



EYE PROTECTION

SEPTEMBER 2016



Dromex

www.dromex.net



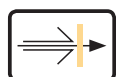
BASIC REQUIREMENTS of CE EN 166:2001

The EN166 standard is applicable to all types of personal eye protectors used against various dangers liable to damage the eye or to alter the vision, with the exception of radiation of nuclear origin, X-rays, laser beams, infrared rays emitted by sources at low temperature. The specifications of this standard are not applicable to eye protectors for which separate and complete standards exist, such as anti-laser eye protector, all-purpose solar spectacles, etc.

The eye protectors fitted with corrective lenses are not excluded from the application field. Not all types of eye protectors are permitted to meet all these requirements.

-  **Identify:** The potential hazards (hazardous light, impacting particles, splashes etc).
-  **Assess:** The hazards and potential health risks and consider other requirements such as skin protection etc.
-  **Select:** The proper eye protector suitable for the hazards. This is made easy using the EN 166 marking system.
-  **Training:** This is a very important step to optimise eye protection by ensuring the operator is proficient in the use and limitations of his/her eye protector.

BASIC TESTS & MARKINGS



DESIGNATION OF FILTERS SCALE NUMBER - OCULAR (1 – 6)

Scale Number - for oculars with filtering effect only. Higher numbers have a stronger filtering effect (e.g. are darker for welding).

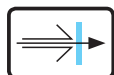
NIL. Welding filters have no code number. A shade number between 1, 2 and 16. Suffix "a" denotes filter for use in gas welding with flux. See EN 169 and EN 379.

- 2 Ultraviolet Filter with colour recognition effected**
– plus shade number between 1, 2 to 5 as per EN 170.
- 3 Ultraviolet Filter with good colour recognition**
– plus shade number between 1, 2 to 5 as per EN 170.
- 4 Infra Red Filter as per code number for IR filters**
– plus shade number between 1, 2 and 10 as per EN 171.
- 5 Sunglare Filter code number for sunglare filters without IR specification**
– plus shade number between 1, 1 and 4, 1 as per EN 172 and EN 1836.
- 6 Sunglare Filter code number for sunglare filters with IR specification**
– plus shade number between 1, 1 and 4, 1 as per EN 172 and EN 1836.



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ORDER OF MARKING ON OCULARS WHERE RELEVANT:



Scale number
(filters only)



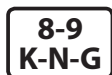
Makers mark



Optical class



Mechanical
strength



Fields of use



Scratch
resistance



Fog resistance



Radiant heat

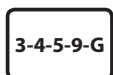
ORDER OF MARKING ON FRAMES WHERE RELEVANT:



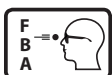
Makers mark



The Standard



Fields of use



Mechanical
strength

LENS SELECTION AND APPLICATION:

Clear		general indoor use eye protection against impact hazards	
Grey		sunglare 5-2,5	Outdoor Anti-glare lens use to prevent eye fatigue from sun glare
Amber		uv 2-1,2	Prevention of high density light (hdl) for contrast and rotational clarity
Green		sunglare 5-2,0	Prevent eye fatigue from indirect light flash
IR green		infrared 4-IR3 or 5	Used for certain welding & gas cutting techniques
Mirror		sunglare 5-1,7	Indoor/outdoor (i/o) for artificial and sunlight glare
Blue		sunglare 5-2,5	Outdoor Anti-glare lens use to prevent eye fatigue from sun glare



FIELD OF VISION (OPTICAL CLASS)

1 - $\pm 0,06$ DIOPTRES

2 - $\pm 0,12$ DIOPTRES

3 - $\pm 0,25$ DIOPTRES

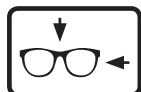
Optical class 1, 2 or 3 - indicates optical quality of the ocular and the wear duration

OCULAR (1 – 3)

PERMANENT WEAR

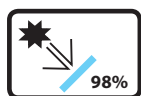
OCCASIONAL WEAR

EXCEPTIONAL WEAR



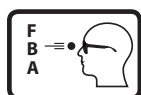
ROBUSTNESS

FRAME AND OCULAR are required to withstand specified lateral and frontal impacts at specified speeds



