



Speedglas™

Technical Datasheet

3M™ Speedglas™ 100 Welding Helmet (Black and with Graphics)

Description:

The Speedglas 100V welding helmet:

- Is suitable for most welding applications up to Shade 12 in the dark state.
- Has permanent protection (Shade 12 equivalent) against harmful UV- and IR- radiation, regardless of whether the lens is in the light or dark state or whether the auto-darkening function is operational.
- Is easy to operate and maintain.
- Has five different shade number settings in the dark state, 8-12. (Speedglas 100V)
- Has three user selectable levels of detector sensitivity to ensure a reliable arc detection. (Speedglas 100V)
- Has excellent visibility in light state, shade 3, for easy welding preparation and after treatment.
- Has multiple adjustments for highest comfort on helmet, head band and welding lens.
- Can be used together with 3M maintenance free respirators for welding.

Applications:

The Speedglas 100V welding helmet is designed for most welding processes, such as MMA, MIG/MAG, TIG and plasma welding.

Approvals:

The Speedglas 100 welding helmet conforms to AS/NZS 1337 & AS/NZS 1338.1.

Standards:

Speedglas 100:	Standards:
Welding lens	AS/NZS1338.1
Welding helmet	AS/NZS1337 High impact

Auto-Darkening Welding lens

AS/NZS 1338.1 Personal eye protection – Auto-darkening welding lens

Welding Helmet

AS/NZS1337 Personal eye-protection – Equipment for eye and face protection during welding and allied process.

Materials:

Protection plates: Polycarbonate

Plastics: PA

Optical Part: LC-Elements, Glass, Polarisers

Electronics: Printed circuit board assembly

Batteries: Lithium 3V Type CR2032



User instructions:

On/Off **ON/SHADE**

Activate by pressing the ON/SHADE button. The welding lens automatically turns OFF after one hour of inactivity.

Selection of Shade Number setting **ON/SHADE**

The models Speedglas 100S-10 and Speedglas 100S-11 have a fixed dark shade where no setting is required. Model Speedglas 100V has selectable dark shade settings. Five different Shade Number settings, 8-12 are available in the dark state. In order to see the current Shade Number setting, momentarily press the ON/SHADE button. To select another Shade Number, press the ON/SHADE button repeatedly while the LED indicators on the display are flashing. Move the flashing LED to the desired Shade Number.

In all welding processes the arc should only be viewed with the recommended dark shade. See table.

Sensitivity **SENS**

The programming and sensitivity of the photo detector system (which responds to the light from the welding arc) can be adjusted to accommodate a variety of welding methods and workplace conditions. In order to see the current sensitivity setting, momentarily press the SENS button. To select another setting, press the SENS button repeatedly until the LED shows the desired setting.

Position 1 Least sensitive setting. Used if there is interference from other welders arcs in the vicinity.

Position 2 Normal position. Used for most types of welding indoors and outdoors.

Position 3 Position for welding with low current or with stable welding arcs. (eg TIG welding)

If the lens does not darken during welding as desired, increase the sensitivity until the welding lens switches reliably. Should the sensitivity be set too high, the lens may remain in the dark state after welding is complete due to ambient light. In this case, adjust the sensitivity downward to a setting where the welding lens both darkens and lightens.

Low battery indicator

The batteries should be replaced when the low battery indicator flashes or LEDs do not flash when the buttons are pressed.

Note!

Other light sources with fast flashing light eg warning lights can make the optical detector react and make the lens darken/lighten with the same frequency as the flashing light source.

Use limitations:

The Speedglas 100 welding helmet is not suitable for laser welding/cutting or gas welding/cutting. The welding helmet is excellent for all positions except heavy duty overhead welding/cutting operations due to the risk of molten metal.



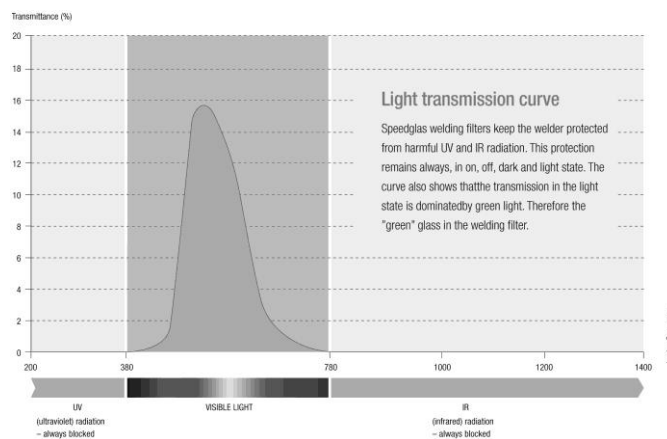
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Technical specification	
Weight Welding helmet (incl welding lens)	450 g (black) 455 g (with graphics)
Viewing area	44 x 93 mm
Switching time light-dark	0,1 ms (+23°C)
Opening time dark-light	100 ms – 250 ms
UV / IR protection	According to shade number 12 (permanent)

Technical specification	
Light state	Shade no 3
Dark state	Shade no 8-12
Battery type	2 x CR2032 (Lithium 3 Volt)
Battery lifetime	1500 hours
Operating temperature	-5°C to +55°C
Head sizes	50-64

Welding process	Current in amperes																				
	A																				
	1.5	6	10	15	30	40	60	70	100	125	150	175	200	225	250	300	350	400	450	500	600
MMAW (covered electrodes)	8			9			10			11			12			13			14		
MAG	8			9			10			11			12			13			14		
TIG	8			9			10			11			12			13			14		
MIG	9			10			11			12			13			14					
MIG with light alloys	10			11			12			13			14								
Air-arc gouging	10			11			12			13			14			15					
Plasma jet cutting	9			10			11			12			13								
Microplasma arc welding	4	5	6	7	8	9	10	11	12												
	1.5	6	10	15	30	40	60	70	100	125	150	175	200	225	250	300	350	400	450	500	600

The table recommends best dark shade of welding filter for various working applications. According to the conditions of use, the next greater or the next smaller scale number can be used.



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