

 **Speedglas™**



Welding Directory

The Power to Protect your World





As one of the world's leading suppliers of safety and protective equipment our goal is to ensure that we satisfy your needs through the provision of exceptional leadership, expertise, quality and service excellence. Our success is measured by your success. If we can make your life and that of your workforce easier, healthier, safer and more productive we are moving in the right direction.

We believe that health and safety is first and foremost about safeguarding worker welfare. A secure, safe working environment is paramount in any business. But we also believe that improving worker protection, comfort and productivity is a more ambitious goal. One we firmly believe in.

At 3M we don't take safety for granted. The health and welfare of your workforce depends on it. So by working in association with skilled safety practitioners, partners and customers, our people are committed to ensuring that we help you create an environment that protects your workforce – effectively, efficiently and economically.

Your success is our achievement. To deliver on our commitment requires a culture of accountability, customer inspired innovation, knowledge and expertise, fuelled by a deep understanding of your needs and the safety needs of your workforce.

With our global technology, manufacturing and knowledge network we do more than simply develop products that ensure your workforce can operate in safety and comfort. We go further to provide good design, cross-over compatibility, expertise, comprehensive support and continuously evolving a range of product options.



Continuously inspired by welders

Customer support

You can buy 3M confident in the knowledge that our products will do the job and more. You can also rest assured that our product range is backed by first class support materials and advice, so you'll always know where to turn.

For advice, information and technical support on the selection and use of 3M Welding Equipment contact the 3M Health and Safety Helpline.

A range of technical literature, posters, selection guides and fact sheets are freely available from the 3M Health and Safety Helpline to help you with your safety requirements.

More information on products and services from 3M is available from our website. Downloads, legislation, special offers, contact 3M, where to buy, maintenance packs and much more can all be found at:
www.3M.co.uk/speedglas

3M™ Speedglas™ Welding Shields

Record Card

Care and Maintenance

To maintain protection levels, optimise the effective lifetime of the system and avoid the additional cost of replacement, it is extremely important to carry out regular checks on your equipment.

Maintenance Record ID: _____
 System ID: _____
 Machine Type: _____

Company Name: _____
 Company Address: _____
 Equipment Used In: _____
 Equipment Maintained By: _____

Date	Healthy	Turbo gas active	Parts Replaced	Signature

As part of CE marking requirements, model cards such as this must be issued for marking checks for each system.

3M

3M Welding

3M™ Adflo™ Powered Air Turbo

Care and Maintenance

The 3M Adflo Powered Air Respirator System is a coordinated face and breathing protection device, for increased comfort and safety in welding.

To optimise the effective lifetime of your welding equipment and avoid the additional cost of replacement, regular maintenance is important.

Before Use

- Check the Adflo in its bag, straps and their connectivity.
- Inspect the Adflo for damage.
- Inspect the Adflo's filter, tube and connections. Remove the pin from the filter's top. Replace if necessary.
- Inspect the Adflo for cracks or damage to the tube or connections.
- Inspect the Adflo for correct fit. The Adflo must be changed if the Adflo appears damaged or if the Adflo is not a perfect seal.
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After Use

- Clean the Adflo after each use with a clean cloth or water if used in a dusty or dirty environment.
- The Adflo must not be stored in a dusty or dirty environment.
- The Adflo must be stored in its original packaging.
- The Adflo must be stored in a cool, dry place.
- The Adflo must be stored in a safe place.
- The Adflo must be stored in a safe place.

When Changing the Filter

- Change the filter when the Adflo appears to be damaged or if the Adflo is not a perfect seal.
- Change the filter when the Adflo appears to be damaged or if the Adflo is not a perfect seal.
- Change the filter when the Adflo appears to be damaged or if the Adflo is not a perfect seal.

Replacing Consumables, Repair Parts and Accessories

To ensure safety in use, please contact your 3M Representative.

Further Information and Advice

For more information on the Adflo Powered Air Respirator System, please contact your 3M Representative.

3M Health and Safety Helpline
 0800 60 800 60 UK 1 800 320 500 IRELAND

3M

Occupational Health & Environmental Safety Group
 3M™ Speedglas™

Premium Performance

made simple

Speedglas™ Premium Performance is a coordinated face and breathing protection device, for increased comfort and safety in welding.

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3M

Clever thinking at work

3M Health & Safety Helpline
 Monday - Friday 9 to 5

0870 60 800 60 UK 1 800 320 500 IRELAND

The brand that introduced the ADF



Eye and face protection

The innovator of the 3M™ Speedglas™ Auto-Darkening Welding Filter completed his thesis in the shipyards of Sweden studying ways to protect welders' eyes and skin from harmful UV radiation. The studies were conducted more than 30 years ago and resulted in the first prototype of an auto-darkening welding filter, a combination of liquid crystal elements, polarizers and electronics.

3M Auto-Darkening Filters

- The brand that introduced the ADF
- A quick guide to all our auto-darkening welding filters

3M™ Speedglas™ Welding Shields

- 3M™ Speedglas™ 100 Welding Shields
- 3M™ Speedglas™ 9100 Welding Shields
- 3M™ Speedglas™ 9002D Welding Shield
- 3M™ Speedglas™ SL Welding Shield



How ADFs work

The key point to remember with 3M™ Speedglas™ auto-darkening welding filters (or ADFs) is consistency. They enable constant, comfortable vision, they provide protection from ultraviolet and infrared (UV/IR) radiation and they consistently auto-switch from clear to dark and back again, in just the way the welder wants.



