# ABRASIVES

# Hermes Automotive Programme

Hermes solutions for Automotive OEM



### CONTENTS

ENGINE-BUILDING Page 4

PRESS & BODY SHOP Page 6

PAINTSHOP

Page 12

PRODUCT DESCRIPTIONS
Page 18

HIGHLIGHTS Hermes MULTIHOLE System Page 30

FineNet abrasives
Page 31

webrax non-woven web Page 32

The "HERMESIT" principle Page 32

Intelligence inside – Hermes CBNi vitrified bonded abrasives Page 33

Lightweight – CBN grinding wheels with CFRP core bodies Page 33

HERMES ABRASIVES INSTITUTE Page 34

# Hermes – a competent "grinding"

# AT HERMES, TRADITION HAS A FUTURE

ermes Schleifmittel is a Hamburg company in the true tradition, with roots going back to 1927. The company is not only one of the world's key manufacturers of coated abrasives – since 1993, it has also occupied a leading market position in the production of precision bonded abrasives.

Hermes owes this market position to its insistence on unsurpassed quality. We feel an obligation to this tradition and it is our main priority for the future. This obligation is the greatest incentive there is, and we devote all our energy and commitment to it – tradition shaping the future.

Hermes maintains numerous production sites and sales offices in all the main industrial and emerging nations of the world, underlining its international commitment and its efforts to provide its customers with a competent local consulting service.









![](_page_1_Picture_23.jpeg)

### A SELECTION OF OUR SITES

- 1 I Headquarters in Hamburg, Germany
- 2 I Hermes Schleifkörper GmbH, Dresden, Germany
- 3 I Hermes Austria
- 4 | Hermes USA
- 5 | Hermes China

# partner all over the world

# SUPPORTING NATURE AND THE ENVIRONMENT

O ompliance with national and international laws and regulations is one of the key principles of Hermes corporate policy and protection of the environment is a core constituent of our corporate responsibility.

As a consequence, as long ago as 1996, Hermes was the first European abrasives factory to be successfully audited on a voluntary basis in line with the EMAS (Eco-Management and Audit Scheme).

The management system currently being implemented covers all areas of the company, with processes relevant to the environment, as well as to quality and energy, being described and monitored internally as well as certified externally by the TÜV-Nord organization in line with DIN EN ISO 14001 and 9001 and 50001.

![](_page_2_Picture_5.jpeg)

# **QUALITY – OUR TRADEMARK**

B ound to tradition on the one hand, yet a pioneering developer of innovative products on the other, Hermes places greatest emphasis on the production of high-quality, state-of-the-art abrasives.

To enable this high standard of quality to be pursued and expanded still further in the future, the TÜV NORD CERT auditing company awarded the Hermes Group the quality seal for meeting the requirements of DIN EN ISO standard 9001.

Our customers - in other words you - benefit considerably from this reliability.

# COME AND SEE OUR PAGE

ermes Group website are continuously updated and form an important information platform for customers and interested parties. Here you will find virtually all the information which is useful when planning and purchasing Hermes abrasives.

The Hermes website uses databases to inform you about new products and application solutions and to provide you with facts and figures about the Hermes Group.

Numerous useful functions help you find out quickly and easily everything you need to know about Hermes abrasives. In the **"Product Finder"** for example, enter simple search queries to find the correct Hermes type and have its key product information (such as product structure and benefits) and primary applications displayed. Alternatively, use the interactive **"Contact Finder"** for a list of Hermes experts (both office-based and sales) – all over the world, of course.

Regardless of where you are on our websites, whether in the "Product Finder" or in the application solutions or in the "Service" area – you always have the option of downloading information about our products and application solutions for immediate use on your PC, tablet or smartphone.

Try us out. We look forward to your visit.

![](_page_2_Picture_16.jpeg)

www.hermes-abrasives.com

![](_page_2_Picture_18.jpeg)

# Engine-building

![](_page_3_Picture_2.jpeg)

Initial grinding followed by<br/>SuperfinishingCamshaft

# 2 Various grinding and finishing applications

Functional surfaces of valves, piston rings, bucket tappets, connecting rods etc.

Initial grinding followed by Superfinishing
Crankshaft he "heart" of any vehicle, the engine, would not work without the high-precision machining of functional surfaces such as the bearing surfaces of crankshafts and camshafts, for example.

Hermes provides a one-stop shop for every abrasive required to achieve final values for dimension, concentricity, surface finish and percentage contact area. Hermes abrasives generate significant process benefits, all the way from initial grinding with CBN grinding wheels to the final super-finishing step using index-fed grinding film.

![](_page_3_Picture_9.jpeg)

# **EXAMPLE FOR CRANKSHAFT GRINDING**

INITIAL GRINDING	1. FINISHING STEP	2. FINISHING STEP
<b>Lineacete</b>		
CBN Grinding wheel 23B 151 Q7 V42 150	Abrasive film rolls FB 637, P 500	Abrasive film rolls FB 637, P 2500

![](_page_3_Picture_12.jpeg)

![](_page_3_Picture_13.jpeg)

# PRODUCT RECOMMENDATION FOR ENGINE-BUILDING

HERMES TYPE		INITIAL GRINDING (Recommended grit range)	FINISH (Recommended grit range)
0	CBN grinding wheel with segmented coating and high-performance bonding V42 for grinding crankshafts 23B 151 Q7 V42 150	151 181	107 126
( ا	CBN Grinding wheel for camshaft grinding 29B 151 07/6 V242K 176	107 151	
	Abrasive film roll FB 637		P 280 - P 2500
	Abrasive cloth roll RB 346 MJ		P 240 - P 800
	Cloth abrasive belt with cork Cork RB 515 X		P 400 - P 1000
<b>()</b>	Agglomerate cloth abrasive belt MERCURIT <sup>®</sup> 598 Y		P 600 - P 1200

More product information on page 18 - 29

# **EXAMPLE FOR CAMSHAFT GRINDING**

INITIAL GRINDING	1. FINISHING STEP	2. FINISHING STEP	
CBN-Grinding wheel 29B 151 07/6 V242K 176	Abrasive film rolls FB 637, P 400	Abrasive film rolls FB 637, P 1200	

![](_page_4_Figure_5.jpeg)

# Press & Body shop

![](_page_5_Picture_2.jpeg)

B oth production processes in bodywork manufacture and design conditions will require mechanical reworking of certain areas of bodywork as a function of vehicle model.

