

Rigid Grinding Discs

– THE SMARTER ALTERNATIVE
FOR SINGLE-STEP FINE GRINDING

- Fast, single-step fine grinding
- Perfect flatness and edge retention
- For all materials



FAST, SINGLE-STEP FINE GRINDING

Aka-Allegran and Aka-Largan combine the usual 2-3 SiC Paper fine grinding steps into one single step

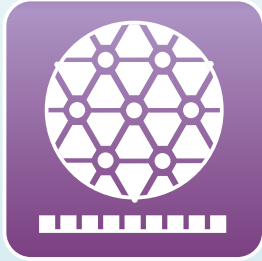
PERFECT FLATNESS AND EDGE RETENTION

Optimal to avoid unwanted relief between phases, to retain inclusions and for the correct measurement of surface layers

FOR ALL MATERIALS

Different disc compositions provide solutions for all different materials, from very hard to soft

Our rigid grinding discs, Aka-Allegran and Aka-Largan provide you with a single fine grinding step for all materials. The shortest preparation times are obtained when used together with our unique DiaUltra suspension.



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Aka-Allegran and Aka-Largan

The rigid grinding discs are available in two different versions, Aka-Allegran and Aka-Largan.

Aka-Allegran is available in four different versions, for different materials and to be used with different diamond suspension grain sizes. They are optimal for the preparation of harder materials >150 HV. Aka-Largan covers the soft materials and harder materials with soft phases. Both types replace all the usual fine grinding steps and provide samples ready for polishing.

Aka-Allegran 9

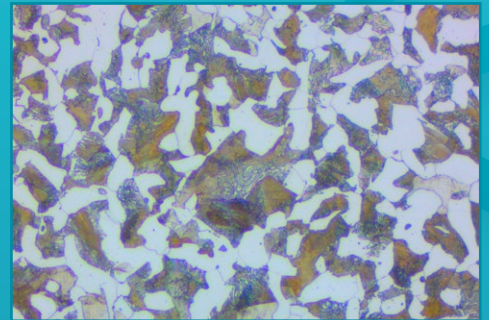
This is the most aggressive disc for fine grinding of harder materials >450 HV with diamond suspensions of 15 - 6 μm . Aka-Allegran 9 provides a very high removal rate and such very short fine grinding times. For the fastest result our DiaUltra 2-in-1 diamond suspension 9 μm is recommended.



Superalloy with diffusion coatings

Aka-Allegran 6

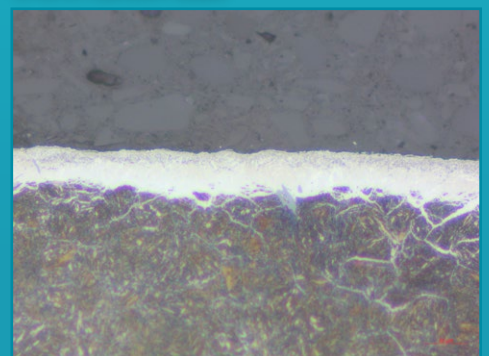
The most universal disc for fast fine grinding of most materials with a hardness >150 HV and with diamond suspensions of 9 - 3 μm . Aka-Allegran 6 is the correct choice when the optimum balance between high material removal and fine surface finish is required.



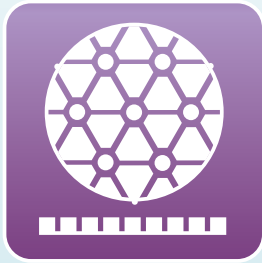
0.45% Carbon steel

Aka-Allegran 3

A softer, more gentle disc for fine grinding of sensitive materials and materials with fragile coatings. It is used for fine grinding with 9 and 6 μm diamond suspensions and can also be used with 3 μm suspensions for polishing of very hard materials. Aka-Allegran 3 preserves brittle coatings and inclusions.



Nitrided steel

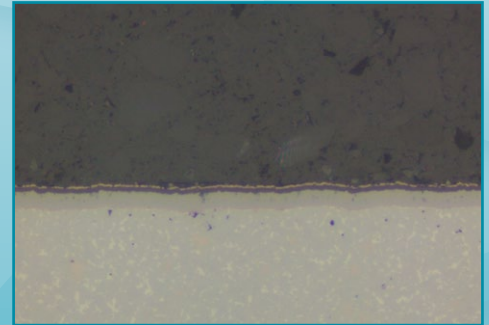


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Aka-Allegran 1

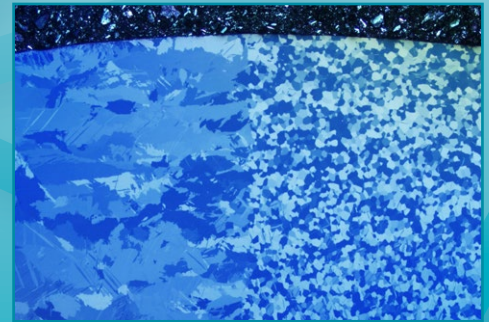
The fine grinding disc with the lowest hardness in the Aka-Allegran series. It is used with diamond suspensions of 3 μm and finer for polishing of very hard materials like coated sintered carbides.



