




KRAMPE HAREX®

KNOW WHY.



**PEENOX®
PERFORM+**

**LASTS LONGER,
SAVES COST**



Shot Peening / Peen Forming

KRAMPEHAREX® KNOW WHY.



OUR GUARANTEE OF QUALITY

Your customers demand consistent high quality from you. The abrasive media from KrampeHarex creates the condition for this.

With its sites in Hamm and Leisnig KrampeHarex has continuously extended the position as technology leader in the field of conditioned steel cut wire grain. The plant in Leisnig specializes in the innovative manufacturing process of heat-treated special grain: Peenox® PERFORM+.

KrampeHarex. Know Why.



SPECIAL GRAIN PEENOX® PERFORM+

Peenox® Perform+ is the cut wire shot of the future. Compared to a conventional steel cut wire it offers the same blasting efficiency with almost double the lifetime which results in an enormous savings potential. The technical characteristics show no difference: during the transition from standard cut wire to Peenox® PERFORM+ no training or extra cost will arise.

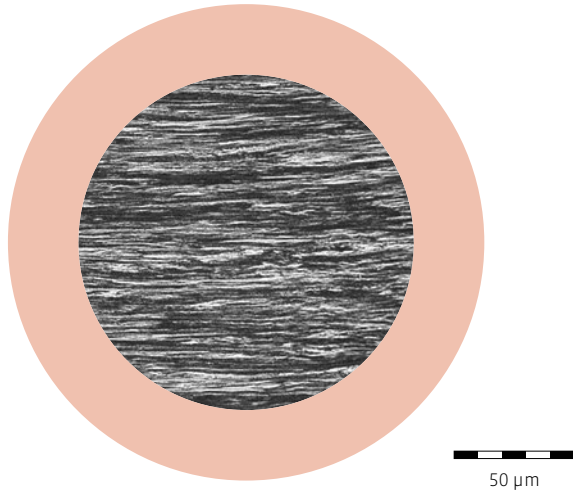
This is possible due to the adjustment in the microstructure of the grain. For Peenox® PERFORM+ the cold wire is drawn before introducing it to an innovative heat treatment process. As a result the grain does not break on impact, but rounds off. Your advantage: you have a significantly lower media consumption and you additionally reduce the wear on your machines.



