

QINGDAO GUARDIAN SAFETY PRODUCT CO., LTD



Safety Shoes Test Report

Batch NO. :	WG20180404	Article No.	WG608	Size	36-49	Outsole	PU sole
Toe Cap	Steel	Upper Material	Genuine leather		Mid sole material	Steel	
Report No. :	WGSF180404				Production date	April, 2018	
Remark	Design type: PU INJECTION OUTSOLE						
Test Items		Norm	Requirements				Result
	Upper/outsole Bond Strength	EN ISO 20345 (5.3.1.2)	3.0N/mm. Bond strength \geq 4.0N/mm, if the sole was torn, bond strength \geq 3.0N/mm				Qualified
	Impact Resistance	EN ISO 20345 (5.3.2.3)	Clearance \geq 14.0mm for size 41&42. for each \pm 2size there should be \pm 0.5mm				Qualified

Whole Footwear	Compression Resistance	EN ISO 20345 (5.3.2.4)	Clearance \geq 14.0mm for size 41&42. for each \pm 2size there should be \pm 0.5mm	Qualified
	Nail Penetration Resistance	EN ISO 20345 (6.2.1)	. Nail Penetration for 力 \geq 1100N	Qualified
Upper	Tear strength	EN ISO 20345 (5.4.3)	Leather: \geq 120N;Coated fabric and textile: \geq 60N	Qualified
	Tensile strength	ENISO 20345 (5.4.4)	Tensile strength for leather split \geq 15N/mm ²	Qualified
	water vapor permeability and coefficient	ENISO 20345 (5.4.6)	water vapor permeability \geq 0.8mg/(cm ² .h) and coefficient \geq 15mg/cm ²	Qualified
Lining	Tear strength	ENISO 20345 (5.5.1)	Leather: \geq 30N;Coated fabric and textile: \geq 15N	Qualified
	Abrasion Resistance	ENISO 20345 (5.5.2)	No holing before 25600 cycles dry and 12800 cycles wet	Qualified
	water vapor permeability and coefficient	ENISO 20345 (5.4.6)	water vapor permeability \geq 2mg/(cm ² .h) and coefficient \geq 20mg/cm ²	Qualified
	Tear strength	ENISO 20345 (5.8.2)	Density \leq 0.9g/cm ³ , \geq 5kN/m	Qualified
	Abrasion Resistance	ENISO 20345 (5.8.3)	Density $>$ 0.9g/cm ³ , volumn loss \leq 150mm ³ Density \leq 0.9g/cm ³ , volumn loss \leq 250mm ³	Qualified
	Flexing Resistance	ENISO 20345 (5.8.4)	Cut growth \leq 4mm before 30000 flex cycles	Qualified
	Hydrolysis	ENISO 20345 (5.8.5)	Cut growth \leq 6mm before 150000 flex cycles	Qualified
	Interlay Bond strength	ENISO 20345 (5.8.6)	Bond strength \geq 4.0N/mm, if the sole was torn, bond strength \geq 3.0N/mm	Qualified

Outsole	Oil Resistance	ENISO 20345 (5.8.7)	volumn increase $\leq 12\%$, if volumn shrinks by $> 0.5\%$ or changes in hardness by > 10 shore A (> 10 IRHD). Oil Ross flex cut growth of $\leq 6\text{mm}$	Qualified
	Thickness of cleateoutsole	ENISO 20345 (6.4.2)	Thickness $\geq 4\text{mm}$	Qualified
	Cleat height	ENISO 20345 (6.4.3)	Cleat height $\geq 2.5\text{mm}$	Qualified
	Resistance to hot contact	ENISO 20345 (6.4.4)	。Rubber&polymeric outsole shall not melt and shall not develop any cracks when bent around the mandrel	Qualified
	Midsole hardness	SAINAST	40-45 SHORE A	Qualified
	Outsole hardness	SAINAST	55-72 SHORE A	Qualified
Tester: Zhou xiaoyan			Auditor: Tangmeng	Test date: April 4, 2018