Coated sintered carbides

Aka-Largan 9

The universal rigid grinding disc for fine grinding of soft and ductile materials and most non-ferrous metals. It is also ideal for the preparation of heterogeneous or composite materials with soft phases. Aka-Largan 9 is used with diamond suspensions from 15 - 3 μm .



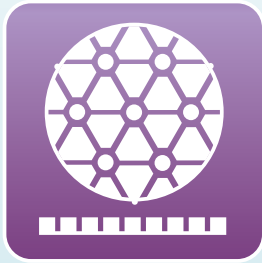
Pure titanium, grade 1, weld

Single-Step Fine Grinding

The combination of a rigid grinding disc and diamond suspension can replace 2-3 steps with SiC Paper in one single step.

The rigid grinding discs are used together with a 2-in-1 diamond suspension or diamond suspension and lubricant. For ease of use and the shortest possible preparation times, we recommend our 2-in-1 diamond suspension DiaUltra. When the diamond suspension is applied correctly a continuous, high removal rate is obtained.

All our rigid grinding discs are based on a thin steel disc for safe attachment onto a magnetic support disc. Five discs with different compositions allow you to find the correct one for your material. The composite material is designed for high removal and maximum flatness, while the pattern allows for an easy flow of removed material and debris. Depending on the material hardness, the diamonds are embedded in the disc just enough to provide the optimal removal and scratch pattern for that specific material, while still being safely held.



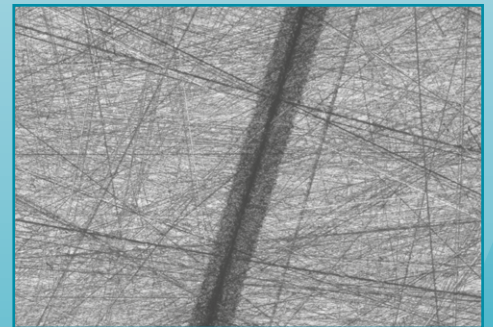
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High Quality Surface Finish and Uniform Scratch Pattern

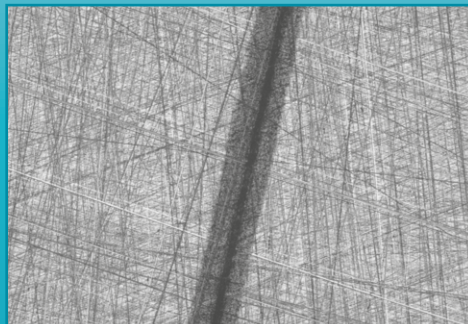
All our rigid grinding discs guarantee a high quality surface finish with maximum planeness and edge retention. The uniform scratch pattern allows for consistent, short polishing steps after fine grinding.

The following images show a comparison of scratch patterns on a steel sample with a ceramic coating after preparation on three different Aka-Allegran discs with DiaUltra 9 μm . All preparation parameters are identical.



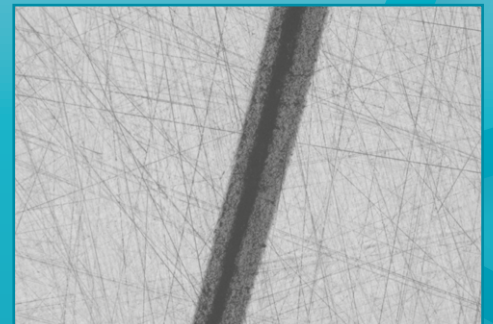
Aka-Allegran 9

The hardest disc provides the highest material removal but also produces the deepest scratches



Aka-Allegran 6

The most universal disc with a high material removal that produces uniform, medium-sized scratches



Aka-Allegran 3

The softer disc with less aggressive material removal, producing the finest scratch pattern

	Recommended Diamond Suspension and Abrasive Size	Relative Disc Hardness	Recommended Use		
			< 150 HV	150 - 450 HV	> 450 HV
Aka-Allegran 9	DiaUltra 15 - 6 μm	Hard			x
Aka-Allegran 6	DiaUltra 9 - 3 μm	Medium hard		x	x
Aka-Allegran 3	DiaUltra 9 - 3 μm	Medium		x	x
Aka-Allegran 1	DiaUltra or Aka-Poly+ with Aka-Lube Clear+ 3 - 0.1 μm	Soft		x	x
Aka-Largan 9	DiaUltra 15 - 3 μm	Very soft	x	x*	

* For heterogeneous materials with soft phases

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