resistencia al calor radiante	Tras 10 s de exposición la llama se apaga/extingue a los 2 s (EN ISO 15090)  HI: 22°C en 30 min  HRO: 300°C en 1 min  HI3: Aumento térmico < 42 ° C en 10 min (EN ISO 15090)	Tras 10 s de exposición, la llama se apaga/extingue a los 2 s (EN ISO 15090)  HI: 22°C en 30 min  HRO: 300°C en 1 min.  HI3: Aumento térmico < 42°C en 10 min (EN ISO 15090)
Frío: -Ambiente -Superficie fría	Aislamiento al frío Aislamiento del piso	CI: 10°C en 30 min.	CI: 10°C en 30 min.
Humedad o condiciones húmedas -Gotas -Salpicaduras	Penetración/absorción de agua Resistencia agua calzado completo	0.2 g/30% ≤ 3 cm2	0.2 g/30% ≤ 3 cm2
Aceite/hidrocarburos	Resistencia hidrocarburos	Aumento volumen ≤12 %	Aumento volumen ≤12 %

## **MANUFACTURER'S GUIDANCE AND INSTRUCTIONS. EU REGULATION 2016/425.**

### **(USE AND MAINTENANCE (RD 1407 / 1992; 159 / 1995. Directive 89/686/ECC).**

**Manufacturer: CALZADOS ROBUSTA, S.L.**  
**Address: CARRETERA DE PREJANO, 72**  
**26580-ARNEDO**

#### **USE AND MAINTENANCE. (REGULATION EU 2016/425)**

The useful life of safety footwear is directly related to the conditions of use and quality of maintenance. Therefore, the user must check regularly on its state to ensure its effectiveness. If any damage is observed during its use, it will be repaired or reformed if possible, otherwise it will be discarded.

The manufacturer recommends:

- Changing socks daily.
- Leaving shoes to air out whenever possible, preferably using two pairs of shoes to alternate, especially in cases of important perspiration.
- Not reusing the shoes of another person.
- Regularly cleaning the upper and sole.
- Drying shoes out whenever they get wet and taking care not to expose the footwear to temperatures exceeding 50°C.
- Storing the pair in a dry and airy place.
- Transporting it preferably in its cardboard box.
- Discarding the shoes is recommended when accentuated wear of the relief of the sole is observed.

#### **ANTISTATIC AND CONDUCTIVE FOOTWEAR.**

Antistatic footwear and boots have to be used where it is required to reduce the accumulation of electrostatic charges in order to avoid the risks of ignition due to sparks of different substances and their vapors, as well as the risk associated with the incomplete removal of the electric charges in certain machines.

Experience has shown that the discharge path through a product under normal conditions requires an impedance of less than 1.000MΩ during the service life of the product in order to fulfil the antistatic requirements.

A value of 100MΩ is considered to be the minimum impedance of a new product in order to ensure reliable protection against electric shock hazard or against ignition if a malfunction occurs in an electrical equipment carrying voltage until 250V.

However, under certain conditions the user should be aware that the protection offered by the shoes could be ineffective and that other means should be used to protect the user at all times. During the use, should not be introduced any element of insulation between the inner-footbed and the user's foot. If an intermediate sole is placed between the sole of the foot and the sole of the shoe, the electrical properties of footwear + intermediate insole must be checked.

#### **EXPIRATION AND GUARANTEE**

Polyurethane is a chemical composition of two materials, polyol and isocyanate. These two products over the time are decomposed by the migration of the material that joins them. After three years from its manufacturing, it is possible that a deterioration of the soles of P.U. starts.

The applicable warranty for storage expiration is for PU / PU soles is 3 years, depending on storage conditions (humidity, heat, lack of light).

The applicable warranty for storage expiration for the soles of POLYURETHANE and RUBBER NITRILE is 7 years, depending on the storage conditions (humidity, heat, lack of light).

The upper materials (leathers, linings, textiles, safety elements, etc.): **DO NOT EXPIRE**

**The durability depends on the level of use, but in any case, its use should not exceed 2 or 3 years for bi-density polyurethane soles (UNE-CEN ISO / TR 18690: 2006).**

**The guarantee applicable to footwear is 1 year against any manufacturing faulty and in normal use with the proper maintenance of the user.**

The manufacturing date of the footwear (sole injection or manufacturing of the same) corresponds to that indicated on the watch located in the shank of the sole (in the center the year and around it the 12 months, marked with an arrow).

