



ROCK-STARS
MADE IN ASPANG

EN

07|2020



ASPANGER
For better Performance



Minerals with best Performance

The name Aspanger stands for functional mineral fillers of exceptional quality. Mined by mechanical means without the use of explosives, our products are appreciated worldwide. They improve paints, coatings, adhesives and plastics and are used in the construction chemical industry and niche industries. Moreover, they can be used without concern in organic agriculture and cosmetics.



The company

Aspanger MICA, Aspanger ASPOLIT, Schlicker and Quartz sand are the four main products of the company.



Aspanger Bergbau und Mineralwerke GmbH & Co KG, with its more than 20 dedicated employees is a certified and leading company in its field.

Each year we mine some 300,000 tons of minerals, from which 15,000 tons are processed to MICA and ASPOLIT.

The raw material for the Aspanger products MICA and ASPOLIT is mined mechanically at a site to the south of Vienna. Mining has been carried out at this deposit since 1856 and the reserves will

serve for more than 100 years. Under the new ownership the production facilities, as well as the organization, have been significantly expanded and modernized since 2015.





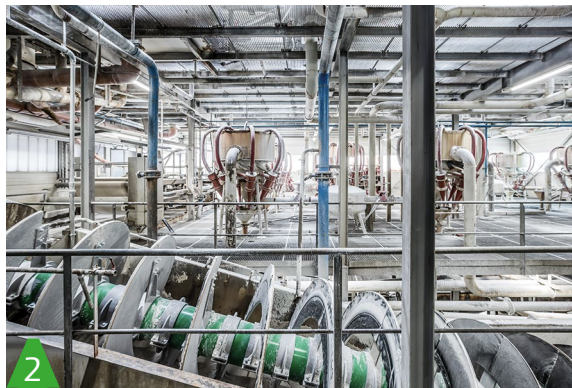
A mineral that changed everything

Aspanger MICA and ASPOLIT stand for excellent material properties. MICA is pure fine Muscovite-MICA, ASPOLIT is a multi-component mineral which mainly consists of Muscovite-MICA and quartz. The range is complemented by Schlicker and quartz sand.



Opencast mining

Our opencast mining takes place using the ripping process utilizing modern backhoe excavators. So the rock is not burdened by explosive residues and due to its purity it serves, among others as excellent filler also in sensitive industries such as cosmetics or agriculture.



Wet processing

In wet processing, slurried with our own pure water without any chemical addition, the rocks are crushed, sieved, slurried, and hydrocycloned in order to separate it into Muscovite-MICA and quartz. The pure Muscovite-MICA is used for our Aspanger MICA. Our more component filler ASPOLIT mainly consists of Muscovite-MICA and quartz.

Very good

Excellent

Characteristics	MICA	ASPOLIT
Reduction of permeability (highest Aspect-ratio)		
Improvement in heat deformation resistance		
Reduction of shrinkage and crack formation		
Excellent wettability (oil absorption)		
Increasing the coverage properties (opacity)		
Reduction of pinhole effect		
UV/IR and chemical resistant		
Excellent adhesion and dispersibility		
Increase of wet-rub resistance		



Relationship between Aspect ratio and Permeability

	MICA/ASPOLIT	TALCUM	KAOLIN
Mohs hardness	2.5/(2.5/7)	1	2
Aspect ratio	- 60:1	- 35:1	- 15:1
Benefits	Excellent wettability (low oil absorption) Reduction of permeability (high Aspect ratio)		
Polarity	hydrophilic	surface (hydrophobic), edge (hydrophilic)	hydrophilic
Particle structure	lamellar, flat and platy	lamellar, wavy and platy	lamellar



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Dry processing

In dry processing, the filler is dried to below 1 % moisture and is finely milled to the customer's specific requirement. Subsequently, the fillers are packaged as required into valve sacks or big bags; bulk shipment in silos is also possible.



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Laboratory

To guarantee excellent quality, on-going strict controls are performed along the entire value chain. For this purpose, our in-house laboratory is equipped with modern measuring instruments such as the XRD x-ray diffractometer, CILAS or Sedigraph.

Aspanger helps make cost savings

Due to their low oil absorption, Aspanger products have excellent wettability. This helps save costs.