Before

With the shield in the safe down position, the welder has a clear view through the welding filter. Both hands are free and the electrode can be precisely positioned.



During

Within 0.1 milliseconds of the arc strike, the filter has switched to the dark state.



After

The filter automatically returns to the clear state after welding is complete, allowing for immediate and safe inspection of the weld pool, as well as preparation for the next weld.

Technical data Speedglas Welding Shield with ADF	3M™ Speedglas™ 100 Shield Black and Graphics Edition	3M™ Speedglas™ 9000 Shield			3M™ Speedglas™ SL Shield	3M™ Speedglas™ 9100 Shield		
Welding Filter Options	100V ADF (variable)	9002D ADF (dual)	9002V ADF (variable)	9002X ADF (variable)	SL ADF (variable)	9100V ADF (variable)	9100X ADF (variable)	9100XX ADF (variable)
Viewing area	44 x 93mm	42 x 93mm	42 x 93mm	55 x 107mm	42 x 93mm	45 x 93mm	54 x 107mm	73 x 107mm
Weight (complete helmet incl ADF)	510g	710g	750g	770g	360g	510*g	520*g	545*g
Dark state	Shade 8-12	Shade 9/11	Shade 9-13		Shade 8-12	Shade 5, 8, 9-13		
Light state	Shade 3	Shade 3	Shade 3		Shade 3	Shade 3		
UV / IR Protection	Shade 12 (permanent)	Shade 13 (permanent)			Shade 12 (permanent)	Shade 13 (permanent)		
Auto ON	No	No			Yes	No		
Switching time, light - dark	0,1 ms (+23°C)	0,4 ms (+23°C)	0,1 ms (+23°C)		0,1 ms (+23°C)	0,1 ms (+23°C)		
Delay (switching time, dark - light)	100-250 ms	100-200 ms	60-500 ms		60-250 ms	40-1300 ms		
SideWindows option	No	Yes			No	Yes		
Exhaust vents	No	Yes			No	Yes		
Hard hat option	Yes	Yes	Yes	Yes	No	No		
Solar cell	No	No	No	Yes	No	Yes	Yes	No
Number of sensors (arc detection)	2	2	2	2	2	3	3	3
Battery lifetime	1 500 hours	1 500 hours	1 500 hours	3 000 hours	1 500 hours	2 800 hours	2 500 hours	2 000 hours

* Weight of 9100 shield without SideWindows.

A quick guide to our Auto-Darkening Welding Filters

The 3M™ Speedglas™ Auto-Darkening Filter (ADF) was one of the first of its type on the market, bringing a new standard to eye protection and comfort for welders. Today there is a great family of 3M™ Speedglas™ Welding Shields, each model with its specific series of welding filters.

Before you select a model, ask yourself:

- How will I use my ADF?
- Do I occasionally change welding process/shade number?
- This is a long term investment. A variable welding filter offers more flexible features for new working conditions.

Filter Guide

There are a few parameters that affects the performance of an auto-darkening welding filter like the type of welding machine, working environments etc.

The table below is a general guide to the various models of 3M™ Speedglas™ Auto-Darkening Welding Filters:

	Speedglas 9100XX	Speedglas 9100X	Speedglas 9100V	Speedglas SL	Speedglas 9002X	Speedglas 9002V	Speedglas 9002D	Speedglas 100V
Dark state	Shade 5, 8, 9-13 (variable)	Shade 5, 8, 9-13 (variable)	Shade 5, 8, 9-13 (variable)	Shade 8 -12 (variable)	Shade 9-13 (variable)	Shade 9-13 (variable)	Shade 9/11 (dual)	Shade 8 -12 (variable)
MMAW (Electrode)	Optimised	Optimised	Optimised	Optimised	Optimised	Optimised	Optimised	Optimised
MIG/MAG	Optimised	Optimised	Optimised	Optimised	Optimised	Optimised	Optimised	Optimised
TIG (>20A)	Optimised	Optimised	Optimised	Optimised	Optimised	Optimised	Suitable	Suitable
TIG (1A-20A)	Optimised	Optimised	Optimised	Suitable	Suitable	Suitable	Not recommended	Not recommended
Plasma (welding and cutting)	Optimised	Optimised	Optimised	Suitable	Suitable	Suitable	Not recommended	Not recommended
Risk of hidden arc	Optimised	Optimised	Optimised	Suitable	Suitable	Suitable	Not recommended	Not recommended
Tack welding	Optimised	Optimised	Optimised	Suitable	Suitable	Suitable	Suitable	Suitable
Grinding	Optimised	Optimised	Optimised	Not recommended	Suitable	Suitable	Suitable	Suitable

For assistance with choosing the right ADF, please call the 3M Safety Helpline on **0870 60 800 60** (UK) or **1 800 320 500** (Ireland)



3M™ Speedglas™ 100 Welding Shields

The highly-affordable 3M™ Speedglas™ 100 Welding Filter has excellent optical quality, reliable light-to-dark switching, and can be used with most arc welding processes, such as stick (MMA), MIG/MAG, and many TIG applications.

