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3M™ GoggleGear™ 500 Series Safety Goggles

Technical datasheet



Product description

The 3M™ GoggleGear™ 500 series is a safety goggle with:

- ▶ Low profile design
- ▶ Scotchgard™ Anti-Fog coating
- ▶ Adjustable headband
- ▶ Optional prescription insert
- ▶ Neoprene headband on blue frame

Key features

- ▶ Optical class 1 lens for prolonged use
- ▶ Single piece ocular lens
- ▶ Scotchgard™ Anti-Fog coating providing protection against fogging and scratching, meeting K and N marking requirements of EN 166
- ▶ Designed to be worn with 3M™ GoggleGear™ prescription inserts
- ▶ Offers protection against UV radiation
- ▶ Scotchgard™ Anti-Fog coating provides scratch resistance and durability, even after multiple washes
- ▶ Blue frame version with neoprene headband can be autoclaved for use in cleanroom environments (based on internal testing)
- ▶ Weight 50g (approx.)

Product range

Description

3M™ GG501SGAF, clear polycarbonate lens with Scotchgard™ coating

3M™ GG502SGAF, grey polycarbonate lens with Scotchgard™ coating

3M™ GG550SGAF, welding Shade 5 polycarbonate lens with Scotchgard™ coating

3M™ GG501NSGAF, clear polycarbonate lens with Scotchgard™ coating and neoprene headband

3M™ GG500PI – prescription insert

Typical applications

- ▶ These products may be suitable for use in a wide variety of applications including:
- ▶ Industrial manufacturing
- ▶ Metal working
- ▶ Mining / oil and gas
- ▶ Construction
- ▶ Food industry
- ▶ Pharmaceutical
- ▶ General laboratory

Intended use

These products are intended for protection against a variety of hazards including liquid droplets (3), large dust particles (4), low energy impact (F) and medium energy impact (B) at extremes of temperature -5°C and +55°C (T) in accordance with EN 166:2001. These products also help protect against UV radiation in accordance with EN 170:2002.

The 3M™ GoggleGear™ lenses are also intended to give an enhanced level of protection against fogging and scratching from the Scotchgard™ coating which meets K rating for anti-scratch (AS) and N rating for anti-fog (AF) as per EN 166:2001.

Sterilisation by autoclaving - internal testing has been carried out on GG501NSGAF-EU samples subjected to 10x, 20x, 30x and 40x automatic cleaning and disinfection and sterilisation by autoclaving at 121°C. Testing was then carried out on the following properties:

- ▶ mechanical performance (BT)
- ▶ the anti-fog properties (K)
- ▶ the anti-scratch properties (N)
- ▶ optical performance (Class 1)

Based on the internal testing the claims remain valid.

NOTE: The GG550 lenses are assessed against EN 169:2002 for transmittance against welding filters. This product protects against high speed impact at medium energy at room temperature only.

Use limitation

- ▶ Never modify or alter this product
- ▶ Do not use this product against hazards other than those specified in this document
- ▶ These products are NOT designed to be worn over prescription spectacles

Standards and approval

These products are type examined by SATRA Technology Europe Ltd, Bracetown Business Park, Clonee, Dublin 15, Dublin, Ireland. Notified Body No. 2777

These products are CE marked to the requirements of the Community Directive 89/686/EEC or European Regulation (EU) 2016/425.

[GB only]: These products are type examined by SATRA Technology Centre Limited, Wyndham Way, Telford Way, Kettering, Northamptonshire, NN16 8SD, United Kingdom. Approved Body No. 0321

These products are UKCA marked and meet the requirements of Regulation 2016/425 on personal protective equipment, as amended to apply in GB.

The applicable legislation can be determined by reviewing the Certificate and Declaration of Conformity at www.3M.com/Eye/certs.

Materials listing

Component	Material
Lens	Polycarbonate
Frame (rigid)	Polypropylene
Frame (soft)	TPE
Headband (apart from GG501NSGAF)	Nylon fibre
Headband connector	Nylon
Headband (GG501NSGAF only)	Neoprene

Marking

The products have demonstrated compliance with the requirements of EN 166:2001 and associated standards and bear the following marks:

Product	Lens	Marking
GG501SGAF-EU	2C-1.2 3M 1 BT KN	3M EN 166 3 4 BT CE
GG501NSGAF-EU	2C-1.2 3M 1 BT KN	3M EN 166 3 4 BT CE
GG502SGAF_EU	5-3.1 3M 1 BT KN	3M EN 166 3 4 BT CE
GG550SGAF-EU	5 3M 1 B KN	3M EN 166 3 4 BT CE
GG500PI-EU	n/a	3M EN 166 3 4 FT CE

Explanation of marking

Marking	Description
2C-1.2 (EN 170:2002)	UV protection with good colour recognition. This product conforms to the requirements of the standard, providing UV protection for the complete specified range (210nm – 365nm)
5-3.1 (EN 172:1994 (as amended))	Sun-glare protection conforming to the requirements of the standard, providing UV protection for the complete specified range (280nm – 350nm)
5 (EN 169:2002)	Welding lens providing protection against UV for the specified range (210nm to 365nm) and IR protection for the specified range (780nm to 2000nm)
1	Optical class
F	Impact protection against high speed particle at low energy (45 m/s)
B	Impact protection against high speed particle at medium energy (120 m/s)
T	Tested for impact protection at extreme temperature conditions -5°C and +55°C
K	Resistance to surface damage by fine particles
N	Resistance to fogging
3	Protection against droplets and splashes of liquid
4	Protection against large dust particles

IMPORTANT NOTICE

The use of the 3M product described within this document assumes that the user has previous experience of this type of product and that it will be used by a competent professional. Before any use of this product it is recommended to complete some trials to validate the performance of the product within its expected application.

All information and specification details contained within this document are inherent to this specific 3M product and would not be applied to other products or environment. Any action or usage of this product made in violation of this document is at the risk of the user.

Compliance to the information and specification relative to the 3M product contained within this document does not exempt the user from compliance with additional guidelines (safety rules, procedures). Compliance to operational requirements especially in respect to the environment and usage of tools with this product must be observed. The 3M group (which cannot verify or control those elements) would not be held responsible for the consequences of any violation of these rules which remain external to its decision and control.

Warranty conditions for 3M products are determined with the sales contract documents and with the mandatory and applicable clause, excluding any other warranty or compensation.

For more information on 3M products and services please contact 3M.

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