Aspanger seals tight

Aspanger products are top in corrosion protection. This is due to the platelet-shaped structure of the mineral which reduces the permeability significantly. (Aspect Ratio 1:60).



Aspanger covers excellently

With Aspanger products the opacity of e.g. paints and coatings is significantly improved – Achieving the aim faster using less material.

Aspanger is naturally pure

Through the explosive-free mining of the raw material, Aspanger products can be used without concern in organic agriculture and the cosmetics industry (COSMOS approved).



High coverage



Less is often more, as is the case with the efficient Aspanger filler.

What if the opacity of a paint is so good that repeated coats are unnecessary? This is achieved by the use of highly efficient Aspanger MICA and Aspanger ASPOLIT in the paint industry.

Advantages of Aspanger MICA and ASPOLIT

- excellent wettability due to low oil absorption
- increases opacity & coverage
- reduces cracking & shrinkage
- reduces visibility of overlapping
- ensures good adhesion
- reduces pinhole effect
- UV, IR and chemical resistance
- excellent dispersibility
- improves wet rub resistance (mainly Aspolit because of abrasion)



Rust has no Chance

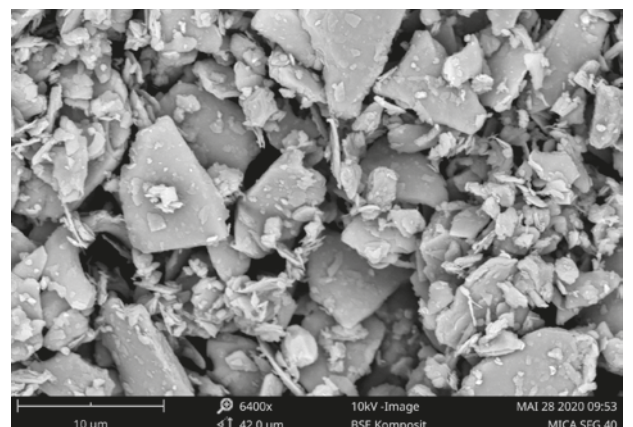


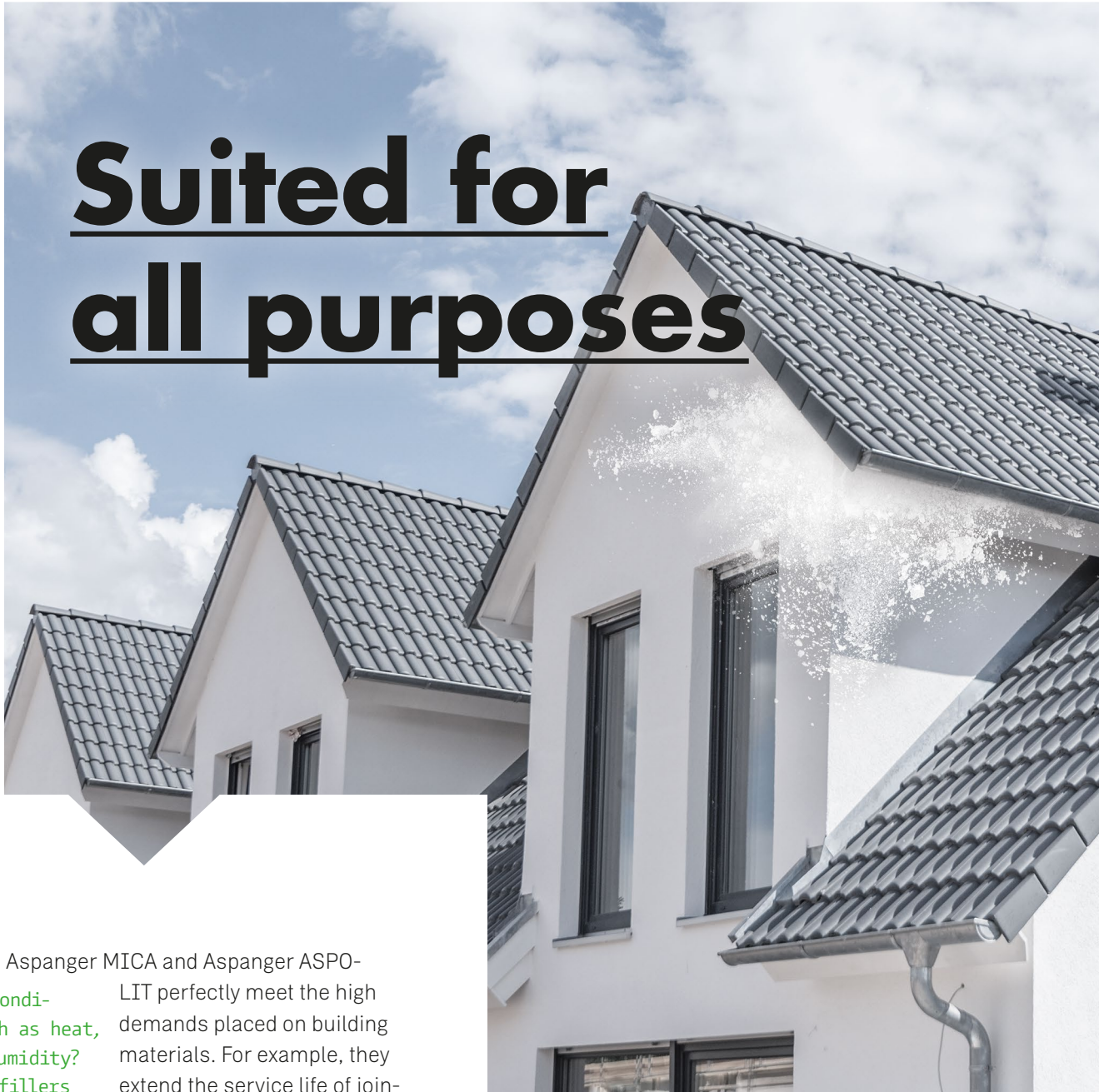
The microscope reveals why Aspanger MICA is the friend of every car lover: the platelet-shaped structure of the mineral reduces the permeability of coatings and protects against corrosion.