The easy-to-use 3M™ Speedglas™ 100 welding shield is the ideal 'first' auto-darkening shield for users who weld infrequently but can benefit from the ability to always see clearly with their welding protection in place. In addition to the black shield there are 10 graphic shields available – all with specific identity. Also available is the 3M™ Speedglas™ 100 Series hard hat option for mandatory head protection areas.

Features and Benefits:

- UV/IR protection shade 12 permanent

Variable Shade Welding Filters (100V)

- Three selectable sensitivity settings: a normal setting used for most types of welding, a setting for other welders working nearby and a setting for low-current or stable arc welding
- Five user-selectable dark shades 8-12
- Switching time light-dark 0,1 ms



3M™ Speedglas™ 100 Blaze Welding Shield

Classification 1/1/2
Conforms to EN 379

3M Speedglas 100 Welding Shields Graphic Editions



Chrome
75 14 20



Tribal
75 13 20



Mechanical Skull
75 15 20



Trojan Warrior
75 16 20



Blaze
75 12 20



Aces High
75 17 20



Steel Eyes
75 21 20



Jewel Skull
75 19 20



Steel Rose
75 18 20



Wild'n'Pink
75 20 20



75 17 20 : **3M™ Speedglas™ 100 Black Welding Shield**



3M™ Speedglas™ 100 Hard Hat Option

78 31 20 : **3M™ Peltor™ G3000 Hard Hat**

The Peltor G3000 Hard Hat is produced in high quality UV-stabilised ABS plastic. This is one of the lightest hard hats on the market. It meets European standard EN 397 with approved extra requirement for low temperature (-30°C).



75 00 20 : **3M™ Speedglas™ 100V Filter**

Viewing area: 44 x 93mm





3M™ Speedglas™ 9100 Series Welding Shields

Optimise your welding comfort, coverage and control. The 3M™ Speedglas™ 9100 Welding Shield features a head suspension system that profiles your unique head shape for a secure, stable fit.

High comfort head suspension

Two crown straps gently saddle the top of the head for increased shield stability and better weight distribution. Both straps are adjustable to fit virtually all head shapes and sizes.

The back portion of the headband is self-adjusting and swivels to fit different head shapes. When wearing a cap backwards you simply turn the back portion upside-down.

The headband can also be manually tightened to your personal preference. The smooth ratchet mechanism allows for precise tightening control.

A snap adjustment allows you to set the shield at 9 different angles.



The front of the headband self-adjusts to match your forehead. Pressure is evenly distributed to sets of twin pads to fit the exact shape of your head.

Four settings let you determine the distance between your face and the shield. This allows you to keep the shield as close as possible to your face for a greater view and reduces the load on your neck muscles.

Small, Medium or Large?
You can adjust the width of the head suspension to your own head size – from 50cm to 64cm.

We've lowered the centre of gravity to be just above your ears! This makes the shield more stable in both the up and down positions, as well as reducing the leveraged strain on your neck. Large, rubber, overmoulded knobs make it easy to adjust the up-and-down pivot action, even when wearing gloves.

More comfort when raised

Lifted into the raised position, the shields "high point" is lower than many other shields. The smooth up-and-down pivot action can be "locked" in the up position – a light pull lowers the shield back down again.

Excellent optics, bigger view

The 3M™ Speedglas™ 9100 Series Welding Filters continue our tradition of outstanding optical quality, including uniform shading and minimal distortion across the entire filter viewing area.

Wider field of view

Introducing the 3M™ Speedglas™ 9100FX Welding Shield, a flip-up combination of an ADF welding shield and a protective visor.

Comfortable protection for safer welders

The 3M™ Speedglas™ 9100 Series Welding Shields are available either with ADF in a fixed position or with the ADF in a flip-up visor which can be lifted to leave a clear visor.

The 3M™ Speedglas™ 9100FX Series Welding Shield features a flip-up combination of an auto-darkening welding shield and a protective visor. Not only is the viewing area of the shield larger than on previous models – 17 x 10cm – the geometry of the shield has also been redesigned to increase peripheral vision.

Features and Benefits:

- 30% larger viewing area than any other Speedglas welding filter (9100XX)
- Adjustable sensitivity of arc detection
- Seven variable dark shades (5, 8, 9-13), including shades for gas welding, micro-plasma and low-amp TIG
- Exclusive shade 5 SideWindows option
- The big 17x10cm clear protective visor is curved, increasing your peripheral vision
- Increased coverage for ear and neck
- Exhaled air is channelled out via side exhaust vent



3M™ Speedglas™ 9100 Welding Shield

Classification 1/1/1/2
Conforms to EN 175 level B and EN 379
Light state shade 3

Part Numbers:

50 18 05 : 9100 Shield with 9100V Filter
50 18 15 : 9100 Shield with 9100X Filter
50 18 25 : 9100 Shield with 9100XX Filter

3M™ Speedglas™ 9100FX Welding Shield

Classification 1/1/1/2
Conforms to EN 175 level B and EN 379
Light state shade 3

Part Numbers:

54 18 05 : 9100FX Shield with 9100V Filter
54 18 15 : 9100FX Shield with 9100X Filter
54 18 25 : 9100FX Shield with 9100XX Filter

3M™ Speedglas™ 9100 Filter Options:

