Speedglas™
Welding Safety

Technical Data Sheet
April 2024

3M™ Speedglas™ Welding Helmets, 9100MP and 9100MP-Lite

Product Description

- Multi Protection – 5 levels of protection: eye, face, head (safety helmet), respiratory and optional hearing protection (3M Speedglas Welding Helmet 9100 MP)
- Multi Protection – 5 levels of protection: eye, face, head (bump cap), respiratory and optional hearing protection (3M Speedglas Welding Helmet 9100 MP-Lite)
- Class TH3 CE, NPF 500
- Adjustable air flow
- Compatible with all 3M™ Speedglas™ 9100 Series Welding Filters and protection plates
- Compatible with selected 3M hearing protection
- Large(17×10 cm), curved clear protective visor with excellent field of view
- Side windows
- Suitable for grinding

Applications

This product helps protect the wearer's eyes and face from sparks, spatter, harmful ultraviolet radiation (UV) and infrared radiation (IR) resulting from certain arc gas welding/grinding processes. The product 9100 MP (EN 397) helps protect against falling objects and 9100 MP-Lite (EN 812) helps protect against bumps.

The Products also protects against certain airborne contaminants when used with an approved air delivery unit.

3M™ Speedglas™ welding helmets 9100 MP/9100 MP-Lite are designed for:

- Most welding processes, such as: MMA (Stick), MIG/MAG, TIG, Low amp TIG
- Cutting
- Grinding

Approvals

The PPE is marked and in conformity with the applicable National and European Regulations, Directives and Standards as listed in table below, which also contains information about the Authorised Body that has issued the type-Examination certificate for the PPE (Module B) and when applicable, the Authorised Body responsible for the surveillance of the quality system of the manufacturing of the PPE (Module D). The applicable type-examination Certificates and Declaration of Conformity are available at www.3M.com/welding/certs.

Table 1: Approvals

Standard/Directive/ Regulation	**Name**
EN 175:1997	Personal protection - Equipment for eye and face protection during welding and allied processes
EN 166:2001	Personal eye protection - Specifications
EN 169:2002	Personal eye protection - Specifications Filters for welding and related techniques - Transmittance requirements and recommended use
EN 12941:1998 +A2:2008	Respiratory protective devices - Powered filtering devices incorporating a helmet or hood
EN 397:2012 + A1:2012 (3M Speedglas Welding Helmet 9100 MP)	Respiratory protective devices - Powered filtering devices incorporating a helmet or hood
EN 812:2012 (3M Speedglas Welding Helmet 9100 MP-Lite)	Respiratory protective devices - Powered filtering devices incorporating a helmet or hood
EN ISO 16321-1:2022	Eye and face protection for occupational use Part 1: General requirements
EN ISO 16321-2:2021	Eye and face protection for occupational use Part 2: Additional requirements for protectors used during welding and related techniques. EN ISO 16321 / Tested Headform*: 1-C12 | 1-S ← | 1-M √ | 1-L → | 2-S | 2-M | 2-L *Tête factice testée, Getestete Kopfform, Testa testata, Cabezal probado, Geteste hoofdvorm, Testad huvudform, Testet hovedform, Testet hodeform, Testattu päänmuoto, Testa testata, Cabeça testada, Δοκιμασμένο σχήμα κεφαλής, Testowany model głowy, Tesztelt fejforma, Testovaná forma hlavy, Testovaná forma hlavy, Preizkušen model glave, צורת ראש נבדקת , Testitud peakuju, Pārbaudīta galvas forma, Išbandyta galvos forma, Forma capului testate, Протестированная модель головы, Перевірена модель голови, Testiran model glave, Тестван модел на глава, Testiran model glave, Test Edilmiş Kafa Şekli, Тексерілген бас пішіні, 经过测试的头模
(EU) 2016/425	Personal Protective Equipment (PPE) Regulation
	Personal Protective Equipment Regulations (Regulation 2016/425 on personal protective equipment, as amended to apply in GB)
Notified Body No. 0196 Module B	DIN CERTCO Gesellschaft fuer Konformitaetsbewertung mbH, Alboinstrasse 56, 12103 Berlin, Germany
Approved Body No. 2571 (Module B)	TUV Rheinland UK, Friars Gate (Third Floor), 1011 Stratford Road, Shirley, Solihull B90 4BN, UK
Notified Body No. 2797 Module B, Module D	BSI Group, The Netherlands B. V. Say Building, John M. Keynesplein 9, 1066 EP Amsterdam, The Netherlands
Approved Body No.0086 Module B, Module D	BSI Assurance UK Ltd, Kitemark Court, Davy Avenue, Knowlhill, Milton Keynes MK5 8PP, UK
Australian/New Zealand Standard	Name