Aspanger MICA holds together what belongs together - thus it reduces the formation of cracks in coatings.

Advantages of Aspanger MICA and ASPOLIT

- reducing permeability due to high aspect ratio
- excellent wettability due to low oil absorption
- reduces cracking & shrinkage & overlapping
- ensures good adhesion
- excellent UV, IR and chemical resistance
- reduces pinhole effect
- excellent dispersibility





Suited for all purposes

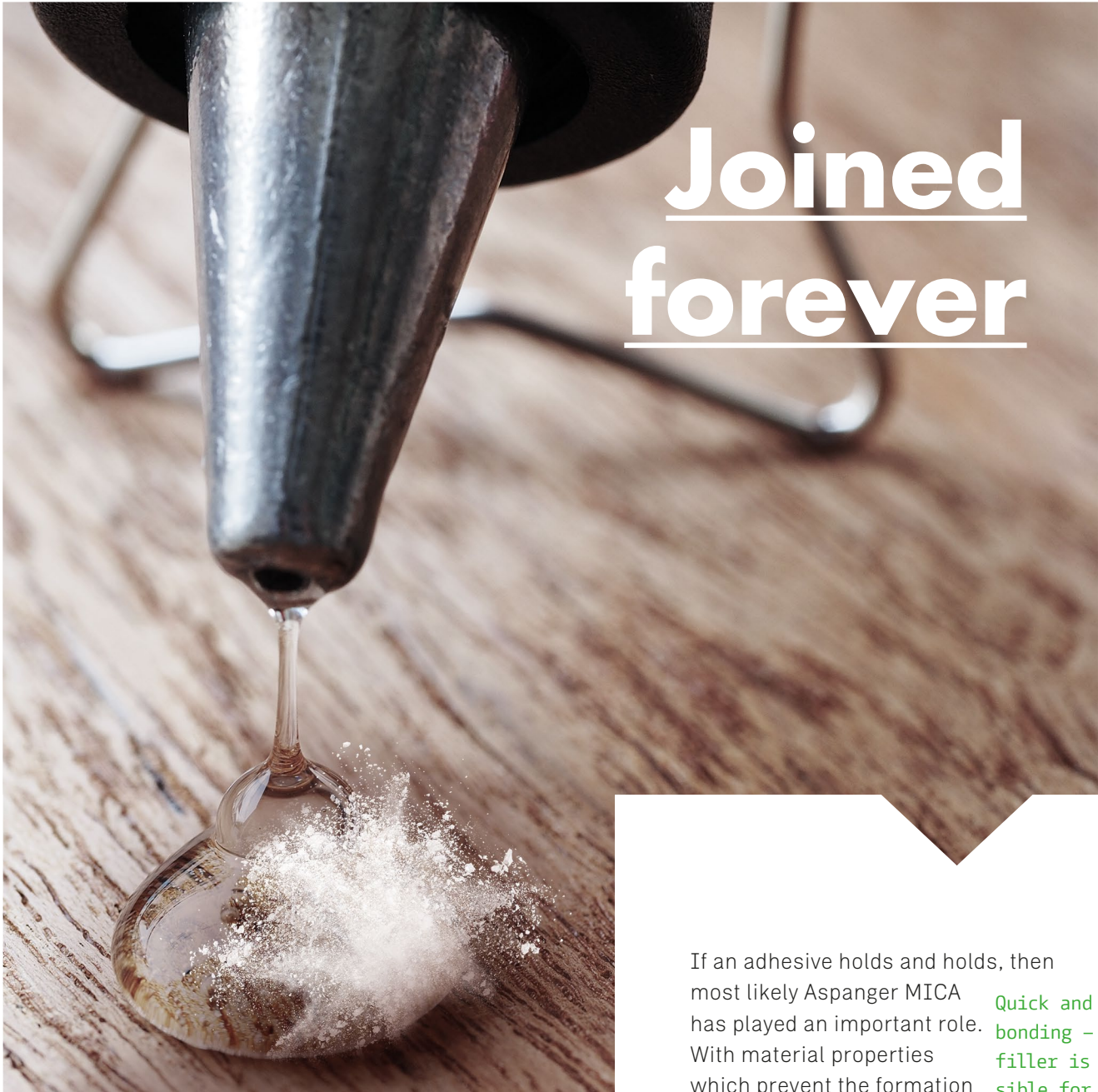
Extreme conditions such as heat, cold or humidity? Aspanger fillers are top of their class.

Aspanger MICA and Aspanger ASPOLIT perfectly meet the high demands placed on building materials. For example, they extend the service life of jointing compounds or are ideal for withstanding weathering influences on facades. The high aspect-ratio causes a so-called lotus-effect which prevents any kind of adhesion.

Tile adhesive can be perfectly applied due to the improved adhesion.

Advantages of Aspanger MICA and ASPOLIT

- excellent wettability due to low oil absorption
- increases opacity & coverage
- Reduces cracking & shrinkage & overlapping
- ensures good adhesion
- excellent UV, IR and chemical resistance
- excellent dispersibility
- reduces pinhole effect
- improves wet rub resistance (mainly Aspolit because of abrasion)



Joined forever

If an adhesive holds and holds, then most likely Aspanger MICA has played an important role. With material properties which prevent the formation of cracks and at the same time lead to firm, but also flexible bonds.

Quick and clean bonding – Aspanger filler is responsible for excellent product properties.

Advantages of Aspanger MICA and ASPOLIT

- excellent combination of viscosity and tensile strength due to mineral structure
- excellent wettability due to low oil absorption
- reduces cracking & shrinkage
- chemical resistance
- ensures good adhesion
- excellent dispersibility



