

TECHNICAL SHEET



Article: **B1009 K-TWIST**
 Norm: **EN ISO 20347:2011**
 Safety Class: **O1 FO SRC**
 Footwear height: **Mod. A, H 87 mm (< 113 mm; Rif. EN ISO 20345 - 5.2.2)**
 Width: **11,5**
 Construction: **STROBEL; CEMENTED BIDENSITY SOLE PU/TPU**
 Cleaning and maintenance: Use only soft brushes and water. Do not use substances like alcohol, thinners, gasoline, oil or any other chemicals. Keep the footwear, dry and clean, in a proper place at room temperature.
 Suggested fields: **Ho.Re.Ca. care, services, transporting**

Entire footwear: components				
Component	Description	Value	Norm Requirements	EN ISO20345
Toe-cap	Impact resistance(200 J)	N/A	≥14 mm	5.3.2.3
	• Free height after impact			
	Compression resistance (15 kN)	N/A	≥14 mm	5.3.2.4
	• Free height after compression			
Sole (SRC)	Slip resistance	0,47 0,39 0,25 0,23	≥ 0,32 ≥ 0,28 ≥ 0,18 ≥ 0,13	5.3.5.4 5.3.5.4 5.3.5.4 5.3.5.4
	• SRA – Sole (entire sole)			
	• SRA – Heel (Angle of 7°)			
	• SRB – Heel (Angle of 7°)			
(P)	Puncture resistance	N/A	≥ 1100 N	6.2.1.1.2
Footbed (A)	Antistatic properties	dry 7,2 x 10 ⁷ Ω humid 3,7 x 10 ⁷ Ω	≥ 10 ⁵ Ω , ≤ 10 ⁹ Ω ≥ 10 ⁵ Ω , ≤ 10 ⁹ Ω	6.2.2.2 6.2.2.2
	• Electrical resistance			
Sole/Upper Heat (HI)	Thermal insulation	N/A	≤ 22°C	6.2.3.1
	• Insole temperature increase			
Cold (CI)	• Insole temperature decrease	N/A	≤ 10°C	6.2.3.2
	Heel (E)	Shock-absorption in the heel region	32 J	≥ 20 J
(WR)	Water resistance (Water absorption)	N/A	≤ 3 cm ²	6.2.5
(M)	Metatarsal protection	N/A	≥ 40 mm	6.2.6

Upper				
Component	Description	Value	Norm Requirements	EN ISO 20345
Fabric B1009	Tear resistance	90 N	≥ 60 N	5.4.3
	Traction resistance	N/A	≥ 15 N/mm ²	5.4.4
	Water steam permeability	7,7 mg/cm ² h	≥ 0.8 mg/cm ² h	5.4.6
	Water steam coefficient	69,8 mg/cm ²	≥ 15 mg/cm ²	5.4.6.
	pH value	N/A	≥ 3,2	5.4.7
	Chromium VI	N/A	Not detectable	5.4.9
	Water passed	N/A	≤ 0.2 g	6.3
	Water absorption	N/A	≤ 30%	6.3

Lining				
Component	Description	Value	Norm Requirements	EN ISO 20345
	Tear resistance	47 N	≥ 15 N	5.5.1
	Abrasion resistance	• Dry : the surface shows no holes	No holes till 51.200 cycles	5.5.2
3D fabric	• humid: the surface shows no holes	• humid: the surface shows no holes	No holes till 25.600 cycles	5.5.2
	Water steam release	21,1 mg/cm ² h	≥ 2,0 mg/cm ² h	5.5.3
	pH value	N/A	Not detectable	5.5.4
	Chromium VI	N/A	Not detectable	5.5.5

Insole				
Component	Description	Value	Norm Requirements	EN ISO 20345
TNT	Thickness	2 mm	≥2,0 mm	5.7.1
	pH value	N/A	Not detectable	5.7.2
	Water absorption	92 mg/cm ²	≥ 70 mg/cm ²	5.7.3
	Water release	90 %	≥ 80 %	5.7.3
	Abrasion resistance (after 400 cycles)	No damage	Damage ≤ to norms reference	5.7.4.1
	Chromium VI	N/A	Not detectable	5.7.5

Removable footbed*				
Component	Description	Value	Norm Requirements	EN ISO 20345
Dry'n Air Omnia	Thickness	3,5± 0,5 mm (tip) 9 ± 0,5 mm (heel)	N/A	5.7.1
	pH value	N/A	Not detectable	5.7.2
	Water absorption	Permeable through the holes	Permeable or ≥ 70mg/cm ²	5.7.3
	Water release	Permeable through the holes	Permeable or ≥ 80%	5.7.3
	Abrasion resistance	No damage	Dry no holes till 25600 cycles Humid no holes till 12800 cycles	5.7.4.2
	Chromium VI	N/A	Not detectable	5.7.5

*Footwear also compatible with DRY'N AIR SCAN&FIT OMNIA and DRY'N AIR GEL footbeds

Sole				
Component	Description	Value	Norm requirements	EN 20345
Midsole PU;	Sole thickness without profile	7,5 mm	≥ 4 mm	5.8.1.1
	Profile height	5 mm	≥ 2,5mm	5.8.1.3
	Tear resistance	8,8 kN/m	≥ 8 kN/m	5.8.2
	Abrasion resistance	149 mm ³	≤ 150 mm ³	5.8.3
Outsole TPU	Flexion resistance	2 mm	≤ 4 mm	5.8.4
	Hydrolysis	2,5 mm	≤ 6mm	5.8.5
	Sole thickness without profile	4,4	≤ 4 N/mm; (*) ≤ 3 N/mm with sole ripping	5.8.6
	(HRO) (Contact heat resistance 300°C)	No damage	No damage (melting, breaking)	6.4.1
	(FO) Fuel resistance (volume changes)	N/A	≤ 12%	6.4.2

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