MICROSTRUCTURE COMPARISON

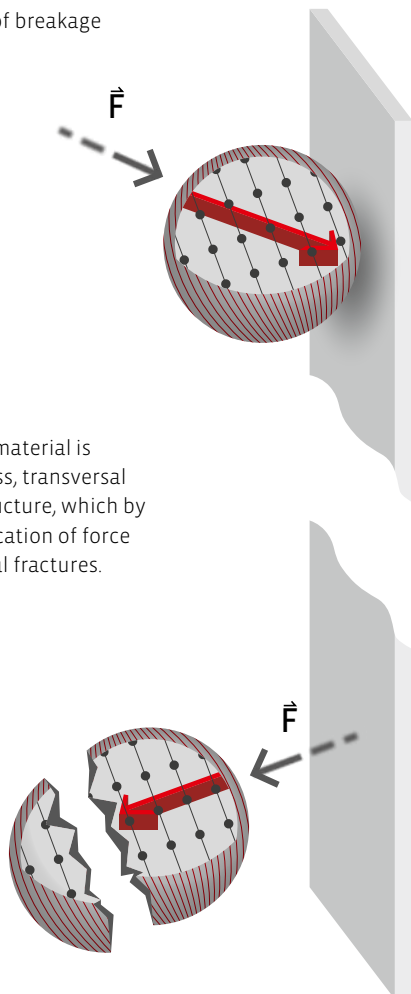
PEENOX® PERFORM+

Standard grain



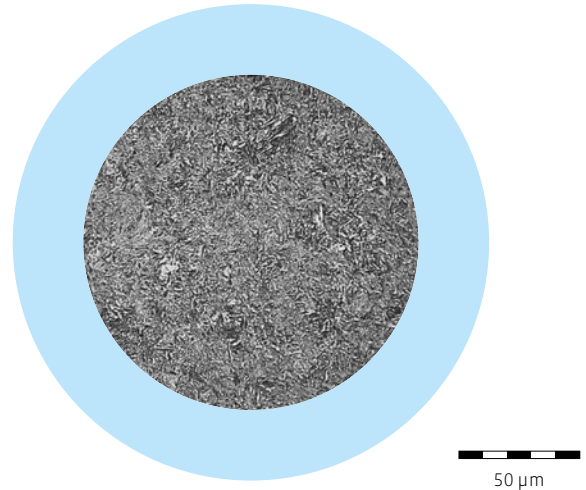
Conventional steel wire grain shows the needle-shaped structure of cold drawn wire under the microscope.

Stress and risk of breakage
Standard grain



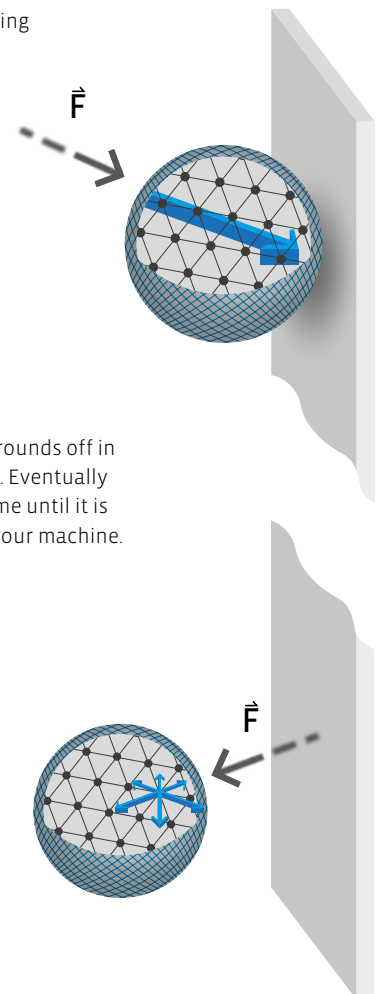
On impact, the material is exposed to stress, transversal to the microstructure, which by repetitive application of force leads to material fractures.

Peenox® PERFORM+

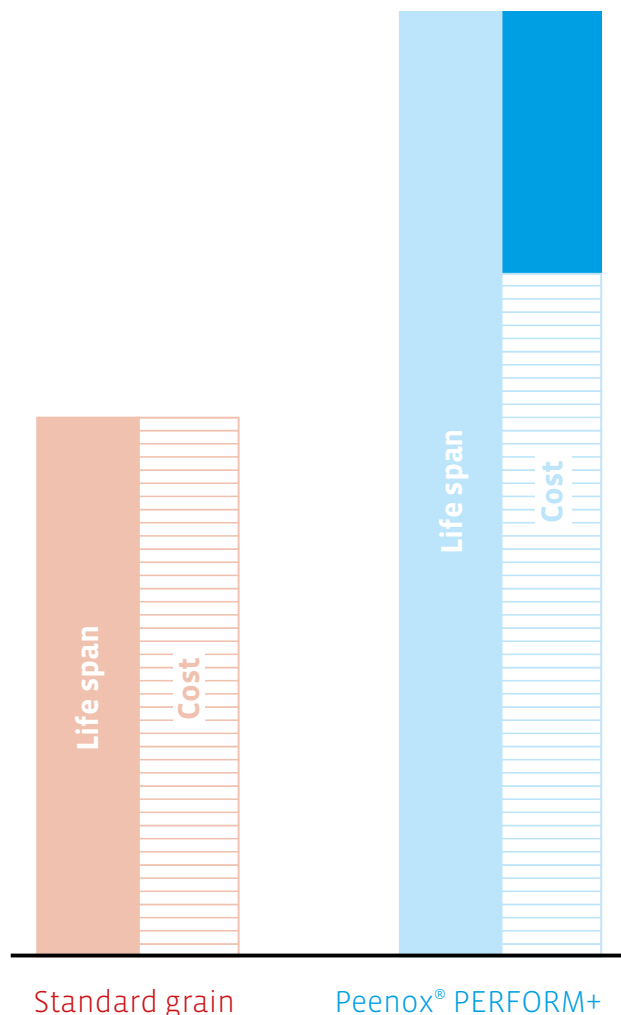


The special grain Peenox® PERFORM+ displays an optimized crystalline structure. The fine-grained, relaxed structure is clearly visible under the microscope.

