



### APPLICATION:

Original ACI mica shields can be used if the sight glass plates, e.g. made of borosilicate glass, are exposed to strong chemical stress.

Our mica discs are made of Muscovite natural mica (clear quality) and show virtually no effect on the visibility of transparent sight glasses. In addition, mica plates increase the temperature resistance and service life of borosilicate sight glasses, for example.

### OPERATING CONDITIONS:

The production and quality tests during the process guarantee the characteristic values of the mica discs and the tight dimensional tolerances. With these outstanding properties, mica shields can be used as an additional safety feature for sight glass plates under extreme conditions.

Operating conditions:		
	muscovite	phlogopite
Permanent heat resistance:	500 °C	700 °C
Permissible maximum temperature in combination with borosilicate glass:	320 °C	320 °C
Pressure:	depending on field of application	

Technical Information:		
Coefficient of expansion (K <sup>-1</sup> )	90 x 10 <sup>-7</sup>	135 x 10 <sup>-7</sup>
Modulus of elasticity (N/mm <sup>2</sup> )	180 x 10 <sup>-3</sup>	170 x 10 <sup>-3</sup>
Thermal conductivity (W/(m·K))	0,25 ... 0,75	~ 1,7

Other properties:		
radiation resistance	Very good	Very good
resistance to organic solvents	resistant	resistant
acid resistance	resistant (except hydrogen fluoride)	resistant (except hot acids)
oil resistance	resistant	resistant
colour	reddish, green, colourless, brown	amber, green

ACI mica qualities		V-1	V-2	V-3	V-4	V-5	V-6	V-7	V-7A	V-8	V-9	V-10	V-10A
		Clear	Clear, slightly tinted	Slightly spotted	Good tinted	Quality A Tinted	Quality B Tinted	Severely tinted	Tightly tinted	Black dotted	Black spotted	Black tinted	Tight black and red tinted
	Crystallographic discoloration	X	*d	*d	*d	*	*	*	*	*	*	*	*
entrapped air	Very light	X	*	*	*	*	*	*	*	*	*	*	*
	Light	X	X	*	*	*	*	*	*	*	*	*	*
	Medium	X	X	X	*e	*f	*	*	*	*	*	*	*
	Strong	X	X	X	X	X	*	*	*	*	*	*	*
	Blurred spots	X	X	X	X	X	X	*g	*h	*	*	*	*
Mineral stains	Light, black and red	X	X	X	X	X	*d	*d	*h	*	*	*	*
	Black	X	X	X	X	X	X	X	*g	X	*d	*g	*h
	red	X	X	X	X	X	X	X	*g	X	X	*d	*
	Black and Red	X	X	X	X	X	X	X	X	X	X	X	*
	Green spots (plant-like)	X	X	X	X	*d	*g	*g	*	*	*	*	*
	Clay stains	X	X	X	X	X	*d	*g	*	X	X	*d	*d
Wavy	Nearly flat	*	*	*	*	*	*	*	*	*	*	*	*
	Light	X	X	*	*	*	*	*	*	*	*	*	*
	Medium	X	X	X	*	*	*	*	*	*	*	*	*
	Heavy	X	X	X	X	X	*	*	*	X	X	X	*
Toughness	Hard	*	*	*	*	*	*	*	*	*	*	*	*
	Soft	X	X	X	X	X	X	S	*	X	X	X	S
	Stones and holes	X	X	X	X	X	X	X	X	X	X	X	X
	Hunches	X	X	X	X	X	X	S	*g	X	X	X	X
	Offset	X	X	X	X	X	X	X	X	X	X	X	X
	Ridges	X	X	X	X	X	X	S	*g	X	X	X	X
	Cracks	X	X	X	X	X	X	X	X	X	X	X	X
	Fractures	X	X	X	X	X	X	X	X	X	X	X	X
	Hairline cracks	X	X	X	X	X	X	X	X	X	X	X	X
	Clefts	X	X	X	X	X	X	X	X	X	X	X	X
	Layer defects	X	X	X	X	X	X	X	X	X	X	X	X
	Pinnately columns	X	X	X	X	X	X	X	*	X	X	X	X
	Abrasion	X	X	X	X	X	X	S	*	X	*	*	*

Legend										
Permitted	Not permitted	Only permitted if specified	Little and small, on a quarter of the usable area	Half the usable area	Very dense	Light	On two thirds of the area	Uniform	Medium	Heavy
*	X	S	a	b	c	d	e	f	g	h

**DELIVERY FORMS AND DIMENSIONS:**

Below are standard dimensions in stock. Other sizes and qualities on request.