In this area, Hermes supplies an extensive selection of abrasives to create a surface which can be painted – everything from initial grinding to precision finishing – all to suit the enormous range of materials used.

Specific tool developments, such as the HERMESIT<sup>®</sup> abrasive discs which is three-dimensional on the abrasive grain side, for example, guarantee constant surface roughness values of  $R_z < 8 \mu m$  over their extended service life; such values are absolutely essential for producing a surface which can be painted.

![](_page_5_Picture_6.jpeg)

### HERMES RECOMMENDATION FOR STEEL BODY COMPONENTS

![](_page_5_Figure_8.jpeg)

![](_page_5_Picture_9.jpeg)

![](_page_5_Picture_10.jpeg)

![](_page_5_Picture_11.jpeg)

![](_page_6_Picture_0.jpeg)

### HERMES RECOMMENDATION FOR GRINDING ALUMINIUM

![](_page_6_Figure_2.jpeg)

![](_page_6_Picture_3.jpeg)

![](_page_7_Picture_0.jpeg)

Type / Application	1	microlite Highlighter stick SCG 120 BU 70	Diamond Highlighter strip DB 661SK	Sandscreen GA 924	Non-woven web webrax- OA 713 VEL	Non-woven web webrax- OA 708 VEL	FineNet FN 915 VEL	VC 151- Longlife VEL	VC 153 VEL	BW
		UX.	11				2			
	HIGHLIGHT	ING								
Steel		+ 120	+ 400 (yellow)	+ 400			+240	P 180 - P 240	P 180 - P 240	P 180 P 24
Aluminium		+ 120	+ 800 (white)	+ 600			+360	P 240 - P 400		
	GRINDING			0						
Steel					+ 180		+240	P 80 - P 150	P 80 - P 150	P 80 P 15
Aluminium					+180	+280	+360	P 100 - •••		
					$\bigcirc$	$\bigcirc$	$\bigcirc$	P 240		
	GRINDING	FLANGES								
Steel										_
Aluminium										
	INTERMED	ATE SURFACE	GRINDING					D.00	D.00	D.00
Steel								P 80 - P 150	P 80 - P 150	P 80 P 15
Aluminium								P 100 - P 240		
Ŕ	SURFACE F	INISHING								
Steel								P 80 -	P 80 -	P 80
								P 150	P 150	P 15
Aluminium								P 100 - P 240		
_										

- -Engine-building

Press shop

Body shop

#### ERMES PRODUCT RECOMMENDATIONS FOR PRESS & RODY SHOP PART 4 LU I

![](_page_8_Figure_0.jpeg)

Type / Applications	Fastlock webrax-AN 701 50	Fastlock RB 486 44 Z	Fastlock CR 456 fibre Procut	Abrasive sleeves RB 346 CX	Flap wheels with shaft FW 340 X
					<b>9</b> -9
GRINDING FL	ANGES				
Steel		+ 36, + 50 - + 80	+ 36, + 80		
		$\bigcirc$	$\bigcirc$		
Aluminium		+ 80	+ 80		
		$\bigcirc$	$\bigcirc$		
INTERMEDIAT	E SURFACE GRINDING	3			
Steel	+ 80, + 100	+ 50 - + 80	+ 80		
	$\bigcirc$	$\bigcirc$	$\bigcirc$		
Aluminium	+ 100, + 280	+ 80	+ 80		
	$\bigcirc$	$\bigcirc$	$\bigcirc$		
	E SURFACE GRINDING	3			
Steel				P 50 - • • • P 80	P 60 - • • • • • P 80
				Ø	Ś
Aluminium				P 80 - • P 150	P 80 - P 120
				Ø	Ś
Product suitability				More produ	ct information on page 18 - 29
••• highly suitable	• very suitable	suitable			

### **HERMES PRODUCT RECOMMENDATIONS FOR PRESS & BODY SHOP, PART 2**

![](_page_9_Picture_3.jpeg)

![](_page_9_Picture_4.jpeg)

HERMES	<b>ACCESSORIES</b>	FOR	<b>ABRASIVES</b>	FOR	PRESS	& BODY	SHOP
	<b>NOOFOOD</b>		ADIIAOITEO		111200		01101

Grinding machines	Backing pads and ac	cessories for discs		Backing pads for fibre discs	Handblocks for strips	3
Random orbital sanders	VEL- Backing pad FJ for random orbital sander	VEL- Backing pad J/-X for angle grinder	VEL-Handpad with loop	Backing pads for angle grinder	VEL-Combiblock with a hard and soft side	VEL-Handblocks with lateral recessed grips
62	9	<b></b>	<b>e</b>			
Accessories	Accessories for	Accessories for	l i			

for discs with Fastlock System	abrasive sleeves	Diamond Highlighting Stick
Backing pads, spindles, adapter	Rubber mandrels	SK-Block
<b>.</b> 0,	- 5	

![](_page_10_Figure_3.jpeg)

![](_page_11_Picture_0.jpeg)

# Paintshop

![](_page_11_Picture_2.jpeg)

The "exterior" of any vehicle is determined not least by a perfect, blemish-free painted surface. Even modern paint systems still require steps following filling, priming and top-coating in order to eliminate any paint blemishes or to prepare surfaces for a subsequent coating step.

Hermes supplies a large selection of abrasives to suit the painting materials and the method required up to and including the Hermes polishing system. Modern tool systems such as the MULTIHOLE system, for example, take account of the requirement for dust-free grinding as well as for improved tool lives.