Tension and Processing
Peenox® PERFORM+



The abrasive media rounds off in the peening process. Eventually the grain loses volume until it is separated through your machine.



+ Your advantage!



Life span:

The special grain Peenox® PERFORM+ lasts significantly longer than conventional abrasive media without heat treatment. Your machines are preserved as well, since hardly any sharp-edged fractured material is involved.



Cost:

You can save up to 30 percent of your current expenses for your abrasive media right from the start. Operating or training costs within the transition phase will not occur. Our consultants will be happy to calculate your individual savings potential.



Abrasive consumption:

Savings on the abrasive media rely on the grain specification and scope of application. Usually, it averages between 30 and 50 percent. Some of our users achieve even greater savings.



HEAT TREATMENT

In an innovative manufacturing process, the crystalline structure of Peenox® PERFORM+ gets optimized.



FREE OF STRESS/TENSION

The homogeneous structure of the material prevents material stress under the impact of applied force.



PERFECT MICROSTRUCTURE, NO BREAKAGE

Brittle fractures are avoided in the event of impact. The grain rounds off and reduces its volume.



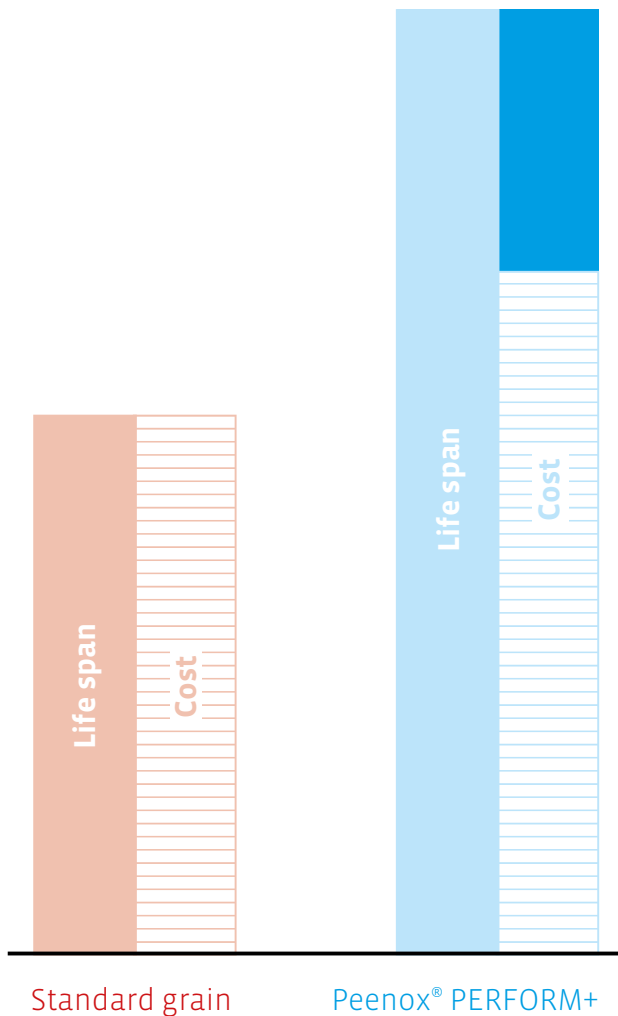
EXTREMELY LONG LIFESPAN

The special grain lasts longer. The consumption of the abrasive media is reduced by up to 50 percent.

PEENOX® PERFORM+

KNOW WHY YOU SAVE COST.

+ Your savings!



Our special grain has been successful used for more than 20 years of practice, in particular in the spring industry. All users report significant savings in materials and costs. Problems in the transition phase have not occurred in any case.

