STARLINE

Technical Data Sheet

STL-9910 & STL-9920 PU Boots

Starline boots are highly durable and waterproof, providing all-day comfort to the wearer.The soles of the boots are easy to clean, which helps prevent clogging that may occur under the boots. The boots also have anti-static and SRC anti-slip properties.Thanks to its shock absorbing heel, it provides comfortable use that can be felt throughout the day.

Marking Area
It contains all the information that must be given according to European norms.

Shoe Sole Material
PU/PU dual density, SRC grade professional outsole.

Technical Specifications

Design Type	D (STL-9910 Models) C (STL-9920 Models)
Outer Material	Khaki, White, Black, Yellow PU
Inner Lining	Khaki, Red PU Coated Fabric
Sole Material	PU/PU Double Density, SRC Professional Sole
Size Range	37-47 (EU), 4-12 (UK)
Weight	STL-9910-O4 1500 gr. (SIZE 41) STL-9910-S4 1700 gr. (SIZE 41) STL-9910-S5 1890 gr. (SIZE 41)
Packaging	5 Pairs / Box
Standards	EN ISO 20347:2012 (O4) EN ISO 20345:2011 (S4 and S5)

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PROTECTED AREA INFORMATION

Starline has O4, S4 and S5 boots that vary according to performance for certain working conditions and possible hazards in different usage areas.

Starline has O4, S4 and S5 boots for different usage areas.

O4

Without steel base and without steel toe

S4

It has a steel toe cap for protection against falling objects.

S5

It has steel midsole against the risk of punctures from the sole and steel toe cap for falling objects

STANDARD EXPLANATIONS

These boots are designed to protect the feet against mechanical hazards defined in PPE Regulation(EU) 2016/425. O4 boots have passed EN ISO 20347 (Personal Protective Equipment - Work Footwear) and S4 and S5 models have passed EN ISO 20345 (Personal Protective Equipment - Safety Footwear) tests.

CE **EN 20345:2011 (S4-S5)**
EN 20347:2012 (O4)

Usage Areas

- Construction and Building
- Automotive and Transportation
- Machinery
- Cleaning
- Fishing
- Logistics and Storage
- Plumbing
- Agriculture
- Recycle
- Mining

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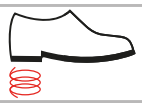
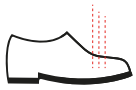
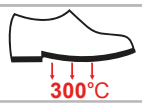
FEATURES

	SYMBOL	DEFINITION	DESCRIPTIONS
	**E**	Energy absorption in the heel area	The energy absorption of the heel strike zone of the heel of the foot when tested in a laboratory setting is not less than 20 J.
	**FO**	Oil resistant sole	When tested in laboratory, the increase in volume is not more than 12%.
	**A**	Antistatic shoes	Electrical resistance under dry conditions is not more than 100 kΩ and not less than or equal to 1000 MΩ; Electrical resistance at wet ambient conditions is not more than 100 kΩ and not less than or equal to 1000 MΩ.
	**P**	Shoe sole puncture resistance	The penetration resistant insert is placed inside the sole of the shoe so that it cannot be removed without destroying the footwear. This insert does not extend over and is not attached to the protrusion of the safety toe cap, except for the non-metallic inserts, which also function as insoles.
		Breathable Upper	Due to the breathable outer material, sweating of the feet is minimized.
	**WRU**	Resistance to water intake on the upper part of the shoe	When tested in the laboratory, the water penetration (expressed as the increase in mass of the absorbent fabric after 60 minutes) is not more than 0.2 g and the water absorption is not more than 30%.
		Steel Cap Toe (200J)	Steel toe caps are embedded in the shoe so that they cannot be removed without damaging the shoe.
	**SRC**	Slip Resistance	It has successfully passed slip resistance tests on ceramic floor tiles with NaLS and on glycerin steel floors.
	**HRO**	Hot Contact Resistance	When subjected to a test at 300oC in a laboratory environment, rubber and polymer-based outsoles do not melt and no cracks occur when bent around the mandrel.

