Technical Datasheet

3M™ Speedglas™ 9100 MP Welding & Safety Helmet

Description:

- Multi Protection - 5 levels of protection: Eye, Face, Head, Respiratory and Hearing (optional accessory)
- Easy to operate and maintain.
- 3M™ Speedglas™ 9100 Series Welding Filters and protection plates
- Large Clear Visor (Same as 3M™ Speedglas™ 9100 FX Welding Helmet)
- SideWindows

Applications:

The Speedglas 9100 MP Welding & Safety Helmet together with 9100 Series Welding Filters are designed for most welding processes, such as MMA, MIG/MAG, TIG, plasma welding and oxyacetylene welding/cutting.
The Speedglas 9100 MP Welding & Safety Helmet is excellent for welding preparations such as grinding thanks to the large clear viewing area. The Speedglas 9100 Welding & Safety Helmet is designed to be used with 3M Air Delivery Units. See appropriate reference leaflet for approved combinations.

Approvals:

The product meet the requirements of the European Community Directive 89/686/EEC (Personal Protective Equipment Directive) and is thus CE marked. The product comply with the harmonized European Standards EN 175, EN 166 and EN 397. Certification under Article 10, EC Type-Examination has been issued by INSPEC International Ltd (Notified body number 0194). The complete 3M™ Speedglas™ 9100 MP Respiratory Systems complies with the harmonized standards EN 12941 and EN 14594.
Speedglas 9100 MP Welding Helmet with powered air respirators or supplied air regulators units marked CE0194 have had certification under Article 10, EC-Type Examination and Article 11, EC Quality Control issued by INSPEC international Ltd.
Speedglas 9100 MP Welding Helmet with powered air respirators or supplied air regulators units marked CE0086 have had certification under Article 10, EC-Type Examination and Article 11, EC Quality Control issued by BSI.

Equipment Marking:

3M EN175B (medium energy impact B)
3M EN166B (medium energy impact B)
3M 1 BT N (1= optical class, BT=medium energy impact at extremes of temperatures (-5°C and +55°C), N=Resistance to fogging)
3M EN12941 TH3 (nominal protection factor 500, higher strength requirement for breathing hose and couplings)

3M EN12941 TH2 (nominal protection factor 50, medium strength requirement for breathing hose and couplings)
3M EN14594 3B (nominal protection factor 200, higher strength requirement)
3M Speedglas 9100 MP Welding Helmet with M-300 helmet shell meet the requirements of EN 397

LD=Lateral Deformation, 440 V a.c.=Electrical Insulation
Additional markings on the product refer to other standards.

Mechanical Strength

EN 166, EN 175

No symbol	Minimum robustness
S	Increased robustness
F	Low energy impact (45 m/s)
B	Medium energy impact (120 m/s)
T	Tested at extremes of temperature (-5°C and +55°C)

Operating instructions:

Adjust the Speedglas 9100 MP Welding Helmet according to your individual requirements to reach the highest comfort and protection. (see fig B:1 - B:3).

Adjust and fit the air delivery unit as outlined in the appropriate User Instruction. Adjust the face seal to suit the shape of the face. (see fig G:7) If needed, lift the visor and adjust the airflow deflector. When fully opened, more airflow is directed across the face. When partially closed, a portion of the air is directed towards the visor. (see fig H:1)

⚠ It is important that the face seal is correctly mounted and fitted to provide the correct protection factor. Do not remove the welding helmet or turn off the air supply until you have vacated the contaminated area.

⚠ Headtops used in aggressive environments or outside in direct sunlight may need to be replaced more frequently than headtops used occasionally indoors.

⚠ 3M recommends a maximum life (shelf-life plus in-use life) of 3 years from the date of manufacture when stored in accordance with the recommended storage conditions for the head protection part (helmet).
Note: date of manufacture is molded on the helmet plastic part.

⚠ When working in environments with intense light radiation that gives heat, environments with welding spatter or when high visibility is required, 3M Speedglas Safety Helmet Cover shall be used.