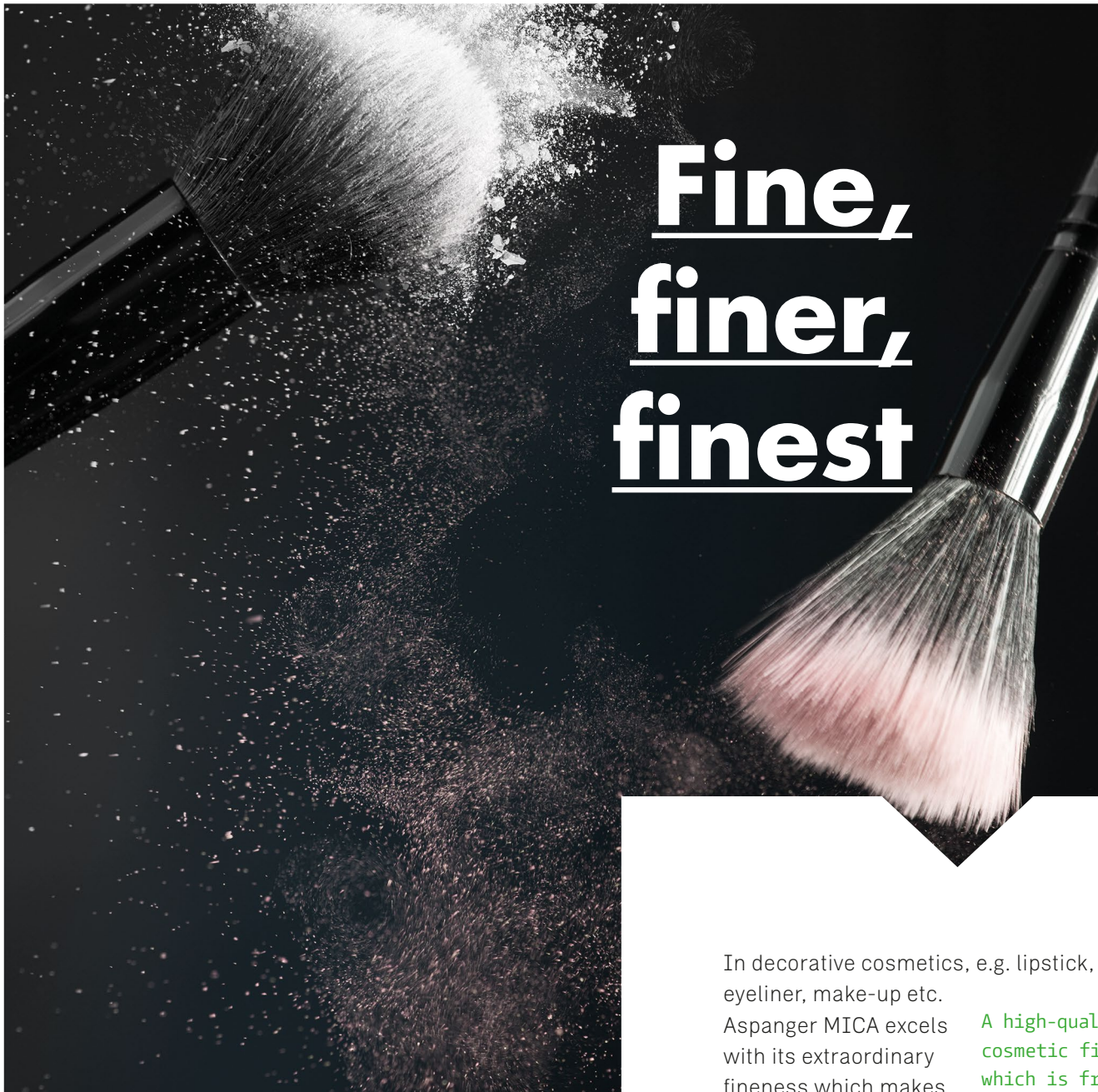
Keeping its shape

The modern world without plastics is hardly imaginable. And Aspanger filler as well.

Improve the properties of plastics & compounds? Aspanger MICA can do this. Thus plastic does not bend even under extreme conditions, is weather and higher acid resistant.

Advantages of Aspanger MICA

- improves mechanical strength & stiffness
- improves heat resistance
- low electric conductivity – isolation effect
- reduces cracking & shrinkage & overlapping
- excellent wettability due to low oil absorption
- reduces pinhole effect
- low thermal conductivity
- excellent dispersibility
- excellent UV, IR and chemical resistance



**Fine,
finer,
finest**

Advantages of Aspanger MICA

- excellent wettability due to low oil absorption
- ideal filler not only for make-up/lipsticks/eyeliner
- REACH/CMR/Nanoparticle regulations are not applicable
- extremely marginal content of heavy metals (COSMOS)
- increases opacity & coverage
- reduces cracking & shrinkage
- improves surface properties & adhesion
- excellent Dispersibility
- basis material for pearlescent pigments

In decorative cosmetics, e.g. lipstick, eyeliner, make-up etc.