The manufacturing date of the upper is shown on the label sewn on the tongue (Year and Week).

**The traceability of the batch is indicated by the manufacturing date (upper and sole) and the production order indicated on the label placed on the primary packaging.**

This PPE is composed of materials with qualities that make it more resistant to ageing if it is properly preserved.

**It is recommended to transport the PPE inside a bag or an individual box.**

This PPE has been designed according to Directive 89/686 / ECC and its subsequent update in the Regulation 2016/425 EU.

The performances achieved in the technical tests are fully satisfactory based on the standards EN ISO 20344 and EN ISO 20345. These performances are guaranteed by the corresponding certificate issued by notified bodies, at European level according to ISO 17025.

## PROTECTION LEVEL

P: Puncture resistance up to 1,100 N.

WRU: Resistant to water penetration and absorption of the upper. (EN ISO 20344; 0.2 g-30%).

C: Footwear providing resistance to electricity under 100MΩ.

HI: Footwear providing thermal insulation against heat.(EN ISO 20344; 22°C/30 min).

E: Energy Absorption in the heel area. (EN ISO 20344; 20 J).

CI: Footwear providing insulation against cold. (EN ISO 20344; 10°C/30 min).

A: Shoes that dissipate electrostatic charges. Resistance between 0.1MΩ and 1000 MΩ.

HRO: Resistance to hot contact (300° C).

WR: Water resistant footwear.

SB: Safety footwear for professional use with toe cap that resist impacts up to 200 Joules and compression up to 15 KN. Sole resistant to hydrocarbons.

OB: Occupational footwear for professional used without safety toe cap.

$$S1 = SB + A + E \quad S2 = S1 + WRU \quad S3 = S2 + P$$

$$O1 = OB + A + E \quad O2 = O1 + WRU \quad O3 = O2 + P$$

SRA: Slip resistance on ceramic tile floor with detergent.

SRB: Slip resistance on steel floor with glycerin.

SRC: Slip resistance on ceramic tile floor with detergent and steel floor with glycerin.

For models marked with P or S3, the resistance to perforation of this footwear has been tested in the laboratory with a truncated nail of 4.5 mm diameter, exerting a force of 1,100 N. If larger forces or smaller diameter nails are given, it will increase the risk of penetration. In such circumstances, alternative preventive measures should be considered.

Currently, two generic types of inserts with piercing resistance are available for footwear: metallic inserts and non-metallic ones. Both types meet the requirements of resistance to penetration established by the standard marked on the footwear, but each of them has additional advantages or disadvantages, among which are the following:

Metallic inserts: are less affected by the shape of the sharp object (i.e. the diameter, the geometry, the sharpness of the object) but due to the limitations of the shoemaking process, does not cover the entire sole surface of the shoe.

Non-metallic inserts: they can be lighter, more flexible and offer a greater coverage surface compare to metal insert, but their resistance to perforation can vary, depending more on the shape of the sharp object (i.e. the diameter, the geometry, the sharpness of the object).

For more information about the type of piercing resistant insert your footwear contains, contact the manufacturer or supplier indicated in these instructions.

**ONLY RISKS FOR WHICH THE CORRESPONDING SYMBOL IS SHOWN ON THE SHOE ARE COVERED. ALL ELEMENTS ADDED LATER, CAN MODIFY PRODUCT CHARACTERISTICS.**

Footwear must be replaced according to UNE-CEN ISO / TR 18690: 2006 when it exists:

- The beginning of pronounced cracking that affects half the thickness of the upper.
- Severe abrasion of the upper or deformations on it.
- The sole shows cracks of more than 10 mm in length and 3 mm in depth.
- Upper / sole separation of more than 10 mm in length and 5 mm in width.
- Height of the sole in the flexion area less than 1.5 mm.
- It is convenient to manually check inside the footwear from time to time, in order to check the lining.

The EC type certificate indicates the name of the notified body and laboratory that submitted the model to the EC type examination, which may be, according to the case, INESCOP (Campo Alto Industrial Estate, Elda, SPAIN), INTERTEK (Center Court, Leicester, UK) or CIMAC (C / Brodolini, No. 19, Vigevano, ITALY).