Best price-performance ratio

Peenox® PERFORM+ costs slightly more in the production than a conventional abrasive media. On the other hand, there is enormous potential for savings due to the lower consumption of abrasive media. We pass this advantage on to you. Bottom line you save up to 30 percent of your current total expenditures on abrasive media.



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TECHNICAL DATA

Z



G1



G2



G3







Peenox® PERFORM+
(VDFI)



Peenox® PERFORM+
(SAE AMS)



Abrasive	Carbon steel cut wire shot		Carbon steel cut wire shot	
Shape	Z, cylindric, conditioned/round (G1, G2, G3)		Z, cylindric, conditioned/round (G1, G2, G3)	
Application	Shot Peening Peen Forming		Shot Peening Peen Forming	
Standards	VDFI 8001 Customer specific requirements		SAE AMS 2431/3: AWCR SAE AMS 2431/8: AWCH Customer specific requirements	
Hardness	HV 640: 610–670 HV1 (56–59 HRC) HV 670: 640–700 HV1 (57–60 HRC) HV 700: 670–730 HV1 (59–61 HRC) HV 800: 770–830 HV1 (63–65 HRC)		SAE AMS 2431/3: 45 – 52 HRC (450 – 550 HV1) SAE AMS 2431/8: 55 – 62 HRC (600 – 750 HV1) SAE AMS 2431: 63 – 65 HRC (770 – 830 HV1)	
Sizes	0,30 mm	0,70 mm	AWC 12: 0,012" (0,30 mm)	AWC 32: 0,032" (0,80 mm)
	0,35 mm	0,80 mm	AWC 14: 0,014" (0,35 mm)	AWC 35: 0,035" (0,90 mm)
	0,40 mm	0,90 mm	AWC 17: 0,017" (0,40 mm)	AWC 41: 0,041" (1,00 mm)
	0,50 mm	1,00 mm	AWC 20: 0,020" (0,50 mm)	AWC 47: 0,047" (1,20 mm)
	0,60 mm	1,20 mm	AWC 23: 0,023" (0,60 mm)	AWC 54: 0,054" (1,40 mm)
	Alternating sizes and mixes available on request		Alternating sizes and mixes available on request	
Packaging				
	Bags 25 kg (55 lbs)	BigBag 1000 kg (2205 lbs)	Drum 907 kg (2000 lbs)	Bags 25 kg (55 lbs)
				BigBag 1000 kg (2205 lbs)
				Drum 907 kg (2000 lbs)

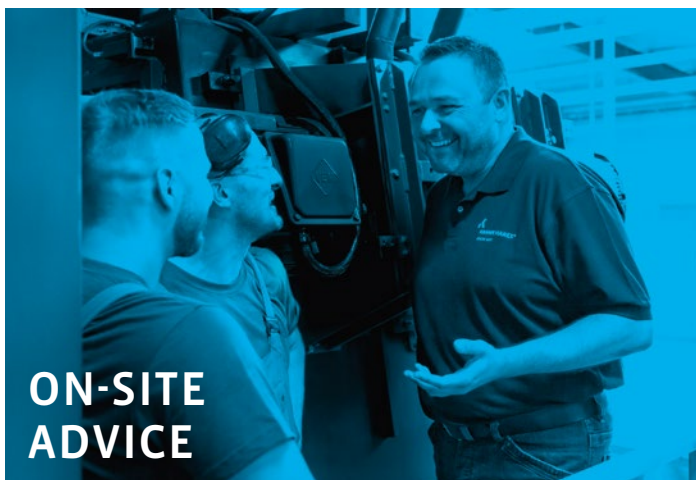
SERVICE+

»EXACTLY THE
SOLUTION WE
NEED«

SPECIAL SOLUTIONS



ON-SITE ADVICE



Our experience is your advantage

Since the beginning of the 1980s, we have introduced our abrasive media all over the world. Something we have learned above all: Listen carefully. Each company is a specialist in their operating procedures and sets their own requirements. Our competent consultants will work out the right approach with your experts.





KRAMPE HAREX®

KNOW WHY.

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