AGEING

FRAME AND OCULAR stability at elevated temperatures and ultraviolet radiation (oculars only)



HIGH SPEED PARTICLES

F – LOW ENERGY

B – MEDIUM ENERGY

A – HIGH ENERGY

S – INCREASED ROBUSTNESS

OCULAR (6mm STEEL BALL (0 86g))

45 m/s

120 m/s

190 m/s

(See optional below)



X X X

X

X

X X X



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OTHER FIELDS OF USE:



3 – LIQUIDS

Liquid droplets for goggles
Liquid splash for face shields but not mesh



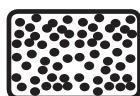
X

X



4 – LARGE (COARSE) DUST PARTICLES for goggles

X



5 – GAS & FINE DUST PARTICLES

X



8 – SHORT CIRCUIT ELECTRIC ARC

Face-shield to comply with a filter of scale number 2-1,2 or 3-1,2
and have a minimum thickness of 1,4 mm

X



9 – MOLTEN METAL & HOT SOLIDS

Both the frame and ocular shall be marked with this symbol together
with one of the symbols F, B or A

X

X



K – GAS & FINE PARTICLE DAMAGE

X



N – RESISTANCE TO FOGGING (8 seconds)

X

X

X

G – RADIANT HEAT (EN 1731)

X

S – INCREASED ROBUSTNESS (22mm ball at 5, 1 m/s)

X

X

X

T – EXTREME TEMPERATURE (-5 to 55°C)

X

X

X

Used in conjunction with either F, B or A to indicate that the eye protector
conforms to the high-speed particle classification at extremes of temperature



ANTI-SCRATCH

Optional anti-scratch coating to protect the eye protector



DV-353C-AFB



DV-353C-AFL



DV-353C-AFR

SPORTY COOL



PRODUCT INFORMATION

- Polycarbonate mono lens
- Cool sleek multi colour frame
- Ergonomic design to fit snug with the face contour
- Scratch resistant lens
- 180° lateral vision
- Anti-fog lens

COMPOSITION & APPLICATIONS

FIELD OF USE:

- EN166 F CE
- DV 2-1,2 1F N

Suitable for use in:

Laboratory, Instrumentation, Instrument Installations and Warehouse



DV-098C-AF

SPORTY RACER



PRODUCT INFORMATION

- Polycarbonate mono lens
- Multi coloured frame
- Soft foam piece for comfortable fit on the nose
- Ergonomic design to fit snug with the face contour
- Compatible with Respiratory equipment
- Adjustable temple
- Anti-fog lens
- Scratch resistant lens
- 180° lateral vision

COMPOSITION & APPLICATIONS

FIELD OF USE:

- EN166 F CE
- DV 2-1, 2 1F N

Suitable for use in:

Construction, Instrumentation, Instrument installations and General Industry



DV-894G-AF-B



DV-894G-AF-Y



DV-894G-AF-R

FOCUS



PRODUCT INFORMATION

- Polycarbonate dual lens
- Ergonomic multi colour temples
- Ergonomic design to fit snug with the face contour
- Compatible with respiratory equipment
- Anti-fog lens
- Scratch resistant lens
- 180° lateral vision

COMPOSITION & APPLICATIONS

FIELD OF USE:

- EN166 F CE
- DV 5-2, 5 1F N

Suitable for use in:

Outdoor use for glare, Forklift drivers and Construction



DV-29SM-AF



DV-29C-AF



DV-29A-AF



DV-29BLUE

BEAMER



PRODUCT INFORMATION

- Polycarbonate dual lens
- Silver plastic frame & temples with black rubber finish
- Soft nose seat for comfort
- Black sealed foam face protector
- Ergonomic design to fit snug with the face contour
- Compatible with respiratory equipment
- Anti-fog lens (Clear, Grey and Amber only)
- 180° lateral vision

COMPOSITION & APPLICATIONS

FIELD OF USE:

- EN166 F CE
- Clear: DV 2-1, 2 1 F N
- Grey: DV 5-2,5 1 F N
- Amber: DV 2-1, 2 1 F N
- Blue: DV 5-2,5 1 F

Suitable for use in:

