EN ISO 16321-1 MARKINGS

BOLLÉ SAFETY EYEWEAR BEARS LENS AND FRAME MARKINGS THAT ARE SPECIFIC TO EACH PRODUCT. EN ISO 16321 WILL GRADUALLY REPLACE THE PREVIOUS EN166 STANDARDS ON ALL OF OUR PRODUCTS.

ALL OF OUR NEW PRODUCTS WILL BE EN ISO 16321-1 CERTIFIED BY JANUARY 1ST 2025.

LENSMARKING

UL1,2 DT 1 KN CE

- BOLLÉ SAFETY
- SHADE TYPE
- LIGHT DETECTION
- SCALE NUMBER
- IMPACT RESISTANCE
- EXTREME TEMPERATURE
- OPTICAL CLASS
- EU CERTIFICATION

FRAME MARKING

16321 UL1,2 DT 1-M 3 6 4 CE

- STANDARD
- BOLLÉ SAFETY
- LENS COMPATIBILITY
- IMPACT RESISTANCE
- EXTREME TEMPERATURE
- HEADFORM TESTED
- DROPLETS
- LIQUIDS
- LARGE DUST
- EU CERTIFICATION

EN166
EN ISO 16321-1

Though most markings are similar between EN166 and EN ISO 16321, You will find hereafter a list of the main changes between the two standards.

PROTECTION AGAINST LIQUIDS: While liquids were encompassed in the '3' marking under EN166, they now have their own marking under EN ISO 16321 («6») displayed on the frame.

SPEED OF IMPACT RESISTANCE: The speed in m/s for the impact resistance has been reduced for the equivalent of the «B» & «A» markings («D» & «E» under ISO 16321).

HEADFORM: It is now required to display on the frame the headform (type & size) used.

ELECTRICAL RESISTANCE: The «8» marking no longer exists. It is not replaced.

CHEMICAL RESISTANCE: Chemical resitance can now be tested on lens and frame («CH» marking)

RADIANT HEAT RESISTANCE: Tests the variation of heat on outer and inner side of the lens when in front of a heat source (*interesting for heat reflective shields*)

LENS COMPATIBILITY: Frame must now display the lens versions the frame is compatible with, even if the lens may not be dismounted/replaced.

LENS MARKING

SUBJECT		DEFINITION	DISPONIBLE IN*			SIMILARITY EN166
			Glasses/ OTG	Goggles	Faceshields	
Shade Type & Scale Number	W	Lens includes **W**elding filter (scale varies from 1.2 to 16)	✓	✓	✓	-
	U	Lens includes **U**V filter (scale varies from 1.2 to 5)	✓	✓	✓	2
	R	Lens includes I**R** filter (scale varies from 1.2 to 10)	✓	✓	✓	4
	G	Lens includes sun**G**lare filter (scale varies from 0 to 4)	✓	✓	✓	5 or 6
Light Detection	L	The lens shade does not affect the detection of colour and **L**ights	✓	✓	✓	C
Impact Resistance	HM	**H**igh **M**ass impact: resists a 25.4mm tip projectile, 500g, falling 1.27m	✓	✓	✓	-
	C	Low energy impact: resists a 6mm, 0.86g ball at 45m/s	✓	✓	✓	F
	D	Medium energy impact: resists a 6mm, 0.86g ball at 80 m/s		✓	✓	B *(120m/s)*
	E	High energy impact: resists a 6mm, 0.86g ball at 120 m/s			✓	A *(190m/s)*
Extreme Temperature	T	Resistance to high speed particles at extreme **T**emperatures (-5°C / 55°C)	✓	✓	✓	T
Optical Class	1	Enhanced optical performance	✓	✓	✓	1
Abrasion	K	Resistance to surface damage by fine particles	✓	✓	✓	K
Fogging	N	Resistance to fogging (50°C / 8 sec.)	✓	✓	✓	N
Chemicals	CH	Resistance to **CH**emicals	✓	✓	✓	-
Thermal risk	7	Radiant heat			✓	-
	9	Molten metal and hot solids			✓	9

FRAME MARKING

SUBJECT		DEFINITION	DISPONIBLE IN*			SIMILARITY EN166
			Glasses/ OTG	Goggles	Faceshields	
Lens Compatibility	...	List of all the compatible lenses certified with the frame	✓	✓	✓	-
Impact Resistance	HM	**H**igh **M**ass impact: resists a 25.4mm tip projectile, 500g, falling 1.27m	✓	✓	✓	-
	C	Low energy impact: resists a 6mm, 0.86g ball at 45m/s	✓	✓	✓	F
	D	Medium energy impact: resists a 6mm, 0.86g ball at 80 m/s		✓	✓	B *(120m/s)*
	E	High energy impact: resists a 6mm, 0.86g ball at 120 m/s			✓	A *(190m/s)*
Extreme Temperature	T	Resistance to high speed particles at extreme **T**emperatures (-5°C / 55°C)	✓	✓	✓	T
Headform	1	Tests realised on a european size headform	✓	✓	✓	-
	2	Tests realised on an asian size headform	✓	✓	✓	-
	S	Tests realised on a small size headform	✓	✓	✓	H
	M	Tests realised on a medium size headform	✓	✓	✓	-
	L	Tests realised on a large size headform	✓	✓	✓	-
Environmental Risk	3	Protection against droplets		✓	✓	3
	4	Protection against large dust particles		✓		4
	5	Protection against gas and thin particles		✓		5
	6	Protection against streams of liquids (Pressure: 170kPa)		✓	✓	3
Thermal Risk	7	Radiant heat			✓	-
	9	Molten metal and hot solids			✓	9
Chemicals	CH	Resistance to **CH**emicals	✓	✓	✓	-

DISCOVER MORE INFORMATION ABOUT OUR TESTS AND MARKINGS

WARNING

If the C, D, E and T symbols do not apply to both the lens and frame, then the lowest level must be assigned to the complete protective eyewear.

* The possible markings varry depending on the protection area of the said product. For simplicity, we considered glasses and OTG as OPZ, goggles as EOZ, and faceshield as FPZ.