ROUND MICA DISCS	MICA SHIELDS IN LONGITUDINAL FORM WITH ROUND ENDS	MICA SHIELDS IN LONGITUDINAL SHAPE WITH ANGULAR ENDS
Ø 42 round 0.15 - 0.20 mm V4	115 x 30 with round ends 0.15 - 0.20 mm V4	190 x 24 Single shield 0.18 - 0.22 mm V4
Ø 45 round 0.15 - 0.20 mm V4	140 x 30 with round ends 0.15 - 0.20 mm V4	220 x 24 Single shield 0.18 - 0.22 mm V4
Ø 63 round 0.15 - 0.20 mm V4	165 x 30 with round ends 0.15 - 0.20 mm V4	250 x 24 Single shield 0.18 - 0.22 mm V4
Ø 80 round 0.15 - 0.20 mm V4	190 x 30 with round ends 0.15 - 0.20 mm V4	280 x 24 Single shield 0.18 - 0.22 mm V4
Ø 100 round 0.15 - 0.20 mm V4	220 x 30 with round ends 0.15 - 0.20 mm V4	310 x 24 Single shield 0.18 - 0.22 mm V4
Ø 125 round 0.15 - 0.20 mm V4	250 x 30 with round ends 0.15 - 0.20 mm V4	340 x 24 Single shield 0.18 - 0.22 mm V4
Ø 150 round 0.15 - 0.20 mm V4	280 x 30 with round ends 0.15 - 0.20 mm V4	360 x 24 Single shield 0.18 - 0.22 mm V4
Ø 175 round 0.15 - 0.20 mm V4	320 x 30 with round ends 0.15 - 0.20 mm V4	400 x 24 Single shield 0.18 - 0.22 mm V4
Ø 200 round 0.15 - 0.20 mm V4	340 x 30 with round ends 0.15 - 0.20 mm V4	430 x 24 Single shield 0.18 - 0.22 mm V4
Ø 250 round 0.15 - 0.20 mm V4	370 x 30 with round ends 0.15 - 0.20 mm V4	220 x 24 x 1,0 layered 1 V4
	420 x 30 with round ends 0.15 - 0.20 mm V4	220 x 24 x 1,4 layered 1,4 V4
	115 x 34 with round ends 0.15 - 0.20 mm V4	220 x 24 x 1,6 layered 1,6 V4
	140 x 34 with round ends 0.15 - 0.20 mm V4	250 x 24 x 1,0 layered 1 V4
	165 x 34 with round ends 0.15 - 0.20 mm V4	250 x 24 x 1,4 layered 1,4 V4
	190 x 34 with round ends 0.15 - 0.20 mm V4	250 x 24 x 1,6 layered 1,6 V4
	220 x 34 with round ends 0.15 - 0.20 mm V4	280 x 24 x 1,0 layered 1 V4
	250 x 34 with round ends 0.15 - 0.20 mm V4	280 x 24 x 1,4 layered 1,4 V4
	280 x 34 with round ends 0.15 - 0.20 mm V4	280 x 24 x 1,6 layered 1,6 V4
	320 x 34 with round ends 0.15 - 0.20 mm V4	310 x 24 x 1,0 layered 1 V4
	340 x 34 with round ends 0.15 - 0.20 mm V4	310 x 24 x 1,4 layered 1,4 V4
	370 x 34 with round ends 0.15 - 0.20 mm V4	310 x 24 x 1,6 layered 1,6 V4
	420 x 34 with round ends 0.15 - 0.20 mm V4	320 x 24 x 1,0 layered 1 V4
		320 x 24 x 1,4 layered 1,4 V4
		320 x 24 x 1,6 layered 1,6 V4
		340 x 24 x 1,0 layered 1 V4
		340 x 24 x 1,4 layered 1,4 V4
		340 x 24 x 1,6 layered 1,6 V4
		360 x 24 x 1,0 layered 1 V4
		360 x 24 x 1,4 layered 1,4 V4
		360 x 24 x 1,6 layered 1,6 V4
		370 x 24 x 1,0 layered 1 V4
		370 x 24 x 1,4 layered 1,4 V4
		370 x 24 x 1,6 layered 1,6 V4
		400 x 24 x 1,0 layered 1 V4
		400 x 24 x 1,4 layered 1,4 V4
		400 x 24 x 1,6 layered 1,6 V4
		420 x 24 x 1,0 layered 1 V4
		420 x 24 x 1,4 layered 1,4 V4
		420 x 24 x 1,6 layered 1,6 V4