Limitations of use:

⚠ Only use with original 3M spare parts and accessories listed in the reference leaflet
and within the usage conditions given in the Technical Specifications.

⚠ The use of substitute components, decals, paint or other modifications not specified in these user instructions might seriously impair protection and may invalidate claims under the warranty or cause the product to be noncompliant with protection classifications and approvals.

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⚠ Eye protectors worn over standard ophthalmic spectacles may transmit impacts thus creating a hazard to the wearer.

⚠ The Speedglas 9100 MP Welding & Safety Helmet is not designed for heavy duty overhead welding/cutting operations due to the risk of burns from falling molten metal.

⚠ The SideWindows should be covered with the cover plates in situations when other welders are working beside you and in situations where reflected light can pass through the SideWindows (see fig K:1-K:2)

⚠ Materials which may come into contact with the wearer's skin are not known to cause allergic reactions to the majority of individuals.

⚠ These products do not contain components made from natural rubber latex.

⚠ Do not use for respiratory protection against unknown atmospheric contaminants or when concentrations of contaminants are unknown or immediately dangerous to life or health (IDLH).

⚠ Do not use in atmospheres containing less than 19.5% oxygen (3M definition. Individual countries may apply their own limits on oxygen deficiency. Seek advice if in doubt).

⚠ Do not use these products in oxygen or oxygen-enriched atmospheres.

⚠ Leave the contaminated area immediately if: Any part of the system becomes damaged, airflow into the headtop decreases or stops, breathing becomes difficult, dizziness or other distress occurs, you smell or taste contaminants or irritation occurs.

⚠ High winds above 2m/s, or very high work rates (where the pressure within the headtop can become negative) can reduce protection. Adjust equipment as appropriate or consider an alternative form of respiratory protective device.

⚠ Users should be clean-shaven where the respirator's face seal comes into contact with the face.

⚠ This product meets the requirement of certain industrial eyewear standards and certain industrial head protection standards. They do not provide complete head, eye and face protection from severe impact and penetration and are not a substitute for good safety practice and engineering controls.

⚠ The safety helmet is made to absorb the energy of a blow by partial destruction or damage to the shell and the harness, and even though such damage may not be readily apparent, any helmet subjected to severe impact should be replaced.

⚠ When working in cold environments an antifog visor plate shall be used due to risk of fogging.

⚠ Do not use in high heat environments above the recommended maximum temperature.

Spare parts, accessories and consumables:

Part no.	
Spare parts	Description
19 71 50	9100 MP flip-up mechanism
19 71 51	9100 MP pivot kit
53 20 16	SPEEDGLAS 9100 FX SideWindows cover plate (2-pairs)
54 05 00	SPEEDGLAS 9100 MP/9100 FX Front cover kit
57 04 95	9100 MP outer shield
57 08 95	9100 MP inner shield
57 28 00	9100 MP welding and safety helmet, without welding filter.
89 60 55	9100 MP safety helmet incl pivot kit
Accessories	
16 90 13	9100 MP safety helmet cover
53 35 05	Welding helmet adapter when using old type of breathing tube (non-QRS).
79 01 01	SPEEDGLAS 9100 Product carry bag
H31P3AF300	3M™ Peltor™ H31 Hearing Protector, with helmet attachment
H510P3AF- -405-GU	3M™ Peltor™ Optime I Hearing Protector, with helmet attachment
H520P3AF- -410-GQ	3M™ Peltor™ Optime II Hearing Protector, with helmet attachment
H540P3AF- -413-SV	3M™ Peltor™ Optime III Hearing Protector, with helmet attachment
Consumables	
52 30 00	Visor plate (standard), pkg of 5
52 30 01	Visor plate (anti-fog), pkg of 5
53 42 00	9100 MP face seal

Technical specification

Weight Welding/Safety Helmet with SideWindows (excl welding filter)	1000 g
Viewing area Visor plate	100 x 170 mm
Operating temperature	-5ºC to +55ºC
Head sizes	51 – 64
Material: Shield: Silver front frame: SideWindows: Head suspension: Safety Helmet	 PPA PA PC PA, PP, TPE, PE PC + PBT