Standard/Directive/ Regulation	Name
AS/NZS 1337.1:2010 (3M Speedglas Welding Helmet 9100 MP)	Personal eye protection Part 1: Eye and face protectors for occupational applications
AS/NZS 1716:2012 (3M Speedglas Welding Helmet 9100 MP)	Respiratory protective devices
AS/NZS 1801:1997 + A1:1999 (3M Speedglas Welding Helmet 9100 MP)	Industrial Safety Helmet
Manufacturer 	3M Svenska AB, Ernst Hedlunds väg 35, 785 30 Gagnef, Sweden
EU Contact Address	3M Svenska AB, Ernst Hedlunds väg 35, 785 30 Gagnef, Sweden
UK Contact Address	3M UK, Cain Rd, RG12 8HT, UK

 = Auto darkening welding filters shall be disposed of as electrical and electronic waste.

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 Properties.
- 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.
- 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.
- Head tops used in aggressive environments or outside in direct sunlight may need to be replaced more frequently than head tops used occasionally indoors.
- 3M recommends a maximum life (shelf-life plus in-use life) of 5 years from the date of manufacture when stored in accordance with the recommended storage conditions for the head/bump protection part (helmet). Note: date of manufacture is moulded 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.
- Eye protectors worn over standard ophthalmic spectacles may transmit impacts thus creating a hazard to the wearer.
- The Speedglas welding helmet is not designed for overhead welding/cutting operations when there is a risk of burns from falling molten metal.
- The side windows 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 side windows.
- 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 head top 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 head top 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 anti-fog visor plate shall be used due to risk of fogging.
- Do not use in high heat environments above the recommended maximum temperature.
- The Speedglas welding helmet 9100 MPLite (bump cap) does not provide protection against the effects of falling or thrown objects, or moving suspended loads. It should not be used instead of an industrial safety helmet as specified in EN 397.
- Respiratory filters shall only be fitted to the turbo unit and not directly to the helmet/hood.

Materials

Shield:	PPA
Font cover:	PA
Side Windows:	PC
Head Suspension:	PA, PP, TPE, PE
Safety Helmet:	PC + PBT
Bump Cap:	HDPE

Technical Properties

Specification	**Value**
Weight welding helmet (excluding welding filter)	9100 MP: 1000g; 9100 MP-Lite: 810g
Head sizes	51-64
Operating Conditions	-5 °C (23 °F) to +55 °C (131 °F), RH ≤ 90%, non condensing conditions
Storage Conditions	-20 °C (-4 °F) to +35 °C (95 °F), RH ≤ 90%, non-condensing conditions
Short-term storage temperature conditions, non-operating <1 month	-30 °C (-22 °F) to +50 °C (122 °F), RH ≤ 90%, non-condensing conditions
Expected service life	EN 397/EN 812 Head protection - When stored as stated, the maximum life (shelf life plus in-use life) is 5 years from date of manufacture.
	Welding helmet - 5 years depending on conditions of use. The product may continue to be used providing all visual inspections and pre use checks are passed.

Spare Parts, Accessories, and Consumables

Part number	**Description**
16 80 10	Sweatband 9100 MP, pkg of 2
16 80 11	Sweatband 9100 MP-Lite, for TH3 level of protection pkg of 2 (not included in M-150)
16 90 15	Shroud
19 71 50	Flip-up mechanism
19 71 51	Pivot Kit
52 30 00	Visor plate, standard, pkg of 5
52 30 01	Visor plate, anti-fog, pkg of 5
53 20 16	Side window cover plates

Part number	Description
53 42 00	Face Seal
53 50 01	Helmet air flow deflector 9100 MP-Lite
53 62 00	Headband ratchet
54 05 00	Front cover kit
57 04 95	Outer shield
57 08 95	Inner shield
57 28 00	Welding helmet 9100 MP, without welding filter
59 28 00	Welding helmet 9100 MP-Lite, without welding filter
89 60 55	Safety helmet 9100 MP, including head suspension and sweatband
89 60 56	Bump cap 9100 MP-Lite, incl head suspension and sweatband
79 01 01	Product storage bag
M-150	Head suspension for 9100 MP-Lite
M-350	Head suspension for 9100 MP
X1P3	3M™ PELTOR™ Ear Muffs X1 (26 dB)*
X2P3	3M™ PELTOR™ Ear Muffs X2 (30 dB)*
X3P3	3M™ PELTOR™ Ear Muffs X3 (32 dB)*
X4P3	3M™ PELTOR™ Ear Muffs X4 (32 dB)*
X5P3	3M™ PELTOR™ Ear Muffs X5 (36 dB)*
Z3AF/2	Helmet assembly parts for Peltor X-series ear muffs, left and right

*Add assembly parts Z3AF/2 when ordering ear muffs for 9100 MP and 9100 MP-Lite welding helmets.

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.

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3M PSD products are occupational use only.