

The welder's most important instrument:
his eyes.



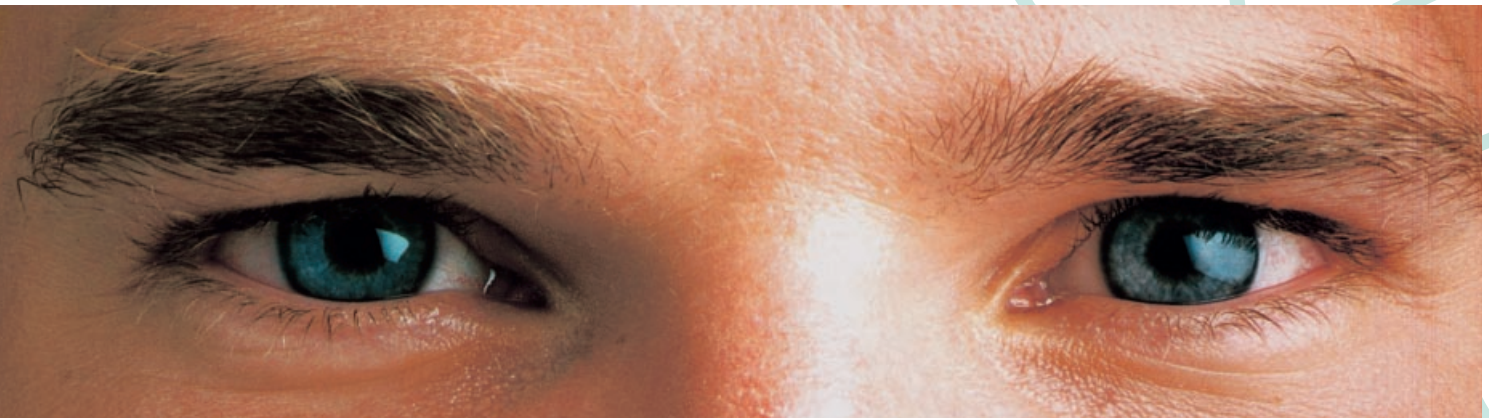
ATHERMAL[®]
EYE PROTECTION BEHIND GLASS!



SCHOTT
glass made of ideas

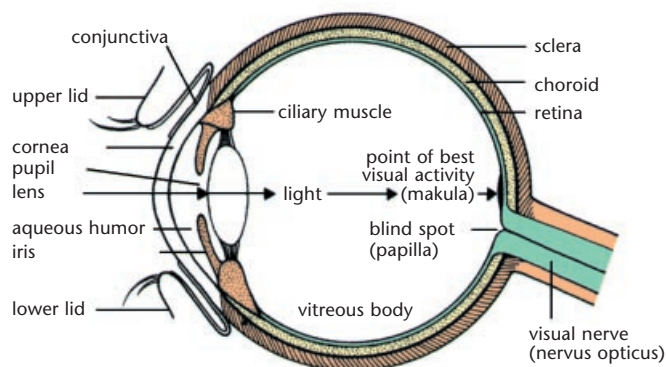
A clear view of everything that causes damage to the eyes.

The eye – a natural high precision optical instrument. Nearly 90 % of all sensations are perceived by the human eye. That is why the consequences of eye damage are especially severe.



During all welding and cutting operations a harmful optical radiation is emitted. The intensity of this radiation depends on the welding processes used and the melting temperatures. The correct selection and the appropriate use of the welding filter eliminate eye damage and reduction of the visual acuity.

