



2820 Classic Line Safety Spectacles

2820 (Clear), 2821 (Smoke) and 2822 (Yellow)



Technical Fact Sheet

Description

The 3M 2820 Safety Spectacles are sleek, modern design products offering excellent application coverage and field of vision. These products are available in 3 lens options: clear, yellow for improved contrast in low light conditions and smoke for protection against sun glare.

Intended Use

These products are intended for protection against high speed particles at low energy (F) at extreme temperature conditions, -5°C and +55°C, (T) in accordance with EN166:2001. They also protect against UV radiation in accordance with EN170:2002, and sun glare in accordance with EN172:2002 (3M 2821 only).

The 2821 is designed for use in outdoor work environment where additional protection against sun glare is a key requirement. The 2822, however, is intended for use in a poorly lit work environment.

Key Features

- Optical class 1 lens for highest optical clarity and extended wear time
- Very lightweight (22g) for maximum comfort
- Adjustable lens angle (via temple pivot) for individual fit
- Wrap-around style for excellent coverage and good field of vision
- Strong polycarbonate lens featuring anti-scratch and anti-fog coating for improved vision and extended durability
- Inclinable soft flexible temples offer improved wearer comfort and optimum fit

Applications

These products can be used in a wide range of industrial applications including:

- Construction
- Automotive & body shop repair
- Wood working
- Industrial manufacturing
- DIY

Standards and Approval

These safety spectacles have been shown to meet the basic safety requirements under Article 10 of the European Community Directive 89/686/EEC and are thus CE marked.

These products have been examined at the design stage by INSPEC International Ltd., Upper Wingbury Courtyard, Wingrave, Aylesbury, Buckinghamshire HP22 4LW (Notified Body number 0194).

These products are tested and CE approved against EN166:2001 1 FT.

Marking

The lens and frame are marked in accordance with the requirements of EN166:2001, and associated standards including EN170:2002 (for UV protection) and EN172:2002 (for sun glare protection).

Example of lens marking:-

Filter code & scale number for UV protection:	2C-1.2 (as per EN170:2002)
Manufacturer's identification:	3M
Optical Class:	1
Symbol for mechanical strength:	F (low energy)

Example of frame marking:-

Manufacturer's identification:	3M
Product reference:	2820
European Standard:	EN166

Symbol for resistance to high speed particle test at extremes of temperature FT (low energy)

Explanation of filter code and scale numbers

Please see the table below for further information.

Product	Lens Option	Lens Marking	Explanation	Comments
2820	Clear	2C-1.2	2C: UV Filter code. 1.2: Scale number.	Colour recognition not affected. For use with sources which emit predominantly ultra violet radiation at wavelengths shorter than 313nm and when glare is not an important factor. This covers the UVC (280nm – 313nm) and most of the UVB (100nm - 280nm) bands.
2821	Smoke	5-2.5	5: Filter code for sun glare. 2.5: Shade number.	Good colour differentiation under sunlight, helps reduce eye fatigue under glare conditions.
2822	Yellow	2-1.2	2: UV Filter code. 1.2: Scale number.	Colour recognition may be affected. For use with sources which emit predominantly ultra violet radiation at wavelengths shorter than 313nm and when glare is not an important factor. This covers the UVC (280nm – 313nm) and most of the UVB (100nm - 280nm) bands.

Use limitation

- Never modify or alter this product
- Do not use this product against hazards other than those specified in this document/product user instructions.
- These products are not suitable for grinding.
- In accordance with EN166:2001 safety spectacles cannot be tested and approved for use against liquid droplets. Where liquid protection is specified a suitable product should be considered, for example safety goggles
- These products are NOT designed to be worn over prescription spectacles

Materials Listing

Lens:	Polycarbonate
Temples:	Nylon
Temple Tips:	Thermoplastic Elastomer

Light Transmission and Absorption Data

Product	Lens Shade	% UV Light absorption (180nm – 380nm)	% Visible light transmission (380nm – 780nm)	% Infra Red light absorption (780 – 1100nm)
2820	Clear	99.9	92.8	4.8
2821	Smoke	99.9	18.5	60.0
2822	Yellow	99.9	92.8	5.0



Occupational Health & Environmental Safety Group

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Accessories

3M 270:	Anti-fog wipe
3M 271:	Simple neck cord
3M 272:	Premium neck cord- with safety break
3M 273:	Soft carry bag for spectacles