Aspanger MICA excels with its extraordinary fineness which makes it perfect as a basis material for pearlescent pigments. The finer the filler is - the better the brushability is; and this improves the matting effect or the effect of pigments. Furthermore it is environmentally friendly and antiallergenic.

A high-quality cosmetic filler which is free from animal testing and is 100 % produced in Austria without child labour.



COSMOS APPROVED

MICA	Cosmetics		
	C	M	F
D90 (µm)*	34	20	12.5
D50 (µm)*	15	11	7.5
D10 (µm)*	5.5	4	3

* CILAS 715 measured values



Biologically impeccable

Biological UV protection of fruits and vegetables through the use of finely ground rock flour.

Due to its special properties, Aspanger MICA is an indispensable aid in biodynamic agriculture. MICA has proven itself to be a purely organic insecticide (e.g. against the Pear Psyllid insect), to protect fruit and vegetables from excessive sun exposure or to reduce the russetting during the fruit phase.

Advantages of Aspanger MICA

- excellent wettability due to low oil absorption
- purely organic insecticide (e.g. Pear Psyllid insect)
- safe to use in the food industry - extremely marginal content
- improves surface properties of food & vegetable
- protection against russetting
- excellent UV resistance
- excellent Dispersibility
- reduction of permeability (high aspect ratio)



As good as it gets

Where high performance is required, Aspanger MICA and Aspanger ASPOLIT convince by their exceptionally high quality. This makes them particularly interesting for industrial niches such as the refractory industry, iron foundries, in the production of clutch and brake linings or of (coloured) pencils, where they significantly improve the product properties.

High temperatures?
Extreme demands?
Fillers from
Aspanger are true
high performance
performers.

Niche markets

- Iron foundry (sand)
- Special paper application
- Refractory industry
- Clutch & brake pads
- (Coloured) pencils
- Insulation materials
- Ceramics

Aspanger Schlicker

mixed mineral of Muscovite-MICA & Quartz

- grain size d98 of 125 µm
- available in semi-moist or dried form

Aspanger Quartz-Micafill

mixed mineral of Quartz & Muscovite-MICA

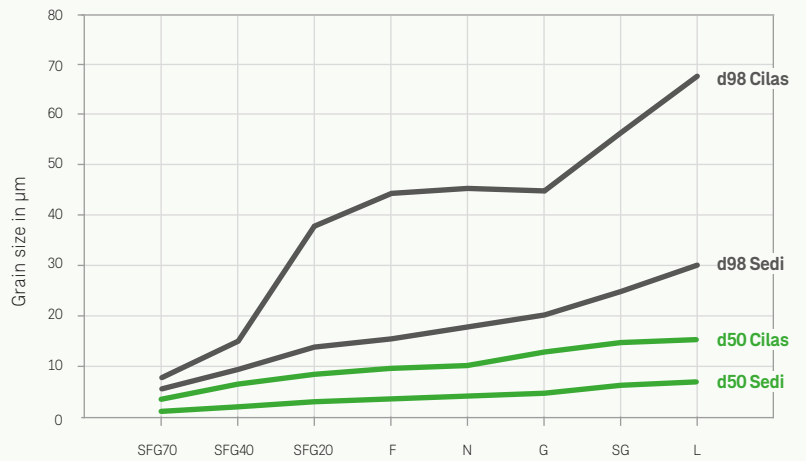


The products: an overview

Aspanger MICA

Density	2.85 g/cm ³
Mohs hardness	2.5
Refractivity	1.56
pH-value	9.5
Moisture	< 1 %