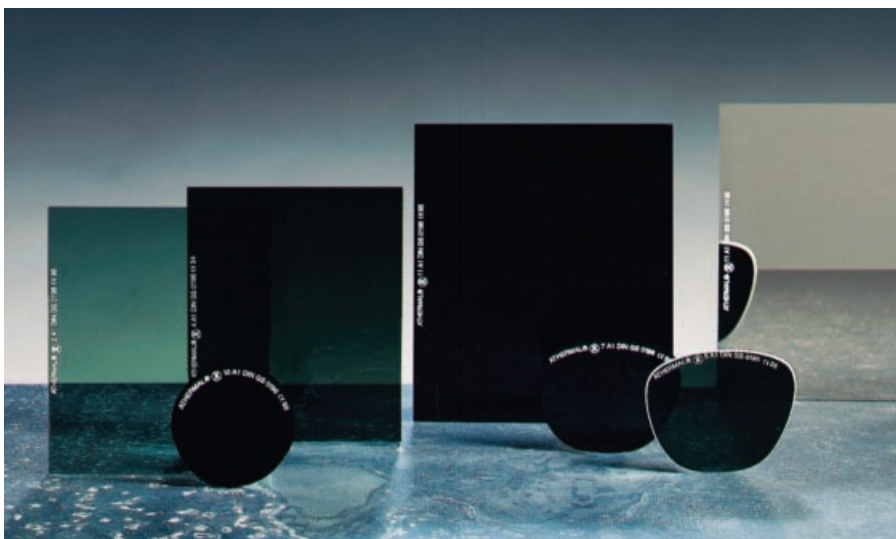
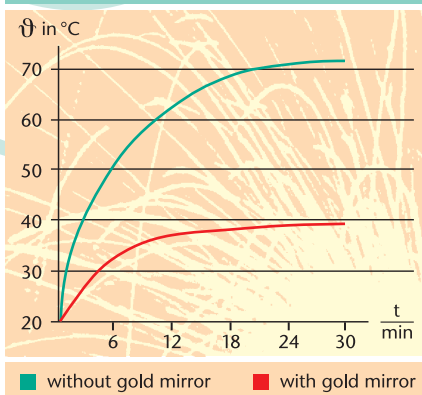
Types of optical radiation and possible effects on the function of the eye			
Optical radiation during welding	to the eye	direct effects on the eye	indirect effects on the eye
ultraviolet radiation	invisible	absorption of radiation by the cornea	painful corneal inflammation of keratitis and conjunctivitis
visible radiation (light)	visible	high radiant intensity glare	temporary reduction of the visual acuity
infrared radiation	invisible	heating of the aqueous humor and the lens lenticular opacity burning of the retina	permanent reduction of the visual acuity leading to cataract



ATHERMAL[®] welding protection glass: gold – the safe eye protection.

ATHERMAL[®] – the internationally approved welding filter from SCHOTT – offers excellent protection. The features of ATHERMAL[®] are: high optical quality, dimensional stability resistance to radiation, scratch resistance. The agreeable grey-green colour of ATHERMAL[®] assures observation without fatigue. The ATHERMAL[®] range offers the correct eye protecting glass for every welding operation. ATHERMAL[®] with gold mirror coating reflects additionally 90 % of the infrared radiation (radiated heat) and particularly reduces the heat to which the eyes are exposed.

Heating of ATHERMAL[®] shade 11A1 DIN, with and without gold mirror coating (measurement conditions: welding with 6 mm electrodes, current intensity 350 Amperes, working distance 40 cm)



Facts and Figures.



The optical requirements of eye protecting filters for welding are laid down in national and international standards, eg DIN EN 166/169. ATHERMAL® is virtually free from „scattered light effect“ and complies with optical class 1.

Each ATHERMAL® welding filter is photometrically tested. The identification marking is made in compliance with standards or upon customers' request.

For our customers in EC countries we mark ATHERMAL® as specified in the right hand table.

Identification marking

ATHERMAL®	Registered Trademark
Ⓐ	
6	Shade No.
A	Manufacturer's mark (= A)
1	Optical quality class
DIN	DIN mark of conformity
GS	National safety mark
0196	Notified Body of DIN CERTCO, Gesellschaft für Konformitätsbewertung mbH – Augenschutz und Persönliche Schutzausrüstung – Westl.-Karl-Friedrich-Str. 56 D-75172 Pforzheim
CE	EC mark of conformity

Availability

ATHERMAL® – without gold mirror coating, shades 2-14

ATHERMAL® – with gold mirror coating, shades 8-14

For further Information please contact:

Type of filter	Standard dimensions	Shade No.	Used in
curved	sizes to customer specifications curvature 2.5 dpt	2–8	protective spectacles
plane	50 mm Ø	2–8	protective spectacles welding helmets and hand shields
	110 x 90 mm	8–14	
	110 x 85 mm	“	
	110 x 80 mm	“	
	110 x 60 mm	“	
	110 x 55 mm	“	
	108 x 83 mm (4 1/4 x 3 1/4")	“	
	108 x 51 mm (4 1/4 x 2")	“	
	105 x 50 mm	“	
	98 x 75 mm	“	
other sizes on customer request			
larger sizes to customer specifications		2–14	welder's cabins

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