# HERMES RECOMMENDATION FOR SANDING ELECTROCOAT

![](_page_11_Picture_6.jpeg)

![](_page_11_Picture_7.jpeg)

![](_page_12_Figure_0.jpeg)

# HERMES RECOMMENDATION FOR SANDING PRIMER

![](_page_12_Figure_2.jpeg)

![](_page_12_Picture_3.jpeg)

Type / Applications	Sandscreen GA 924	Sandscreen GA 924 VEL	VC 151- Longlife VEL incl. MULTIHOLE	VC 154- Longlife	VC 154- Longlife FOAM	VC 154- Longlife VEL incl. MULTIHOLE	VC 154- Longlife SK	WS fle VE incl. MUL
SANDING ELECTR	OCOAT							
Manual	+ 400 / + 500	+ 400	P 320 - P 500	P 400 / P 500	P 320 - P 400	P 320 - P 500	P 320 - P 500	P 400 / P 600
	$\bigcirc$	$\bigcirc$	$\bigcirc \square$	$\bigcirc \square$		$\bigcirc \square$	$\bigcirc \square$	
By machine			P 240 - P 400			P 240 - P 400	P 240 - P 400	P 400 / P 600
							$\bigcirc$	C
SANDING PRIMER	ł							
Manual				P 800	P 800	P 800	P 800	P 800
				$\bigcirc \square$		$\bigcirc \square$	$\bigcirc \square$	
By machine			P 400 / P 500			P 400 - P 600	P 400 - P 600	P 400 / P 600
Product suitability	••• highly su	iitable ••	very suitable	suitable				

### HERMES PRODUCT RECOMMENDATIONS FOR SANDING ELECTROCOAT AND PRIMER

# **HERMES ACCESSORIES**

Grinding machines	Backing pads a	Backing pads and accessories for discs							strips
Random orbital sander	VEL-Backing pad FJ	VEL-Backing pad J MULTIHOLE	VEL- Soft Pad MULTIHOLE	VEL- Soft Pad	Multiflow- Pad	VEL-Handpad with loop	VEL- Disc holder with water storage	VEL- Combiblock with a hard and soft side	VEL- Handblock with lateral recessed grips
62	9								-

![](_page_13_Picture_5.jpeg)

![](_page_13_Picture_6.jpeg)

![](_page_13_Picture_7.jpeg)

![](_page_14_Figure_0.jpeg)

More product information on page 18 - 29

### **GRIT SIZE COMPARISON**

FineNet and Sa	nding sponges			
Conventional abrasives	Hermes FineNet	Main competitor product	Hermes Sanding sponges	Competitive Sanding sponges
180	-			
220		180	100	medium
240	240			
280				
320		180/360	180	fine
360	240/360			
400	360	360	220	extra fine
500				
600	500	500		
800	500/600		280	super fine
1000	600/800	500/600		
1200	800/1000	600/1000		
1500	1000	1000	400	ultra fine
2000		1000/2000		

webrax non-woven web							
Description	Standard Hermes						
coarse	+ 80						
medium	+ 100, + 120						
fine	+ 180						
very fine	+ 220, + 280, + 360						
super fine	+ 500						
ultra fine	+800 + 1500						

Differing product designs make direct grit size comparisons impossible.

![](_page_14_Figure_6.jpeg)

![](_page_15_Picture_0.jpeg)

Type / Applications	VC 154- Longlife VEL incl. MULTIHOLE	WS flex 16 VEL incl. MULTIHOLE	WS flex 16	WS flex 16 SK 302	FB 637 SK	FineNet FN 915 VEL incl. MULTIHOLE	webrax- OS 709	webrax- OS 709 VEL
					2			
TOPCOAT-GRINDIN	IG DEFECTS							
Manual	P 1000 •	P 2000 - + 5000	P 2000 - •• + 5000	+ 2500 - + 5000	P 2500 •	+ 1000	+ 1500 •	+ 1500 •
	$\bigcirc \square$	$\bigcirc \square$		$\bigcirc$	$\bigcirc$	$\bigcirc \square$		$\bigcirc$
By machine	P 800 - P 1500	P 2000 - • • • + 5000		+ 2500 - • • • + 5000	P 2500	+ 800 - + 1000		+ 1500 •
		$\bigcirc$ $\bigcirc$		$\bigcirc$	$\bigcirc$			$\bigcirc$

### HERMES PRODUCT RECOMMENDATIONS FOR TOPCOAT FINISHING

More product information on page 18 - 29

### **HERMES ACCESSORIES**

	Grinding machines	Backing pads and accessories for discs						
Type / Applications	Random orbital sanders	VEL-Backing pad FJ	VEL- Backing pad J MULTIHOLE	VEL- Soft Pad MULTIHOLE	VEL- Soft Pad	VEL-Handpad with loop	Accessories for rosette discs	Rosette disc wet applicator
	62	9					<b>1</b> 0	9

![](_page_15_Picture_6.jpeg)

![](_page_15_Picture_7.jpeg)

Type / Applications	Polishing Fluid Rapid Cut	Polishing Fluid Medium Cut & Gloss	Polishing Fluid Fine Cut & Gloss	Polishing Fluid Final Gloss	VEL Polishing foam hard	VEL Polishing foam medium	VEL Polishing foam soft	Lambswool Polishing disc
			-			6	()	6
2-STEP-	Ste	ep 1	Ste	p 2				
POLISHING-	••• (	or 🔹 🖷	••• 0	r •••	•••	••	•••	•••
SYSTEM	Pre-sanding with P 2000	Pre-sanding with + 2500			Only for pre-polishing		Only for fine-polishing	
1-STEP-		••• (	ir 🕶 a	r 🐽	•••	••	•	••
POLISHING- System		Combination Pre-sanding with + 3000* Fine sanding with + 5000	Pre-sanding with + 5000 only	Pre-sanding with + 5000 only				
REMOVAL OF Hologramms				•••		••	•••	

### HERMES PRODUCT RECOMMENDATIONS FOR POLISHING

\* Pre-sanding of larger defects

### **HERMES ACCESSORIES**

	Backing pads	Manual working	
Type / Applications	Backing pads for Hermes Polishing-System	Hermes MicroFibre Polishing cloth Pro	
		400 x 400 mm	

# **CUT/GLOSS VALUE COMPARISON**

![](_page_16_Figure_6.jpeg)

More product information on page 18 - 29

![](_page_17_Picture_0.jpeg)

# **Product Descriptions**

# **CBN GRINDING WHEEL FOR CRANKSHAFT GRINDING**

![](_page_17_Picture_3.jpeg)

#### 29B 151 Q7 V42 150

**Operating speed** 125 m/s

Dimension

Form 12A1, segmented 650 x 35 x 132H5 - U... - X...