50 00 25 : 3M™ Speedglas™ 9100XX Filter
50 00 15 : 3M™ Speedglas™ 9100X Filter
50 00 05 : 3M™ Speedglas™ 9100V Filter

3M™ Speedglas™ 9100 Consumables:

52 60 00 : outer protection plate standard (pck 10)
52 70 00 : outer protection plate scratch resistant (pck 10)
16 80 15 : 9100 sweatband (pck 3)

All shields fit well with 3M Respiratory Protection

3M™ 4000 Series Respirator



3M™ 7500 Series Half Mask



3M™ 9900 Series Particle Respirator
Please check page 17 for details





3M™ Speedglas™ 9002D Welding Shield

With a dual shade filter and two sensitivity levels, the 3M™ Speedglas™ 9002D offers the welder an excellent choice of settings. The 3M Speedglas 9002D Welding Shield features side windows and CO₂ reduction vents for improved comfort. The Speedglas 9000 Welding Shield is also available with a safety helmet, especially designed for welders working in areas with overhead hazards.

Features and Benefits:

- Available as complete shield with Speedglas 9002D welding filter, shade 9/11 (dual). The 9002V and 9002X filters can still be ordered as spares
- Speedglas SideWindows
- Exhaust vents
- Light state shade 3
- Switching time light-dark 0.4ms (+23°C)



3M™ Speedglas™ 9002D Welding Shield
 Classification 1/2/2
 Conforms to EN 379, EN 175 level F
 40 18 40 : **9002 Shield with 9002D Filter**

3M™ Speedglas™ 9002 Consumables
 42 60 00 : **outer protection plate standard**
 (pck 10)
 42 70 00 : **outer protection plate scratch resistant**
 (pck 10)
 16 90 01 : **Throat cover, Teca Weld**



3M™ Speedglas™ Welding Filter Options:
 40 00 80 : **3M™ Speedglas™ 9002X Filter**
 Viewing area: 55 x 107mm
 40 00 70 : **3M™ Speedglas™ 9002V Filter**
 Viewing area: 42 x 93mm
 40 00 40 : **3M™ Speedglas™ 9002D Filter**
 Viewing area: 42 x 93mm

All shields work well with 3M Hearing Protection

3M™ 1310 Cap Banded Ear Plugs



3M™ E-A-R™ Ultrafit™ Corded Ear Plugs



3M™ E-A-R™ Push-Ins™ Ear Plugs



48 38 00 : 3M™ Speedglas™ 9000 ProTop Welding Shield
 Classification 1/1/1
 Conforms to EN 379, EN 175

3M™ Speedglas™ ProTop Consumables
 19 67 05 : **Safety helmet white, other colours upon request**
 19 71 50 : **Safety helmet assembly parts**

3M™ Speedglas™ SL Welding Shield

Welders have asked for two things in personal protection: lighter weight and more comfort. Our challenges in designing this shield were to significantly reduce its weight, while maintaining the performance and protection that welders worldwide have come to expect in every Speedglas product. The result of our efforts: a 360 gram auto-darkening welding shield.

Features and Benefits:

The Shield: stronger, thinner

- Strong lightweight material with excellent protection and coverage
- Non-absorbent material, that retains its performance in high humidity
- Back-and-forth adjustments allow for better fit and safety
- Ideal for tight spaces

Auto-Darkening Welding Filter

- For most arc welding processes – such as MMA, MIG/MAG, TIG and plasma welding
- Viewing area 42 x 93mm
- Light state shade 3
- Variable dark shade 8-12
- Switching time light-dark 0,1 ms (+23°C)

The Headband: Fits better, feels cooler

- A pattern of holes for breathability and better conformity to the welder's head
- Accommodates smaller head sizes; its full range is from 50cm to 64cm



70 11 20 : 3M™ Speedglas™ SL Welding Shield

Classification 1/1/1/2
Conforms to EN 379, EN 175 level F



3M™ Speedglas™ SL Consumables:

70 00 20 : Speedglas SL Auto-Darkening Filter Variable 8-12

72 60 00 : Speedglas SL Outer Protection Plate Standard (pk 5)

42 80 20 : Speedglas Inner Protection Plate (ADF)

16 80 10 : Sweatband, fleecy cotton

Performance and Comfort go hand in hand



Not even the best protective equipment will be used all day if it's not comfortable. 3M™ Speedglas™ Welding products are always designed with user comfort and performance in mind.

Obviously, good general ventilation is required for all working environments. To capture welding fumes, local exhaust ventilation and “on-gun, fume-extractors” are typically used.

In addition to local exhaust ventilation, welders often require respiratory protective equipment to further reduce exposure to contaminants.





- A general guide to respiratory protection
- 3M™ Speedglas™ 9100 Air / FX Air Powered & Supplied Air Respirators
- Care and Maintenance



A general guide to respiratory protection

Welding generates harmful airborne particles and gases known to cause short and long term health problems for welders. Respiratory Protective Equipment (RPE) may be used to help reduce exposure to these hazards.

Two types of RPE are used to protect welders:

Filtering devices Filter contaminants from the air			Supplied air devices Use breathable quality air from a compressor
Reusable Respirators	Disposable Respirators	Powered Respirators	Air Regulator
			

Ventilation of the work area is important to help reduce the airborne concentration of contaminants and to ensure that the oxygen in the air is maintained at a safe level. Oxygen deficiency (i.e. <19.5% oxygen) can occur when welding in poorly ventilated areas or confined spaces. 3M do not offer RPE for use in oxygen deficient atmospheres.