ADDITIONAL FEATURES FOR SPECIAL APPLICATIONS WITH SYMBOLS SUITABLE FOR MARKING

FEATURES		CLASS		SYMBOL
		I	II	
Complete Footwear	Penetration resistance	X	X	P
	Electrical properties:			
	- Conductive footwear	X	X	C
	- Antistathic footwear	X	X	A
	- Electrically insulated footwear		X	EN 50321 bkz
	Resistance to unsuitable environmental conditions			
	- Insulation of the complete sole against the hot	X	X	HI
	- Insulation of the complete sole against the cold	X	X	CI
	Energy absorption of the heel press area	X	X	E
	Water resistance	X		WR
	Forefoot Protector	X	X	M
	Ankle Protector	X	X	AN
	Cut resistance	X	X	CR
Upper	Water penetration and absorption	X		WRU
Outsole	Hot cantact resistance	X	X	HRO
	Fuel oil resistance	X	X	FO
Note - The application of a feature to a particular classification is indicated by an X in this chart.				

STANDARD EXPLANATIONS

ISO 20347:2012 (Personal Protective Equipment Work Footwear)

This standard specifies basic and additional (optional) requirements for general purpose work shoes. For example, it includes mechanical risks, slip resistance, thermal risks, ergonomic behaviour. This standard also specifies the requirements for work shoes fitted with custom inner socks, custom work shoes or tailor made custom work shoes. This standard does not cover high visibility feature due to interacts with clothing (e.g. trousers cover shoes) and work area conditions (e.g. dirt, mud). Specific risks are covered by complementary business standards. (eg shoes for firefighters, electrically insulated shoes, protection against chainsaw injuries, protection against chemicals and molten metal splashes, protection for motorcycle riders).

ISO 20345:2011 (Personal protective equipment – Safety footwear)

This standard covers basic and additional (optional) requirements for general purpose safety footwear. For example, it includes mechanical risks, slip resistance, thermal risks and ergonomic behaviour. Special risks are covered by supplemental standards for work (eg fire (fireman) shoes, electrically insulated shoes, protection against chain saw cut injuries, protection against chemical and molten metal splashes, protection for motorcycle riders).

CLASSIFICATION OF FOOTWEAR

Over Knee Boots

CLASSIFICATION	DESCRIPTION
Clas I	Footwear made of leather or other materials, except those made entirely of rubber or of an all-polymer base.
Clas II	Footwear that is all rubber (eg fully vulcanised) or all polymer based (eg fully moulded).

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KEY FEATURES OF SAFETY FOOTWEAR

FEATURE		CLASSIFICATION	
		I	II
Design	Upper height	X	X
	Heel strike zone (Design B, C, D, E)	X	X
Complete Footwear	Sole performance:		
	- Fabrication	X	
	- Upper/outsole adhesion strength	X	
	Toe Protector:		
	- General	X	X
	- Inner lenght of toe protectors	X	X
	- Impact resistance	X	X
	- Compression resistance	X	X
	- Behavior of toe protectors	X	X
	Sealing		X
	Certain ergonomic features	X	X
	Slip resistance	X	X
	- Ceramic floor tile with NaLS^a slip resistance on the floor		
	- Slip resistance on steel substrate with glycerine^b		
	- Slip resistance on steel floor with glycerine and ceramic floor tile floor with NaLS.		
Upper	General	X	
	Thickness		X
	Tear strength	X	
	Rupture properties	X	X
	Flexing resistance		X
	Water vapor permeability and coefficient	X	
	pH value	X	
	Hydrolysis		X
	Chromium(VI) content Over Knee Boots	X	
Front Upper Lining	Tear strength	X	O
	Wear resistance	X	O
	Water vapor permeability and coefficient	X	
	pH value	X	O
	Chromium(VI) content	X	O
Gamba Lining	Tear strength	O	O
	Wear resistance	O	O
	Water vapor permeability and coefficient	O	
	pH value	O	O
	Chromium(VI) content	O	O
Sole Lining / Insole		X	O
Shoe Tongue	Tear strength	O	
	pH value	O	
	Chromium(VI) content	O	
Outsole	Design	X	X
	Tear strength	X	X
	Wear resistance	X	X
	Flexing resistance	X	X
	Hydrolysis	X	X
	Interlayer adhesion strength	O	O