#### The benefits for you

- · Reducing of the grinding time due to optimized bonding system
- No chatter marks
- · Extremely constant grinding characteristics from the beginning to the end of tool life
- High profile retention
- Delivery in series and available with CFRP body construction

### **CBN GRINDING WHEEL FOR CAMSHAFT GRINDING**

![](_page_17_Picture_15.jpeg)

29B 151 07/6 V24	2K 176	Discussion	E 4444	
Operating speed	125 m/s	Dimension	Form 14A1	
			14A1-85 x 50 x 20NB - U X	
The benefits for you				
• Very high number	in parts per grinding wheel ar	nd 10% longer tool l	ife in comparison to competitive products	

· Compliance with all relevant geometry and surface requirements in a narrow tolerance range

• Cost effective high-performance tool

#### **FILM-BACKED ABRASIVES**

![](_page_17_Picture_20.jpeg)

FB 637				
Abrasive grain	Aluminium oxide	Coating	Closed	
Bonding	Resin	Grit range	P 120, P 180, P 240, P 280,	
Backing	Film		P 360 - P 1500, P 2500	
The benefits for you				
The highly tear-resistant and even polyester film guarantees constant parameters of application				

- during precision grinding operations
- Closer ranges of tolerance in the coefficients of surface roughness benefit precision grinding, due to compression resistance backing
- · An excellent grain sharpness with bond strength leads to high abrasion of material
- High-performance
- · Reduced cycle times
- · Oil and emulsion resistant

# **CLOTH-BACKED ABRASIVE ROLLS AND BELTS**

#### RB 346 MJ

Abrasive grain	Aluminium oxide
Bonding	Resin, red-brown
Backing	J-cloth

#### The benefits for you

- Synthetic resin bond ensures excellent grit adhesion
- Light, flexible cloth backing for grinding contoured workpieces
- Universally suitable

#### CORK RB 515 X

Abrasive grain	Silicon carbide + Cork	Coating	Closed
Bonding	Resin, black	Grit range	P 150, P 220, P 280, P 320,
Backing	X-cloth		P 400, P 600 - P 1000

Coating

Grit range

Closed

P 60 - P 800

#### The benefits for you

- High tool life
- Produces an outstanding fine-structured pattern due to cork particles

#### MERCURIT<sup>®</sup> RB 598 Y

Abrasive grain	MERCURIT Silicon carbide (Agglomerate)	Coating	Closed
Bonding	Resin, black	Grit range	P 240, P 320, P 400,
Backing	Y-cloth		P 600 - P 1200

#### The benefits for you

- Increased efficiency and productivity in comparison to conventional grinding belts due to 3 to 5 times longer tool life (reduced stoppages for belt replacement and machine downtimes, and saving costs on the disposal of used belts)
- High process stability due to constant roughness values and stock removal rates through over the entire period of use

![](_page_18_Picture_17.jpeg)

![](_page_18_Picture_18.jpeg)

![](_page_18_Picture_19.jpeg)

![](_page_19_Picture_0.jpeg)

# Product Descriptions

# **DEFECT HIGHLIGHTER STICKS / STRIPS**

![](_page_19_Picture_3.jpeg)

![](_page_19_Picture_4.jpeg)

MICROLITE DEFEC	MICROLITE DEFECT HIGHLIGTHER STICK SCG 120 BU 70					
Abrasive grain Bonding	Silicon carbide Polyurethane	Grit range	F 80 F 150 Recommendation: F 120			
The benefits for y	ou					
<ul> <li>Longer tool life in comparison to vitrified-bonded highlighting sticks</li> <li>No smearing</li> <li>No scratches, especially in the edge and radius area</li> <li>No shattering when dropped</li> </ul>						
DIAMOND HIGHLIG	GTHER STRIP DB 661SK					
Abrasive grain Bonding	Diamond Resin	Grit range	400/800			
The benefits for you						
<ul> <li>Longer tool life in comparison to vitrified-bonded highlighting sticks</li> <li>Low clogging characteristics</li> </ul>						

- No scratches, especially in the edge and radius area
- No shattering when dropped

### SANDSCREEN DISCS

![](_page_19_Picture_9.jpeg)

GA 92400 / GA 92407 VEL				
Abrasive grain Bonding Backing	Aluminium oxide Resin, brown Sandscreen / Sandscreen, velour-backed	Coating Grit range	Open + 400 to + 1000 / + 400, + 600	
The benefits for you				

Open mesh structure means no loading and a reduction in dust

• Long tool life

• Plain backed discs can be used on both sides

### FOAM-BACKED ABRASIVES

#### **FINENET FN 915, VELOUR-BACKED**

Abrasive grain	Silicon carbide	Coating
Bonding	Resin, grey	Grit range
Backing	Foam- and velour-backed net	

#### Closed + 240, + 360, + 500 to + 1000

Semi-open

P 400 - P 800

P 150, P 180, P 240 - P 320,

#### The benefits for you

- · Abrasive adapts perfectly to contours and very tight radii
- · Minimal loading and the potential to clean the used abrasive results in extended tool life
- Generates very fine surfaces with consistent surface roughness
- Dust-free sanding with minimal rework on surfaces
- Extremely versatile wet and dry on random orbital sanders or with hand sanding:
  - In dry sanding applications:
  - \* dust can be extracted through the sanding disc
  - \* dust residues on the sanded surface are reduced because the foam layer absorbs dust
  - In wet sanding applications:
  - \* foam layer "stores" water and allows a finely-metered supply of water for rinsing off and binding sanding residues
- Pressure-equalizing foam layer facilitates "gentle" sanding and reduces the risk of sanding through surface coatings

#### VC 154-LONGLIFE FOAM

Abrasive grain	Aluminium oxide	Coating
Bonding	Resin, Prolub*, pink	Grit range
Backing	C-weight paper, foam-backed	

#### The benefits for you

- For intermediate and fine sanding of primer and filler
- · Additional coating prevents loading with sanding dust
- Adapts very well to contours due to the soft foam backing

#### SANDING SPONGE MEDIUM, SINGLE-SIDED

Abrasive grain	Aluminium oxide	Grit range	P 60, P 100, P 150 - P 220,
Bonding	Resin, light grey		P 280, P 400, P 600
Backing	Hard and dense PU foam		

#### The benefits for you

- Medium degree of flexibility
- Adapts very well to shape and small radii
- Very fine patterned surfaces with constant roughness values
- Pressure-equalizing foam layer facilitates "gentle" sanding and reduces the risk of sanding through surface coatings
- Sanding before applying primer in grit range 60 to 180
- Dry final sanding with grit sizes 220 to 600
- Universal use

![](_page_20_Picture_32.jpeg)

![](_page_20_Picture_33.jpeg)

![](_page_20_Picture_34.jpeg)

# **Product Descriptions**

# WEBRAX NON-WOVEN WEB ABRASIVES

![](_page_21_Picture_3.jpeg)