The protection offered by RPE depends on the type of device and, if applicable, the filters fitted to it.

The levels of protection of 3M RPE for welders are listed in the table below. The Assigned Protection Factor (APF) for the equipment is published by the Health and Safety Executive in its book HSG-53. An APF of 20 indicates equipment that, when used properly, will reduce exposure by a factor of 20.

	Filtering devices			Supplied air device	
Model	9925/9928	7500 with P2 filters	7500 with P3 filters	Adflo with Speedglas welding shields	Fresh-air C with Speedglas welding shields
Type	Disposable Respirator	Reusable Respirator	Reusable Respirator	Powered Air Respirator	Supplied Air Respirator
APF	10	10	20	20 or 40 [†]	20 or 40 [†]
Additional protection	Ozone up to 10xWEL* and nuisance level** organic vapours	Options available for Ozone up to 10xWEL* and nuisance level** gases/ vapours	Options available for Ozone up to 10xWEL* and nuisance level** gases/ vapours	Options available for gases and vapours	
*WEL = Workplace Exposure Limit **Nuisance level = below WEL [†] APF of 40 with 9100FX Air. APF of 20 with 9100 Air					



Filtering devices

Welders requiring respiratory protection need particle filters to capture metal fumes. In addition they may need gas and vapour filters depending on the type of work and the hazards generated. Harmful gases and vapours may be generated by ultraviolet light from the arc reacting with the air or by the burning of coatings or contamination on the metal.

Filtering devices can be either disposable or reusable:

Disposable respirators - e.g. 3M™ 9925/9928

Reusable half face masks - e.g. 3M™ 7500

Reusable powered respirators - e.g. 3M™ Adflo

The options for gas and vapour filters are:

Filter type	A	B	E
Description	Organic vapours, boiling point >65°C with good warning properties (taste and smell)	Inorganic gases/vapours with good warning properties (taste and smell)	Acid gases with good warning properties (taste and smell)
Examples	Many common solvents, degreasants and thinners	Chlorine	Hydrogen chloride

Note: Not all gases and vapours can be captured by filters. Check at www.3M.co.uk/selectrespirator

Supplied air devices

3M™ Fresh-air C protects welders by feeding breathable quality air from a compressor into a 3M™ Speedglas™ welding shield. It may be used when a supplied air device is preferred to a filtering device or against gases or vapours that cannot be filtered.

3M Air Quality Testing Service

The COSHH Regulations require that the air provided to supplied air devices should be of breathable quality and of sufficient, constant flow and pressure to provide adequate protection.

The 3M Air Quality Engineers will:

- ▶ test the air at several positions
- ▶ suggest measures and give sound advice if the air does not meet requirements
- ▶ issue a certificate should the air meet requirements for Breathable Quality Air

For more details see page 22



3M™ Speedglas™ 9100 Welding Systems

Improved Respiratory Protection - TH3

The New 3M™ Speedglas™ 9100 FX Air Welding Shields offer the highest respiratory protection - TH3 and excellent vision in the flip-up mode. It readily connects to 2 different air delivery units:

- 3M™ Adflo™ Powered Air Turbo
- 3M™ Fresh-Air C Supplied Air Regulator

The exclusive “stackable” configuration of the Adflo turbo unit means that the gas filter can be stacked onto the particle filter for additional protection from specific organic, inorganic and acidic gases and vapours.

Features and Benefits:

An Adaptable System

- With the right type of filter, Adflo effectively protects against both particles and gases – all in one system. The filters can be replaced selectively: you don't need to change all filters at the same time

Filter Indicator

- As soon as you turn on your Adflo powered air respirator a display indicates the status of the particle filter

Airflow

- For hot humid jobs the user can increase the airflow from 170 l/min to 200 l/min

Main Systems Part Numbers

- 54 66 05 : 9100FX Shield with 9100V ADF and Adflo
- 54 66 15 : 9100FX Shield with 9100X ADF and Adflo
- 54 66 25 : 9100FX Shield with 9100XX ADF and Adflo
- 56 66 05 : 9100 Shield with 9100V ADF and Adflo
- 56 66 15 : 9100 Shield with 9100X ADF and Adflo
- 56 66 25 : 9100 Shield with 9100XX ADF and Adflo



3M™ Speedglas™ 9100FX Air Welding System

Assigned protection factor 40
Conforms to EN 12941 (TH 3)



Also available:

3M™ Speedglas™ 9100 Air Welding System

Assigned protection factor 20

Common Consumables:

- 83 71 00 : Adflo Particle Filter
- 83 60 10 : Adflo Prefilter (pck 5)
- 83 72 42 : Adflo Gas Filter A1B1E1
- 83 71 10 : Odour Filter, Holder & Pad
- 83 71 20 : Replacement Odour Filter Pad
- 83 60 00 : Spark Arrestor
- 83 40 16 : Self-Adjusting Breathing Tube
- 83 40 17 : Heavy Duty Breathing Tube



3M™ Speedglas™ 9100 Welding Shield with 3M™ Fresh-air C Compressed Air Regulator

For highly-contaminated welding environments, you may use the 3M Fresh-air C compressed air respiratory system with a 3M™ Speedglas™ Welding Shield. The belt-mounted regulator connects to an approved air hose with a quick release connector system.