Grain size



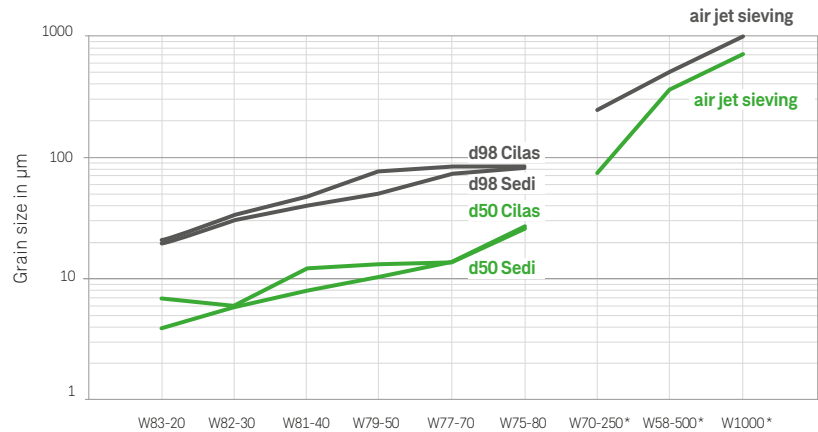
MICA	SFG70	SFG40	SFG20	F	N	G	SG	L
Oil absorption (g/100g)	38	28	26	24	24	22	20	17
Whiteness FMY (%)	85	83	83	83	80	79	78	77
Grain size D98 (µm) (Sedi/Cilas)	6/8	9/15	14/38	16/44	18/45	20/44	25/57	30/68
Grain size D50 (Sedi/Cilas)	1.5/4.1	2.7/7.1	3.8/8.9	4.2/9.8	4.6/10.4	5.4/13.8	7/15.7	7.5/16.3



Aspanger ASPOLIT W

Density	2.75 g/cm ³
Mohs hardness	2.5 (MICA) 7 (Quartz)
pH-value	9.5
Moisture	< 1 %

Grain size * or air jet sieve

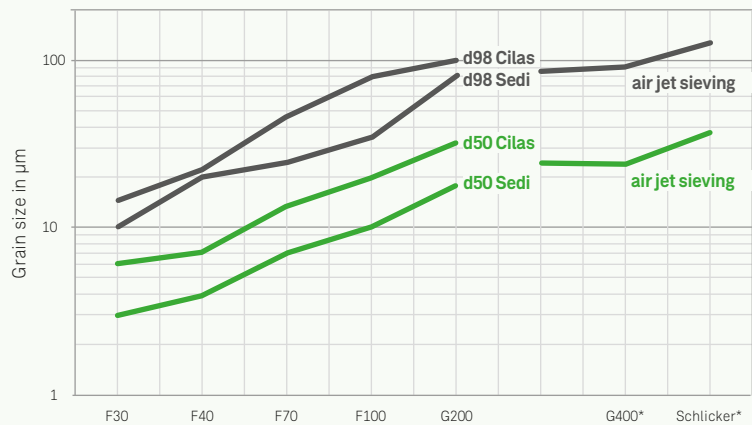


ASPOLIT W	W 83-20	W 82-30	W 81-40	W 79-50	W 77-70	W 75-80	W 70-250	W 58-500	W 1000
Oil absorption (g/100g)	21	20	18	15	13	13	11	-	-
Whiteness FMY (%)	83	82	81	79	77	75	70	58	-
Grain size D98 (µm)	20/21	30/32	40/47	50/79	70/82	80/82	250	500	1000
Grain size D50 (µm)	4/7	6/6	8/13	10/14	14/14	18/17	75	350	700

Aspanger ASPOLIT

Density	2.75 g/cm ³
Mohs hardness	2.5 (MICA) 7 (Quartz)
pH-value	9.5
Moisture	< 1 %

Grain size * or air jet sieve



ASPOLIT	F 30	F 40	F 70	F 100	G 200	G 400	Schlicker semi-moist or dried form	Quartz-Micafill 0-4 mm
Oil absorption (g/100g)	22	21	20	17	13	12	-	80 % Quarzsand and 20 % Muscovite- MICA; semi-moist
Whiteness FMY (%)	78	77	76	75	70	68	-	
Grain size D98 (µm)	10/16	20/22	25/45	35/80	70/96	90	125	
Grain size D50 (µm)	3/6	4/7	7/14	10/20	18/32	24	38	

The stated technical data and information on all products shown herein are not specifications. These are average values resulting from careful research and given without legal liability.

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