General industry and safety officers



DV-026-A



DV-026-C
DV-026-C-AF



DV-026-GN



DV-026-G

EURO



PRODUCT INFORMATION

- Polycarbonate mono lens
- Black vinyl adjustable temples
- Ergonomic design to fit snug with the face contour
- Compatible with respiratory equipment
- Anti-fog lens (Clear only)
- Anti-glare lens (Amber, Grey & Green)
- Scratch resistant lens
- 180° lateral vision

COMPOSITION & APPLICATIONS

FIELD OF USE:

- EN166 F CE
- Clear: DV 1 F
- Clear Anit-fog: DV 1 FN
- Grey: DV 5-2,5 1F
- Green: DV 5-2 1F
- Amber: DV 2-1,2 1F

Suitable for use in:

Construction, Mining, Milling, Engineering Workshops and Factories



DV-026-IR3



DV-026-IR5



WELDING GOGGLES



PRODUCT INFORMATION

- Polycarbonate mono lens
- Black vinyl adjustable temples
- Ergonomic design to fit snug with the face contour
- Compatible with respiratory equipment
- Scratch resistant lens
- 180° lateral vision

COMPOSITION & APPLICATIONS

FIELD OF USE:

- EN166 F CE
- IR3: 3DV 1 F
- IR5: 5DV 1 F

Suitable for use in:

- Welding industry



DV-12G



DV-12C
DV-12C-AF



DV-12A-AF



DV-12GN



DV-12SM

SPORTY



PRODUCT INFORMATION

- Polycarbonate mono lens
- Wide black vinyl temples
- Ergonomic design to fit snug with the face contour
- Compatible with respiratory equipment
- Anti-fog lens (Clear & Amber)
- Anti-glare lens (Mirror, Green & Grey)
- Scratch resistant lens
- 120° lateral vision

COMPOSITION & APPLICATIONS

FIELD OF USE:

- EN166 F CE
- Clear: DV 1 F
- Clear Anti-fog: DV 1 FN
- Grey: DV 5-2,5 1F
- Green: DV 5-2 1F
- Amber: DV 2-1,2 1F

Suitable for use in:

Construction, Mining, Milling, Engineering Workshops, Factories, Warehouse and General Industries



DV-55C-AF



DV-55G-AF

CLASSICS



PRODUCT INFORMATION

- Polycarbonate dual lens
- Black vinyl adjustable temples
- Soft nose seat for comfort
- Ergonomic design to fit snug with the face contour
- Compatible with respiratory equipment
- Anti-fog lens
- Anti-glare lens (Grey)
- Scratch resistant lens
- 180° lateral vision

COMPOSITION & APPLICATIONS

FIELD OF USE:

- EN166 F CE
- Clear: DV 1 FN
- Grey: DV 5-2,5 1FN

Suitable for use in:

General industry and safety officers
Grey - Outdoor and Construction environment



DV-1GN



DV-1C



DV-1A

WRAP AROUNDS



PRODUCT INFORMATION

- Polycarbonate mono lens
- Polycarbonate temples with ventilation
- Ergonomic design to fit snug with the face contour
- Compatible with respiratory equipment
- Can be used with prescription spectacles
- Anti-glare lens (Green & Amber)
- Scratch resistant lens
- Over spectacle
- 120° lateral vision

COMPOSITION & APPLICATIONS

FIELD OF USE:

- EN166 F CE
- Clear: DV 1 F
- Green: DV 5-2 1 F
- Amber HDL: DV 2-1,2 1 F

Suitable for use in:

Overspecs and visitors glasses



DV-11



DV-21

GOGGLES



PRODUCT INFORMATION

- Clear polycarbonate mono lens
- 14 mm elasticated & adjustable headband
- High quality vinyl frame
- Ergonomic design to fit snug with the face contour
- Face contact area designed for comfort and seal
- Compatible with respiratory equipment
- Scratch resistant lens
- 120° lateral vision

COMPOSITION & APPLICATIONS

FIELD OF USE:

DV-11 (Direct Mesh Vent)

- Efficient direct micro ventilation system
- EN 166 FCE
- DV-1 F

DV-21 (InDirect Vent)

