



DOC. NO.	REVISION	ISSUE	DATE
QF/RD/05	08	02	16-12-22

SAFETY SPECTACLES ES 001



CERTIFIED TO IS 5983:1980, EN 166:2001 & ANSI Z 87.1-2010

1	GENERAL PARAMETERS	DESIGN	Frameless, wraparound spectacle
		APPLICATION	All industrial settings where dust/flying particles protection or ultraviolet protection is required
		LENS COLOUR OPTIONS	Clear, Smoked, Clear Anti-fog
		MECHANICAL HAZARD PROTECTION	Frontal, lateral impact resistance Lateral protection
		OPTICAL HAZARD PROTECTION	99.9% UV Protection
		MATERIALS	Lens – Class 1 Polycarbonate Temples – Polycarbonate
		OPTICAL CLASS	Class 1
		LENS SCALE FOR CLEAR LENS	3-1.2 K 1 FT 0 CE V
		COATINGS	Hard coated for scratch resistance or Antifog
		WEIGHT	< 26 gms approx.
2	VITAL TEST COMPLIANCE	MECHANICAL HAZARD PROTECTION	Resistance to low impact energy of high-speed particles at extremes of temperature: Withstands the impact of a 6mm nominal diameter steel ball, weighing 0.86 gm at a speed of 45 m/s (as per EN166:2001) and 50.9m/s (as per ANSI Z87.1) The impacts are carried out after conditioning the eyewear to temperatures of $(55 \pm 2) ^\circ\text{C}$ and $(-5 \pm 2) ^\circ\text{C}$

HIGH MASS IMPACT	As per ANSI Z87.1 Standard a 500g projectile made of steel and shall have a 30° conical tip with a 3.18 mm spherical radius and have a diameter of 25 mm is dropped over the head-form, tip down, at the designated test height of 127 cm.
INCREASED ROBUSTNESS	As per EN166 Standard steel ball when dropped from a height of 1.27 – 1.31 mtrs. With stands the impact of 22 mm nominal diameter, weighing 44gm.
PENETRATION TEST	As per ANSI Z87.1 Standard, A pointed projectile 44.2g shall be freely dropped through the guide tube, point downward within a 20 mm circle centered in front of each eye of the headform, two on the left viewing area and two on the right viewing area.
OPTICAL HAZARD PROTECTION	99.9% UV protection Transmittance (280-380 nm) < 0.1%
OPTICAL PROPERTIES	Spherical Refractive Power of Clear Lens within ± 0.06 m-1
	Astigmatic Refractive Power of Clear Lens ± 0.06 m-1
	Prismatic Refractive Power for Clear & Smoked Lens- Horizontal base out ≤ 0.75 cm/m; Base in ≤ 0.25 cm/m; Vertical ≤ 0.25 cm/m
	Max spectral transmittance in UV-313nm of Clear Lens- 0.0003%
	Max spectral transmittance in UV-365nm of Clear Lens- 10%
	Luminous transmittance in visible spectra of Clear Lens- 74.4-100% (As per EN166:2001), 85-100% (As per ANSI Z87.1)
HAZE	As per ANSI Z87.1 Standard Clear Plano lenses shall not exhibit more than 3% haze
CORROSION RESISTANCE	No corrosion observed on metal parts of spectacle when tested as per EN 166 and ANSI Z87.1 standards
FLAME RESISTANCE	Spectacle did not ignite when tested as per EN 166 and ANSI Z87.1 standards.