![](_page_21_Picture_4.jpeg)

WEBRAX-0A 708				
Abrasive grain Bonding Backing	Aluminium oxide Resin, red-brown Non-woven web	Coating Grit range	Open + 120, + 180, + 280, + 360	
<ul> <li>The benefits for y</li> <li>Highly flexible, de</li> <li>No clogging due</li> <li>Optimum product</li> </ul>	<b>you</b> eformable, three-dimensiona to open structure tt structure for hand-sanding	l non-woven web		

WEBRAX-OA 708	, VELOUR-BACKED			
Abrasive grain Bonding Backing	Aluminium oxide Resin, red-brown Non-woven web	Coating Grit range	Open + 280	
The benefits for	VOII			

• Highly flexible, deformable, three-dimensional non-woven web

• No clogging due to open structure

![](_page_21_Picture_9.jpeg)

WEBRAX-OS 709				
Abrasive grain	Silicon carbide	Coating	Open	
Bonding	Resin, grey	Grit range	+ 180, + 280, + 500,	
Backing	Non-woven web		+ 800, + 1500	
The benefits for	you			
	6 II II II II I			

• Highly flexible, deformable, three-dimensional non-woven web

• Optimum product structure for hand-sanding

![](_page_21_Picture_13.jpeg)

WEBRAX-OS 709	, VELOUR-BACKED			
Abrasive grain	Silicon carbide	Coating	Open	
Bonding	Resin, grey	Grit range	+ 1500	
Backing	Non-woven web			
The benefits for	you			

• Highly flexible, deformable, three-dimensional non-woven web

• No clogging due to open structure

#### WEBRAX-OA 713, VELOUR-BACKED

Abrasive grain	Aluminium oxide	Coating
Bonding	Resin, light brown	Grit range
Backing	Non-woven web, high-density	

Open + 180

#### The benefits for you

- Highly-compressed non-woven web with increased grit density
- High strength and density of Abrasive web fibres for more aggressive applications

### **STABLE PAPER-BACKED ABRASIVES**

3W 114, VELOUR-BAGKED				
Abrasive grain	Aluminium oxide	Coating	Open	
Bonding	Resin, antistatic, black	Grit range	P 60 - P 150	
Backing	F-weight paper			

#### The benefits for you

- Less loading characteristics
- Open coating reduces loading with sanding dust, especially with resinous materials (zinc, oil)
- · Stable, tear-resistant F-weight paper backing with good edge stability increases work safety

Abrasive grain Bonding Backing	Ceramic grain Resin, green F-weight paper	Coating Grit range	Closed + 60 to + 180
The benefits for	you		
Low grinding ton	anoraturae due to additional	1.1912	
Uniform surface	finish	additives	
<ul> <li>Low grinning ten</li> <li>Uniform surface</li> <li>VC 153, VELOUR- Abrasiva grain</li> </ul>	finish BACKED	Conting	Closed
<ul> <li>Low grinting ten</li> <li>Uniform surface</li> <li>VC 153, VELOUR- Abrasive grain Bonding Backing</li> </ul>	finish BACKED Aluminium oxide Resin, red-brown E-weight paper	Coating Grit range	Closed P 24, P 36 - P 220

- Suitable for low pressure applications
- Strong paper backing with good edge stability
- Especially suitable for finishing steel sheets
- Universally applicable

![](_page_22_Picture_17.jpeg)

![](_page_22_Picture_18.jpeg)

![](_page_22_Picture_19.jpeg)

![](_page_22_Picture_20.jpeg)

# **Product Descriptions**

# **PAPER-BACKED ABRASIVES**

![](_page_23_Picture_3.jpeg)

ADIASIVE YIAIII	Aluminium oxide	Coating	Open
Bonding	Resin, with additives, white	Grit range	P 60 - P 240,
Backing	C-weight paper		P 320 - P 500
The benefits for	you		
<ul> <li>Highly aggressiv</li> <li>For intermediate</li> <li>Especially suitate</li> </ul>	e and final sanding primer and fille ole for sanding aluminium	r	
VC 154-I ONGLIE	F		
VC 154-LONGLIF	E Aluminium ovide	Coating	Semi-open
VC 154-LONGLIF Abrasive grain Ronding	E Aluminium oxide Besin, Proluh* nink	Coating Grit range	Semi-open P 80 - P 1200
VC 154-LONGLIF Abrasive grain Bonding Backing	E Aluminium oxide Resin, Prolub*, pink C-weight paper	Coating Grit range	Semi-open P 80 - P 1200
VC 154-LONGLIF Abrasive grain Bonding Backing The benefits for	E Aluminium oxide Resin, Prolub*, pink C-weight paper <b>you</b>	Coating Grit range	Semi-open P 80 - P 1200
/C 154-LONGLIF Abrasive grain Bonding Backing The benefits for	E Aluminium oxide Resin, Prolub*, pink C-weight paper You	Coating Grit range	Semi-open P 80 - P 1200

![](_page_23_Picture_5.jpeg)

	you		
<ul> <li>Premium product</li> <li>Long tool life an</li> <li>Flexible, wear-reet</li> <li>Low clogging with</li> <li>Especially suitable</li> </ul>	ct sanding lacquer d high stock removal rates due esistant Latex paper backing as th sanding dust due to semi-op ple for intermediate sanding lac	to sharp aluminium oxide sures very good adaptati pen coating and additiona quer	e abrasives grain ons to contours Il coating
VC 154-LONGLIF	E, SELF-STICK		
Abrasive grain Bonding	Aluminium oxide Resin, Prolub*, pink	Coating Grit range	Semi-open P 80 - P 240. P 320 - P 400.