Note 1 - The applicability of a feature for a particular classification is indicated by the letter X or O. The letter X means the feature must be met. In some cases, the property relates only to certain materials within the classification (for example, the pH value of leather components). This does not mean that other materials are excluded from use. The letter O means the property must be met if the component part is present. The absence of X or O indicates no attribute requirements.
Note 2 - For Class II footwear, it is usual not to have an insole lining. However, it cannot be applied if removable outcrops are used; only for leather material, the chromium (VI) and pH specifications are met.
Not 3 - Before molding, the fabric covering the mold is not considered a lining. One of the three characteristics of slip resistance must be met: **SRA,SRB,SRC**

MARKING CATEGORIES OF SAFETY FOOTWEAR

CATEGORY	KEY FEATURES	ADDITIONAL FEATURES
SB	I or II	
S1	I	Heel press area of closed heel Antistatic properties Energy absorption of the heel of the heel of the foot Resistance to fuel oil
S2	I	S1 + Water penetration and water absorption
S3	I	S2 + Penetration resistance + Threaded outsole
S4	II	Heel press area of closed heel Antistatic properties Energy absorption of the heel of the heel of the foot Resistance to fuel oil
S5	II	S4 + Penetration resistance + Threaded outsole
Note – For ease of marking, this chart has categorized the most common combinations and additional features of safety footwear.		

USER INFORMATION

Maintenance and Cleaning

Clean your boots regularly with the recommended high-quality cleaning processes for purpose. NEVER use caustic or abrasive cleaning agents. Do not use alcohol, solvents, gasoline, oil, chemicals or any other type of chemicals to clean boots.
It only provides a certain level of protection and care to the boots when the information and regulations in the user manual are fulfilled. The manufacturer declines all liability in case of misuse or maintenance.

Lifespan

The exact lifespan of the product will largely depend on how and where it is worn and cared for. Therefore, it is very important that you carefully inspect the boot before use and replace it when it is found that it is not suitable for wear. Due to many factors that are effective during use, it is not possible to determine the useful life of boots precisely. In general terms, a maximum of three years is foreseen for boots that are all polyurethane and only boots with a polyurethane sole.

Storage

When not in use, keep the boots away from extreme temperatures and store it in a well-ventilated area. Never store the boots under heavy objects or in contact with sharp objects. If the boots are wet, allow it to dry slowly and naturally, away from direct heat sources, before storing.

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STL-9910 & STL-9920 MODELS

STL-9910 STL-9920 STL-9910K STL-9920K STL-9920M

MODEL	SIZE	STEEL TOE	STEEL BASE	COLOR
STL-9910-O4	37-47	X	X	Khaki,White,Black,Yellow
STL-9910-S4	37-47	✓	X	Khaki,White,Black,Yellow
STL-9910-S5	37-47	✓	✓	Khaki,White,Black,Yellow
STL-9920-O4	37-47	X	X	Khaki,White,Black,Yellow
STL-9920-S4	37-47	✓	X	Khaki,White,Black,Yellow
STL-9920-S5	37-47	✓	✓	Khaki,White,Black,Yellow
STL-9910K-O4	37-47	X	X	Khaki,White,Black,Yellow
STL-9910K-S4	37-47	✓	X	Khaki,White,Black,Yellow
STL-9910K-S5	37-47	✓	✓	Khaki,White,Black,Yellow
STL-9920K-O4	37-47	X	X	Khaki,White,Black,Yellow
STL-9920K-S4	37-47	✓	X	Khaki,White,Black,Yellow
STL-9920K-S5	37-47	✓	✓	Khaki,White,Black,Yellow
STL-9920M-O4	37-47	X	X	Khaki,White,Black,Yellow
STL-9920M-S4	37-47	✓	X	Khaki,White,Black,Yellow
STL-9920M-S5	37-47	✓	✓	Khaki,White,Black,Yellow