Features and Benefits:

Adjustable Air Flow

- The lightweight, belt mounted regulator allows the user to adjust the airflow from 160 to 300 litres per minute, making Fresh-air C ideal for hot and strenuous work
- Air pressure 4-10 bar
- The exclusive airflow pattern evenly distributes filtered air throughout the entire breathing zone of the shield
- The soft, flexible face seal creates a positive pressure environment within the shield, keeping the surrounding pollutants at bay

Comfort Belt

- Polypropylene 78 -150cm

Air Supply

- The air supply must be air of breathable quality meeting the requirements of EN12021
- The 3M™ Aircare™ filtration systems may be used to remove particles and odours.

Ranges

- 56 88 00 : **3M™ Speedglas™ 9100 Air with Fresh-air C Regulator without ADF***
- 54 88 00 : **3M™ Speedglas™ 9100FX Air with Fresh-air C Regulator without ADF***

* Auto-Darkening Filter



3M™ Speedglas™ 9100 Air System

Conforms to EN 14594 Class 2B
Assigned protection factor 20

3M™ Speedglas™ 9100FX Air System

Conforms to EN 14594 Class 3B
Assigned protection factor 40








Common Consumables:

- 80 60 00 : **Comfort Belt**
- 85 30 64 : **Air Hose**
- 53 41 00 : **Face Seal**
- 83 40 16 : **Self-Adjusting Breathing Tube**
- 83 40 17 : **Heavy Duty Breathing Tube**
- 52 60 00 : **Speedglas Outer Protection Plate standard (pck 5)**
- 16 80 15 : **Speedglas 9100 Sweatband (pck 3)**

3M™ Personal Protective Equipment

3M offers you a wide range of personal protective equipment including maintenance free particulate respirators, reusable respirators, eyewear and hearing protection for the widest range of industrial applications, with unequalled pedigree, gained in the toughest conditions.









The 3M™ Speedglas™ 9100 Welding Shield and 3M™ Speedglas™ 100 Graphic Shield designs work well with most 3M™ maintenance free respirators that provide protection against hazardous welding particles. The products selected below are those that typically fit well inside the shield. They are well suited for the airborne hazards often found when welding.

Suggested models of respirators		Description	Approval	Part No.
3M™ 4000 Series Respirator		The 3M 4000 Series are a range of ready-to-use, maintenance-free half masks designed for effective and comfortable protection against a combination of many gases, vapours and particulates.	EN 405:2001	4251 - FFA1P2D 4255 - FFA2P3D 4277 - FFABE1P3D 4279 - FFABEK1P3D
3M™ 7500 Series Half Masks		The 3M 7500 Series Half Masks have set a new standard in introducing the highest levels of comfort to half mask respirators. With the 3M™ 2000 Series particle filters, the 7500 Half Mask fits comfortably inside the Speedglas 9100 shield.	EN140:1998	7501 - small 7502 - medium 7503 - large
3M™ 2128 and 2138 Series Filters		The 3M 2128 and 2138 Series Filters offer particulate protection and additional nuisance level protection against organic vapours and acid gases. Both filters fit the 3M 7500 Series Half Masks.	EN143:2000 P2 R EN143:2000 P3 R	2128 2138
3M™ 9925 or 9928 Particle Respirator		Maintenance Free Particulate Respirator for protection against fine dust, oil and water-based mists, metal fume and ozone. The 3M™ Cool Flow™ Valve reduces heat build up to offer comfortable protection, particularly in hot and humid environments.	EN149:2001 FFP2	9925 9928
3M™ 9922 Speciality Respirator		The 3M 9922 Particulate Respirator offers relief against fine dusts, oil and water-based mists and nuisance levels of organic vapours from solvents, degreasers and resins. It also provides protection against respiratory hazards during welding such as welding fume and ozone gas.	EN149:2001 FFP2	9922





Contact the 3M Health and Safety Helpline on
0870 60 800 60 (UK) or 1 800 320 500 (Ireland) for further advice





























































3M™ Hearing Protection

Model	Description	Approval	Part Number
3M™ 1310 Cap Banded Earplugs	 The unique flexible band allows for easy manipulation and together with the soft round shape foam ear plugs provides reduced pressure and a comfortable seal.		1310
E-A-R™ Classic™ Ear plugs	 E-A-R™ Classic Earplugs are made from a soft energy absorbing polymer foam which provides excellent hearing protection.		PP-01-002 : Pillowpack FP-01-000 : 5 pair PD-01-001 : One Touch Refill PD-01-009 : One Touch Top Up AM-01-000 : Classic Small
3M™ 1100 Earplugs	 The soft foam material provides maximum comfort and low pressure inside the ear.		1100 : Uncorded 1110 : Corded
3M™ E-A-R™ Push-Ins™ Earplugs	 The E-A-R™ Push-Ins™ Earplugs revolutionise hearing protection with more advantages than many other foam earplugs. No roll down is required, a gentle push is all it takes.	EN 352-2	EX-01-021 : Uncorded EX-01-020 : Corded
3M™ E-A-R™ Ultrafit™ Corded Earplugs	 For occasion when the convenience and permanence of a pre-moulded earplug is more suitable for your requirements.	EN 352-2	UF-01-00
Peltor™ Optime™ I Earmuff	 Peltor Optime I Earmuff offers versatile protection and is very lightweight providing high wearer comfort. It combines a low profile with generous inner depth which makes it easy to combine with other equipment, allowing the ear to rest comfortably.	EN 352-3	H510B : Neckband H510A : Headband H510F : Folding Headband H510P3 : Helmet Attachment
Peltor™ Optime™ II Earmuff	 Peltor Optime II Earmuff has been developed for demanding noisy environments and muffles even extremely low frequencies to a maximum degree.	EN 352-3	H520B : Neckband H520A : Headband H520F : Folding Headband H520P3 : Helmet Attachment
Peltor™ Optime™ III Earmuff	 Peltor Optime III Earmuff is a high performance hearing protector and has been developed for use in extremely noisy environments.	EN 352-3	H540B : Neckband H540A : Headband H540P3 : Helmet Attachment