P 600, P 800, P 1200

![](_page_23_Picture_7.jpeg)

# Backing C-weight paper The benefits for you

- Premium product sanding lacquer
- Long tool life and high stock removal rates due to sharp aluminium oxide abrasives grain
- Flexible, wear-resistant Latex paper backing assures very good adaptations to contours
- Low clogging with sanding dust due to semi-open coating and additional coating
- · Good surface qualities when intermediate sanding lacquer
- Especially suitable for finishing filler and lacquer on random orbital sanders

Abrasive grain	Aluminium oxide	Coating	Semi-open
Bonding	Resin, Prolub*, pink	Grit range	P 80 - P 1500
Backing	B-weight paper		

# The benefits for you

- Premium product sanding lacquer
- Long tool life and high stock removal rates due to sharp aluminium oxide abrasives grain
- Flexible, wear-resistant Latex paper backing assures very good adaptations to contours
- Low clogging with sanding dust due to semi-open coating and additional coating
- · Good surface qualities when intermediate sanding lacquer
- Especially suitable for finishing filler and lacquer on random orbital sanders

# WATERPROOF, PAPER-BACKED ABRASIVES

#### WA FLEX 28 B, VELOUR-BACKED

Abrasive grain	Aluminium oxide	Coating
Bonding	Resin, brown	Grit range
Backing	B-weight paper, waterproof	

#### The benefits for you

- Highly flexible waterproof Latex paper backing
- Especially suitable for sanding primer and lacquered surfaces as well as for pre-sanding before lacquering

Closed

P 400 - P 1200

• Can be used wet or dry

#### WS FLEX 16

Abrasive grain	Silicon carbide	Coating	Closed
Bonding	Resin, grey-blue	Grit range	P 60 - P 2000,
Backing	B-weight paper, waterproof		+ 2500, + 3000, + 5000

#### The benefits for you

- Highly flexible waterproof Latex paper backing adapts very well to contours
- Especially suitable for sanding scratch-resistant lacquer due to hard silicon carbide abrasive grain
- Can be used wet or dry

#### WS FLEX 16 SELF-STICK 302

Abrasive grain	Silicon carbide	Coating	Closed
Bonding	Resin, grey-blue	Grit range	P 1200, + 2500,
Backing	B-weight paper, waterproof		+ 3000, + 5000

#### The benefits for you

- Highly flexible waterproof Latex paper backing
- Especially suitable for sanding scratch-resistant lacquer due to hard silicon carbide abrasive grain
- Especially suitable for sanding topcoat defects

#### WS FLEX 16, VELOUR-BACKED

Abrasive grain	Silicon carbide	Coating	Closed
Bonding	Resin, grey-blue	Grit range	P 400, P 600, P 800,
Backing	B-weight paper, waterproof		P 2000, + 2500, + 3000,
			+5000

#### The benefits for you

- · Highly flexible waterproof Latex paper backing adapts very well to contours
- Especially suitable for sanding scratch-resistant lacquer due to hard silicon carbide abrasive grain
- Especially suitable for sanding topcoat defects
- · Can be used wet or dry

![](_page_24_Picture_26.jpeg)

![](_page_24_Picture_27.jpeg)

![](_page_24_Picture_28.jpeg)

![](_page_24_Picture_29.jpeg)

# **Product Descriptions**

# **CLOTH-BACKED ABRASIVES**

![](_page_25_Picture_3.jpeg)

RB 346 87 MX, VELOUR-BACKED						
Abrasive grain Bonding Backing	Ceramic grain / Aluminium oxide Resin, red-brown X-cloth	Coating Grit range	Closed P 40, P 60 - P 180, P 240			
The benefits for	you					
<ul> <li>Synthetic resin b</li> <li>Self sharpening</li> <li>High tear-resista</li> </ul>	ond ensures excellent grit adhesion ceramic ensures longer tool life nt X-cloth increases safety when grin	Idina				

![](_page_25_Picture_5.jpeg)

RB 480 24 YX, VE	ELOUR-BACKED			
Abrasive grain Bonding Backing	Zirconia alumina Resin, blue YX-cloth	Coating Grit range	Closed + 80 to + 120	
The benefits for you				

High stock removal rates and long tool life due to tough zirconia alumina abrasive grain

![](_page_25_Picture_8.jpeg)

CR 456 Z, VELOUR-BACKED					
Abrasive grain Bonding Backing	Ceramic grain Resin, with additives, green Z-cloth	Coating Grit range	Closed + 36 to + 120		
The benefits for yo	u				
<ul> <li>Highly economical</li> <li>Tough and sharp c</li> <li>Low grinding temp</li> <li>Highly tear-resista</li> </ul>	due to low overall grinding costs eramic grain provides high stock rep eratures due to the additional Procu nt and waterproof Polyester backing	noval rates and long to t coating with low elongation pr	ool life rovides high disc stability		

![](_page_25_Picture_10.jpeg)

HERMESIT® RB 530 J, VELOUR-BACKED				
Abrasive grain	HERMESIT <sup>®</sup> Aluminium oxide (coated carrier sphere)	Coating	Special	
Bonding Backing	Resin, brown J-cloth	Grit range	P 120, P 150	

#### The benefits for you

 Increased efficiency and productivity in comparison to conventional grinding belts due to 3 to 5 times longer tool life (reduced stoppages for disc replacement and machine downtimes and saving costs on the disposal of used belts)

- High process stability due to constant roughness values and stock removal rates through over the entire period of use
- Especially suitable for applications with low grinding pressure

### **FIBRE DISCS**

# RB 314 FIBREAbrasive grainAluminium oxideBondingResin, red-brownBackingX-Fibre

#### The benefits for you

- Long tool lives achieved by using a tough aluminium oxide grain and closed coating
- Universal applications in the bodyshop
- For grinding carbon steels, aluminium and non-ferrous metal alloys

#### **RB 414 X-PROCUT**

Abrasive grain	Zirconia alumina	Coating	Closed
Bonding	Resin-Procut, blue	Grit range	+ 36 to + 120
Backing	X-Fibre		

Coating

**Grit range** 

Closed

P 16, P 24, P 36 - P 120

#### The benefits for you

- · High stock removal rates due to Zirconia alumina abrasive grain
- Additional Procut coating for cool grinding
- Especially suitable for grinding flanges and welded seams

#### **CR 456 FIBRE-PROCUT**

Abrasive grain	Ceramic grain	Coating	Closed
Bonding	Resin, with additives, green	Grit range	+36, + 50 to + 120
Backing	Vulcanized fibre		

#### The benefits for you

- Long tool life due to high-performance ceramic grain increases economic efficiency
- · Additional Procut coating means low grinding temparatures
- Especially suitable for grinding high-alloyed steel

#### **HERMESIT® RB 514 J-FLEX**

Abrasive grain	HERMESIT <sup>®</sup> Aluminium oxide (coated carrier sphere)	Coating	Closed
Bonding	Resin, brown	Grit range	P 120, P 150
Backing	Vulcanized fibre		