- Indirect dual ventilation system
- EN 166 FCE 3, 4, 9, B CE
- DV-1,9, B

Suitable for use in:

General workshops and Grinding



DV-001AM

GOGGLES



PRODUCT INFORMATION

- Clear polycarbonate mono lens
- 12 mm elasticated & adjustable headband
- High quality vinyl frame
- Ergonomic design to fit snug with the face contour
- Efficient indirect quad ventilation system
- Compatible with respiratory equipment
- Can be used with prescription spectacles
- Anti-fog lens
- Scratch resistant lens
- 90° lateral vision

COMPOSITION & APPLICATIONS

FIELD OF USE:

- EN 166 FCE
- DV-1 F N

Suitable for use in:

General workshops and Grinding



DV-004MAX

MAXI VIEW GOGGLES



PRODUCT INFORMATION

- Clear (EN170 2-1,2) polycarbonate mono lens
- 25 mm elasticated & adjustable headband
- High quality vinyl frame
- Ergonomic design to fit snug with the face contour
- Wide face contact area for comfort and seal
- Efficient indirect ventilation system
- Compatible with respiratory equipment
- Can be used with prescription spectacles
- Anti-fog lens
- Scratch resistant lens
- 180° lateral vision

COMPOSITION & APPLICATIONS

FIELD OF USE:

- EN 166 3, 4, 9, F N
- DV 2-1.2 1 F N

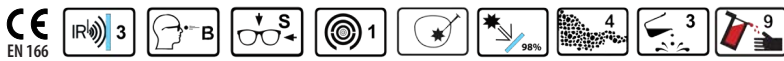
Suitable for use in:

Grinding, Woodwork and light chemical splashes



DV-GW5

WELDING GOGGLE



PRODUCT INFORMATION

- Polycarbonate mono lens
- Soft rubber face seal
- Efficient indirect ventilation system
- 11mm adjustable elasticated headband
- Ergonomic design to fit snug with the face contour
- Compatible with respiratory equipment
- Scratch resistant lens & Anti-mist lens
- 98° lateral vision

COMPOSITION & APPLICATIONS

FIELD OF USE:

- EN175:1997 3 4 9 B CE
- Y-S GB/T 3609 1 2008
- ES ANZI Z87 1

Suitable for use in:

- Welding industry



DV-326B-C-AF



DV-326B-G-AF



SPOGGLE



PRODUCT INFORMATION

- **Used as a spectacle or a goggle all in one!**
- Perscription lens inner attachment
- Polycarbonate mono lens
- Soft rubber face seal
- Efficient indirect ventilation system
- Detachable black vinyl adjustable temple
- Detachable 12mm adjustable elasticated headband
- Ergonomic design to fit snug with the face contour
- Compatible with respiratory equipment
- Complete with a detachable prescription (rx) lens contour
- Anti-fog lens
- Scratch resistant lens
- 180° lateral vision

COMPOSITION & APPLICATIONS

FIELD OF USE:

CLEAR

- EN 166 FCE
- Clear (DV 2-1.2 1 F N)

GREY

- EN 166 FCE
- Grey (DV 5-3.1 1 F N)

Suitable for use in:

General industry and light chemical splashes



DV-504

WIRE MESH

CE
EN 1731

PRODUCT INFORMATION

- Metal wire mesh dual lens
- Black vinyl adjustable temples
- Clear polycarbonate & removable side protectors
- Ergonomic design to fit snug with the face contour
- Compatible with respiratory equipment
- 90° lateral vision

COMPOSITION & APPLICATIONS

Suitable for use in:

Forrestry, Woodwork, Carpentry and Mining



ACCESSORIES

PRODUCT INFORMATION

BLACK UTILITY BAG

- Black polyester padded belt bag
- Dual webbing belt loops
- Zip up
- Clip connector

BLACK POUCH BAG

- Soft spectacle pouch cleaning bag
- Draw string close

COMPOSITION & APPLICATIONS

GREEN RETAINER CORD

- Green $\phi 3$ mm polyester cord
- Loop and spring temple attachment

BLACK RETAINER CORD

- Black $\phi 3$ mm fabric tube
- Sock temple attachment
- Toggle adjuster for snug fit