3M™ Coveralls

3M™ 4520 Protective Coverall Type 5/6		Lightweight protection for all day comfort with breathable material for extra comfort and reduced heat stress.	Typical Applications <ul style="list-style-type: none"> • Light duty maintenance • Asbestos handling • Abattoirs/Farming • Construction work • Wood/Metal processing 
3M™ 4540+ Protective Coverall Type 5/6		Combined performance and comfort offering excellent robustness and low linting properties.	Typical Applications <ul style="list-style-type: none"> • Paint Spraying • Asbestos handling • Light-duty industrial cleaning and maintenance • Pharmaceutical processing 

3M™ Eyewear

	Model	Description	Approval	Part Number
3M CLASSIC SPECTACLES	3M™ Virtua™ AP Spectacles	Protection never looked so affordable. The new 3M™ Virtua™ AP features a graceful, unisex styling and lightweight comfort to help promote compliance.	EN 166 1.F	Lens Colour Product Code  71512-0000M  71512-
	3M™ 2720 Series Spectacles	Cost-effective protection and comfort. 3M™ 2720 Classic Line Spectacles are lightweight and offer the wearer high levels of comfort together with reliable protection. They are available in 3 lens options.	EN 166:2001 1.FT	Lens Colour Product Code  2720  2721  2722
	3M™ 2820 Series Spectacles	Safety with style. Very lightweight, sleek and modern design offering excellent coverage and field of vision.	EN 166:2001 1.FT	Lens Colour Product Code  2820  2821  2822
	3M™ Tora™ Spectacles	Lenses and temples in combined colours intensify the contemporary smart look. 9D base curved lens offers excellent peripheral vision and perfect lateral side protection (Optical Class 1).	EN 166 1.F and EN 170 1.FT	Lens Colour Product Code  71501-00001CP  71501-00002CP  71501-00003CP
3M COMFORT SPECTACLES	3M™ 2840 Series Spectacles	With a new, unique style the 3M™ 2840 Spectacles have been designed with user comfort and convenience in mind. The temples are fully inclinable and adjustable in length for optimal fit. The soft inner padding offers increased comfort. The 3M™ 2840 Spectacles feature a strong polycarbonate lens with anti-scratch and anti-fog coating (except 3M™ 2844) and integrated browguard.	EN 166 and EN 170 1.FT	Lens Colour Product Code  2840  2841  2842  2844  2845  2846
	3M™ Solus™ Spectacles	From colour-accented temples, to the high profile dual lens look of fashion street wear, Solus brings sophistication and comfort to safety eyewear.	EN 166 and EN 170 1.FT	Lens Colour Code Frame  71505-00001CP   71505-00002CP   71505-00003CP   71505-00004CP   71505-00005CP 
3M PREMIUM SPECTACLES	3M™ Eagle™ Spectacles	The Polycarbonate lens eliminates the UV, reduces IR levels and secures perfect eye comfort by controlling visible light. Can be used in all situations where UV, IR or visible light creates a risk. Available in shade 1,7 (welder's assistant) up to 7,0 (oxy cutting).	EN 166 1.F	Lens Colour Code Frame / Lens  27-3024-03P  PC - 3,0  27-3024-05P  PC - 5,0  27-3024-07P  PC - 7,0
	3M™ Metaliks™ Spectacles	Polished metal frame with a sleek 10-base de-centered twin lens for optimum eye coverage and optimal field of vision.	EN 166 1.F and EN 170 1.F	Lens Colour Code Frame  71460-00001CP   71460-00002CP 
	3M™ Metaliks™ Sport Spectacles	Metal frames with saddle type nosepiece. Formable rubber tipped temples for extra comfort and adjustability.	EN 166 1.FT	Lens Colour Code Frame  71461-00001CP   71461-00002CP   71461-00003CP   71461-00004CP 
GOGGLES	3M™ Fuel™ X2 Series Spectacles	An ultra efficient blend of comfort and style offers a refined look and superb features.	EN 166 1.FT	Lens Colour Code Frame  71502-00000M   71502-00001M   71502-00002M 
	3M™ 2890 Goggles	The 3M™ 2890 Safety Goggles feature a modern, slim design and are available with four options using an either acetate or polycarbonate lens with either sealed (3M™ 2890S, 3M™ 2890SA) or indirect ventilation	2890 + 2890S EN166 1.BT 2890A + 2890SA EN166 1.FT	Lens Colour Product Code  2890  2890A  2890S  2890SA
	3M™ Fahrenheit Goggles	Soft PVC crystal frame with a wide support area all around the face to enhance comfort. Specific channel on the side of the frame to accommodate the temple of prescription frames.	EN166 1.BT EN166 1.BT EN166 1.B9	Lens Colour Product Code Headband Ventilation  71360-00001 Nylon Indirect  71360-00002 Nylon Indirect  71360-00005 Neoprene Non-vent



We do the Overtime - Care and Maintenance

Why is care and maintenance so important?