#### The benefits for you

- Increased efficiency and productivity in comparison to conventional grinding discs due to 3 to 5 times longer tool life (reduced stoppages for disc replacement and machine downtimes and saving costs on the disposal of used discs)
- High process stability due to constant roughness values and stock removal rates through over the entire period of use
- Especially suitable for applications with low grinding pressure
- High work safety due to vulcanized fibre backing

![](_page_26_Picture_25.jpeg)

![](_page_26_Picture_26.jpeg)

![](_page_26_Picture_27.jpeg)

![](_page_26_Picture_28.jpeg)

# **Product Descriptions**

# **ABRASIVES WITH FASTLOCK SYSTEM**

![](_page_27_Picture_3.jpeg)

#### **WEBRAX-AN 701 50**

Abrasive grain

Bonding

Backing

Aluminium oxide/Silicon carbide **Grit range** Resin, red-brown Non-woven web, reinforced with cloth

# The benefits for you

- · Compact construction means aggressive grinding
- Less loading with sanding dust and much finer surfaces compared to conventional discs
- Outstanding velcro characteristic using the special VEL-Backing pad-X with open backing construction

Aluminium oxide:

Silicon carbide:

+ 800

+ 80, + 100, + 180, + 280

- No grinding through when grinding body parts
- · Reinforced cloth backing increases work safety

RB 486 44 Z			
Abrasive grain Bonding Backing	Zirconia alumina Resin, with additives, blue Z-cloth	Coating Grit range	Closed + 36, + 40, + 60, + 80

#### The benefits for you

- · Zirconia alumina grit ensures high stock removal rates
- · Procut coating means cool grinding

CR 456 FIBRE-PROCUT							
Abrasive grain Bonding Backing	Ceramic grain Resin-Procut, green X-Fibre	Coating Grit range	Closed + 36, + 50 to + 120				

#### The benefits for you

- · High stock removal rates and high economic efficiency due to high-performance ceramic grain
- · Low grinding temparatures due to additional Procut coating
- Especially suitable for grinding high-alloyed steel
- Very stiff and stable fibre backing

### **ABRASIVE SLEEVES**

### RB 346 CX

Abrasive grainAluminium oxideBondingResin, red-brownBackingX-cloth

# Coating Grit range

Closed P 24, P 36 - P 180, P 240, P 320

#### The benefits for you

- Grinding areas which are hard to reach
- Use on portable straight grinders for grinding welded seams and deburring bores and cut-outs

![](_page_28_Picture_8.jpeg)

### FLAP WHEELS WITH SHAFT

FW 340 X			
Abrasive grain Bonding Backing	Aluminium oxide Resin, red-brown X-cloth	Coating Grit range	Closed P 40, P 60 - P 180, P 240, P 320

#### The benefits for you

- High degree of grit sharpness and high stock removal rates
- Flexibility of the fan-shaped cloth flaps allows great adaptability
- Universally applicable

![](_page_28_Picture_15.jpeg)

![](_page_28_Figure_16.jpeg)

# Hermes MULTIHOLE-System

![](_page_29_Picture_2.jpeg)

The end of the tool life of a disc is frequently determined by premature loading with dust. Although conventional extraction processes reduce loading, they cannot prevent it across the whole of the tool surface, in particular. By the **Hermes MULTIHOLE abrasives** it is possible to sand virtually cleanly without the symptoms of loading. Perforation of the whole of the surface of the disc enables dust to be extracted efficiently from the entire surface of the tool.

#### The benefits for you:

- · Longer tool life compared to conventional extraction methods
- More economical sanding in comparison to net-like abrasive tools
- Better surface quality: cooling flow of air over the whole surface of the disc reduces sanding temperature
- Reduced problems with sanding dust on sanded surfaces
- Hermes MULTIHOLE discs can be used universally on all conventional backing pads with
   extraction holes

![](_page_29_Figure_10.jpeg)

BENCHMARK

![](_page_29_Figure_12.jpeg)

#### LOADING CHARACTERISTICS

![](_page_29_Figure_14.jpeg)

In contrast to the MULTIHOLE discs, discs with conventional extraction holes show typical loading patterns in the centre and the formation of buildup on the abrasive grain.

#### **Trial parameters**

Machine: Portable random orbital sander with extraction hole system, orbit: 3 mm

Material: Primer

Tools: Discs, velour-backed, Ø 150 mm, Grit: P 240

# FineNet abrasives

Preparing surfaces for painting or polishing is one of the most demanding abrasive tasks in the automotive and furniture industries. The abrasive products required for this process have to adapt extremely well to the contours of the workpiece and be highly versatile – whilst their quality must be of the highest order.

The **FineNet FN 915** foam-laminated and velour-backed abrasives especially developed by Hermes not only easily meets these requirements, but are also highly economical.

#### The benefits for you:

- · Abrasive adapts perfectly to contours and very tight radii
- · Minimal loading and the potential to clean the used abrasive results in extended tool life
- · Generates very fine surfaces with consistent surface roughness
- · Dust-free sanding with minimal rework on surfaces
- Extremely versatile wet (foam layer "stores" water and allows a finely-metered supply
  of water for rinsing off and binding sanding residues) and dry (dust can be extracted
  through the sanding disc) on random orbital sanders or with hand sanding
- Pressure-equalizing foam layer facilitates "gentle" sanding and reduces the risk of sanding through surface coatings
- Strong bond between the foam layer and the velour backing allows multiple abrasive changes

#### PRODUCT CONSTRUCTION

Open, flexible net with silicon carbide grain for good adaptability and permeation by sanding dust

Lightweight, flexible velour backing for reliable adhesion to hook-and-loop Backing pads

**GRIT COMPARISON** 

Special foam (thickness: 5 mm) for "gentle" sanding and optimum absorption of dust or water

Conventional abrasives	Hermes FineNet	Main competitor product	Hermes Sanding sponges	Competitive Sanding sponges			
180	-	180	100	medium			
220	240						
240							
280			180	fine			
320		180/360					
360	240/360	360					
400	360	360	220	extra fine			
500							
600	500	500	280	super fine			
800	500/600						
1000	600/800	500/600					
1200	800/1000	600/1000	400	ultra fine			
1500	1000	1000					
2000		1000/2000					

Differing product designs make direct grit size comparisons impossible.

![](_page_30_Picture_17.jpeg)

#### EXAMPLE OF ACHIEVABLE SURFACE ROUGHNESS\*

![](_page_30_Figure_19.jpeg)

#### Disc

FineNet FN 915 VEL, Ø 150 mm

#### Sanding process

Machine sanding (dry) with Festtool random orbital sander, 5 mm stroke Backing pad: medium Sanding pressure: 20 N constant Material: plexiglass

\* The type and hardness of the material to be sanded, the Backing pads and the sanding process will lead to different values for surface roughness.

# 3 benefits of webrax non-woven web

![](_page_31_Picture_2.jpeg)

The magnified photograph clearly shows the open structure of **webrax** non-woven web.

#### 1. Backing

Our non-woven web is manufactured from a special fibre web. During this process, the abrasive grit is firmly anchored by a bond and is correspondingly durable.

The following designs are available:

- Non-woven web
- Non-woven web, on X<sub>w</sub>-cloth
- Non-woven web, high-density
- · Non-woven web, reinforced with cloth
- · Non-woven web, reinforced with cloth on vulcanized fibre

#### 2. Types of grain

Available in grit range 80 to 1500 we use the following types of grain: Aluminium oxide  $(Al_2O_3)$  and Silicon carbide (SiC).

Warning: Information on grit sizes is not comparable with that relating to abrasive papers.

#### 3. Bonding

![](_page_31_Picture_16.jpeg)

The resin bond allows the product to be used under both dry and wet conditions. A benefit you will appreciate.

# The "HERMESIT" principle

![](_page_31_Picture_19.jpeg)

ermes HERMESIT<sup>®</sup> long-life abrasives have special carrier spheres coated with abrasive grain. As this grain breaks down evenly during grinding, so it simultaneously keeps exposing fresh abrasive grain.

#### The benefits for you

- Increased efficiency and productivity in comparison to conventional grinding belts/discs due to 3 to 5 times longer tool life (reduced stoppages for belt replacement and machine downtimes and saving costs on the disposal of used belts)
- High process stability due to constant roughness values and stock removal rates through over the entire period of use
- Universally applicable can be used wet and dry (resistant to water, emulsion and oil)

# Intelligence inside – Hermes CBN<sup>®</sup> vitrified bonded abrasives

![](_page_32_Picture_1.jpeg)

ermes CBNi vitrified bonded abrasives are equipped with an RFID (Radio Frequency Identification) chip in the core body. These chips enable the machine and the tool to communicate with one another and transmit important data to make your grinding process more reliable and more efficient.

#### The benefits for you

- Compliance with safety issues such as calibration of max. v<sub>c</sub>, for example
- Identification of the abrasive tool (tool and order no. or similar)
- Optimization of grinding parameters such as the specifi-cation of dressing parameters for better tool lives and an optimized grinding process, for example, or statement of actual dimensions to reduce process setup times
- Documentation of process history in the event of tool change or for evaluation purposes

![](_page_32_Picture_8.jpeg)

# Lightweight – CBN grinding wheels with CFRP\*core bodies

Another highlight of Hermes product and material research in bonded abrasives are CBN grinding wheels with a CFRP\* core body. For certain grinding processes, this leads to significant improvements which are much appreciated by Hermes customers.

#### The benefits for you

- Significantly less weight means better handling (a key benefit in grinding processes such as centerless infeed grinding)
- The vibration-damping effect can increase performance and reduce grinding times

\* CFRP = Carbon Fibre-Reinforced Polymer

![](_page_32_Picture_15.jpeg)

Hermes CBN grinding wheels with CFRP\* core bodies

# Hermes Abrasives Institute - for your efficient grind

optimize econom

![](_page_33_Picture_2.jpeg)

he H.A.I optimization programmes offer you individual services and consulting, as well as training courses which will make you more competitive and successful.

You will find that our H.A.I consultants are competent partners who will support you with their many years' experience in process optimization and in managing and designing staff training courses.

**H·A·I** 

Hermes Abrasives Institute

HOW for cont

![](_page_33_Picture_5.jpeg)

![](_page_33_Picture_6.jpeg)

# ing process

mprove quality

inprovemen\*

The optimization programmes are devided into the following three areas aimed at users, industrial customers and dealers who like to optimize their profitability, consolidate their expertise or avoid quality problems:

#### H.A.I Consulting – Process optimization for your benefit.

Process optimization and Lean consulting are the key components which can improve your abrasive processes in terms of productivity, profitability and quality.

> Our experienced consultants at H.A.I Consulting combine holistic analysis with modern measuring and analysis techniques on your own premises, using knowledge transfer which delivers not only reliable data and

> > measured results, but also genuine competitive advantages.

At the Hermes Abrasives Institute, an extensive range of grinding/sanding machines allows us to imitate a wide variety of customer applications, simulating and analyzing applications in the process.

#### H.A.I Training – Turning theory into outstanding practise.

We want to do more than just communicate knowledge, we want to provide concrete demonstration and training for your team to enable them to implement theoretical and practical knowhow correctly – catered to your requirements.

#### Our training courses:

· Basic training about coated abrasives and how to use it correctly

- · Basic training about grinding with bonded abrasives
- Training course content about Lean principles in the form of a simulation of corporate decisions and processes ("Baking Factory")

#### H.A.I Manual – The manual for your abrasive processes.

As specialists in complex processes, we collaborate with you to produce manuals for your abrasives processes which contain process-specific and general information about "Grinding" independently of the products you use.

#### WE WOULD BE DELIGHTED TO ADVISE YOU.

#### Hermes Abrasives Institute

Headquarters Luruper Hauptstrasse 106 22547 Hamburg, Germany

Tel. +49 (0)40 8330-0 Fax +49 (0)40 8330-230

Has this information sparked your interest? Then we would be pleased to take your call or enquiry:

Tel. +49 (0)40 8330-119 Fax +49 (0)40 8330-5119 info@hermes-abrasives-institute.com

### **HERMES SCHLEIFMITTEL GMBH**

Luruper Hauptstrasse 106 22547 Hamburg, Germany

Tel. +49 (0)40 8330-0 Fax +49 (0)40 8330-230

hsd@hermes-schleifwerkzeuge.com www.hermes-abrasives.com

![](_page_35_Picture_4.jpeg)

**HERMES** 

# HERMES SCHLEIFKÖRPER GMBH

Lohrmannstrasse 21 01237 Dresden, Germany

Tel. +49 (0)351 2801-0 Fax +49 (0)351 2801-392

info@hermes-schleifkoerper.de www.hermes-schleifkoerper.de

![](_page_35_Picture_9.jpeg)