To optimise the effective lifetime of your welding protective equipment and avoid additional cost of replacement, regular maintenance is important.

Guidance on the appropriate checks is provided in the instruction booklets with each new system/item. The care and Maintenance Pack Sheets and Posters make this information accessible on a day-to-day basis and are a strong visual reminder.

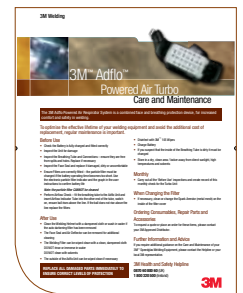
Packs

The care and maintenance packs provide easy-to-follow guidance explaining the checks and procedures for the components of each 3M system on site. The use of posters and information sheets allows this key information to become easily accessible to everyone involved with maintaining the equipment.



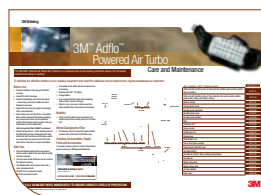
Information Sheets

The sheets highlight the main 'Before Use' and 'After Use' checks (as required) for each piece of kit. They also provide a breakdown of various consumables, accessories and repair parts with part numbers and pack quantities.



Posters

The A3 posters highlight the main 'Before Use' and 'After Use' checks required to ensure optimum performance and protection.



Record Cards

As part of the COSHH regulations relating to respiratory protective equipment, records of monthly checks must be kept.



To download the above material, please go to:

www.3M.co.uk/maintenancepacks

To request full packs please call 3M Safety Services on

0845 601 3457

3M Fit Testing

Do you have workers who wear tight fitting respirators, such as Disposable Respirators, Half Masks or Full Face Masks (including those fitted to a powered respirator)?

If so, you are required to fit test them*



Product Type	Required Fit Test Method
Disposable Respirator	Qualitative or Quantitative
Half Mask (including those fitted to a powered or supplied air device)	Qualitative or Quantitative
Full Face Mask (including those fitted to a powered or supplied air device)	Quantitative Only

3M can offer both Qualitative and Quantitative Fit Testing.

The 3M Fit Testing Service is provided by Fit2Fit accredited personnel on the employers site at a day/time suitable to the employer. The Fit2Fit accreditation scheme is a BSIF initiative supported by the HSE which ensures fit testers can conduct a fit test to the level of competence required in the HSE guidance note 282/28. Staff carrying out the testing are competent at fit testing and have a professional and friendly manner which is important when coaching and reassuring employees during their fit test.



We will fit test employees on the respirator that has been issued. We also carry sufficient samples of 3M's full range of respirators, so should any employee require a different model or design, samples are made available if required. 3M can offer a fit testing service lasting either half a day or a full day(s), depending on the number of employees who require a fit test.

*as per COSHH Regulations 2002

To receive a quote for Face Fit Testing, please either call our 3M Safety Services Coordinator on **0845 601 3457**, or email us on safetyservices.uk@mmm.com



3M Air Quality Testing Service

Do you use airfed respirators?

The COSHH regulations require that the air provided to this type of equipment should be of breathable quality and of sufficient, constant flow and pressure to provide adequate protection*

The 3M Air Quality Testing Service is carried out by engineers who will:

- ✓ Carry out a briefing where required, on the test procedure
- ✓ Test the air at several positions, as per your requirements
- ✓ Suggest measures and give sound advice, if the air does not meet the requirements, to enable the employer to make further assessments
- ✓ Issue a certificate should the air meet the requirements of Breathable Quality Air
- ✓ Issue a written set of test results
- ✓ Send an automatic notification for re-test as per your requirements



Air Quality Testing

An air quality test will check the oxygen level of the air and the level of the following contaminants:

- ✓ oil
- ✓ water
- ✓ carbon dioxide
- ✓ carbon monoxide
- ✓ odour



Air Flow Testing

An air flow test ensures the air flow at each outlet meets the flow and pressure required by your respiratory protective equipment.

To receive a quote for Air Quality Testing services, please either call our 3M Safety Services Coordinator on 0845 601 3457, or email us on safetyservices.uk@mmm.com

*as per COSHH Regulations 2002 (European Standard for Breathable Quality air is EN12021).

3M Health and Safety Helpline - 0870 60 800 60 (UK), 1 800 320 500 (Ireland)

Diverse range of personal protective equipment

The combined portfolio of 3M™, Peltor™ and E-A-R™ products includes high-quality, innovative solutions to protect people at work. Here are some examples:

Respiratory protection



Hearing protection



Eye protection



Head protection



Welding protection



Protective coveralls



For more information about our products and services visit our website at www.3M.co.uk/ohes



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The Iveagh Building
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Tel: 1800 320 500

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