

# AV '21 CONFERENCE ASPHALT PAVEMENTS 2021

## EP GRIP – QUICK, ENVIRONMENTAL AND ECONOMICAL TECHNOLOGY FOR SAFE TRAFFIC

Michael Dirschedl

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**Motto: We will not catch Europe without good-quality pavements**

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## EP-Grip

How is EP-Grip installed?



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- ➔ Sweeping with high water pressure jets (1200 Bar) or shot peening
- ➔ also removal of road markings

## How is EP-Grip installed?



- ➔ Application of the epoxy resin by means of a computer-controlled installation unit
- ➔ Depending on the substrate between 1,2 and 1,5 kg/m<sup>2</sup>
- ➔ Widths are variable, up to 4m

## How is EP-Grip installed?



- ➔ Immediately afterwards splitting
- ➔ Approx. 11 kg split 1-3 mm (depending on the use), 7 - 8 kg remain bound
- ➔ Rolling with a rubber-tyred roller

## How is EP-Grip installed?



- ➔ After approx. 2 hours of vacuuming or sweeping off the excess grit (depending on the ambient temperature, at low temperatures it may take longer time)

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## EP-Grip

What is EP-Grip?

## What is EP-Grip?

- ➔ High quality surface treatment EP-GRIP / EP-GRIP ASK
- ➔ Can be applied to concrete and asphalt
- ➔ Use of high quality binding agent (flexibilized on AC)
- ➔ High-quality, polish-resistant scattering with natural / artificial rock
- ➔ Very long service life
- ➔ Economical and sustainable
- ➔ Bright (mean luminance coefficient  $q_0 = 0.131 \text{ cd} / (\text{m}^2 \times \text{lx})$ ; according to TU Dresden test - Bauxit)
- ➔ Grippy Noise reducing
- ➔ No fire-supporting properties (building material class B1, PZ is available)



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## EP-Grip

What are the properties of EP-Grip?

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### Micro-/Macro-Texture



- ➔ EP-Grip
- ➔ PSV >58
- ➔ Friction  $\mu \geq 0,7$  and up to 1,0 (also after 15 years of use)

### PSV



- ➔ asphalt or concrete
- ➔ Required PSV 53
- ➔ Friction after 5 years less than  $\mu 0,6$

## What are the properties of EP-Grip?

### Noise Reduction

- ➔ **The optimal condition and roughness of the road surface has a decisive influence on the rolling noise (friction) of the tire on the road surface. With this optimization, measurements using the CPX method show a reduction in the sound pressure level of up to 75%. A reduction in the noise level means nominally at a speed of 100 km/h. Noise reduction up to 6 dB (A). This corresponds to a sensory reduction in noise emissions of 75%. The measurement carried out confirmed the value of DStro - 5 dB (A) for EP Grip.**

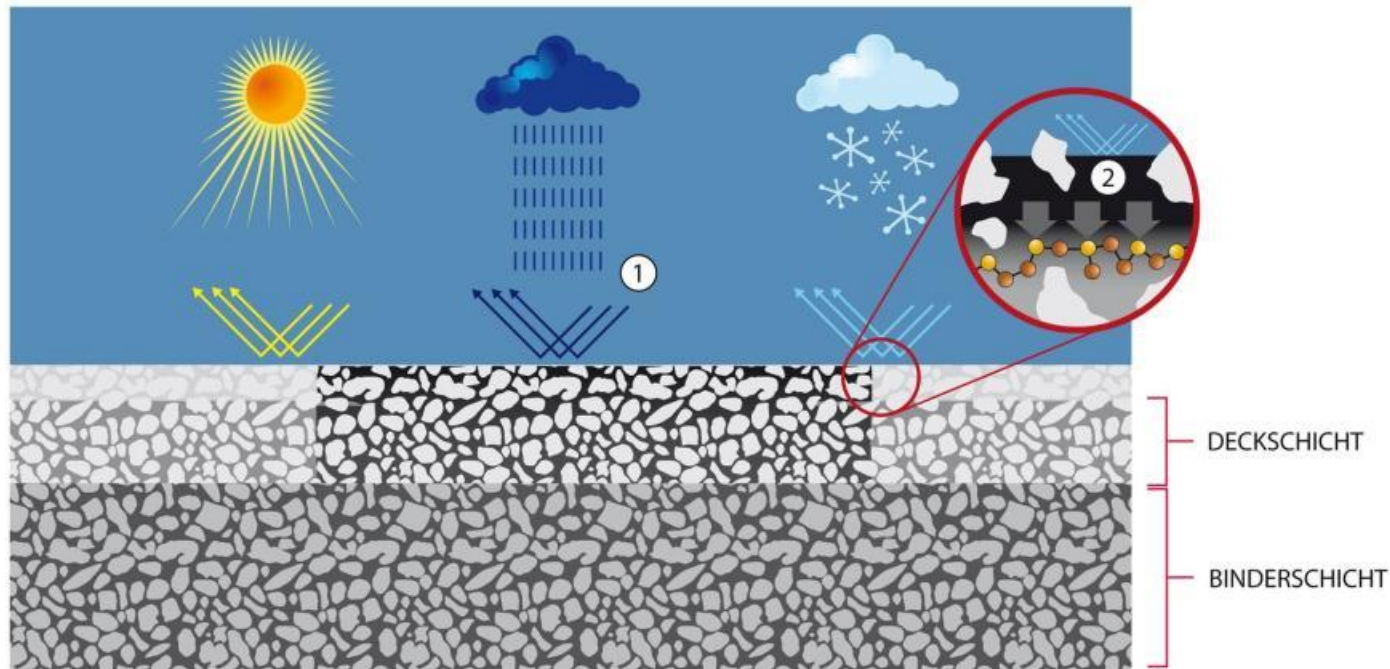
## What are the properties of EP-Grip?

➔ Video Night visibility

➔ [https://www.youtube.com/watch?v=tFeWY\\_o6W9s](https://www.youtube.com/watch?v=tFeWY_o6W9s)

## What are the properties of EP-Grip?

### ➔ Lifetime



① Oxidation + Witterungseinflüsse werden zurückgewiesen

② Maltene bleiben im Bitumen eingeschlossen

● MALTENE  
● ASPHALTENE

## What are the properties of EP-Grip?

- ➔ Use of light, highly polish-resistant grit
- ➔ This improves night visibility through retroreflection
- ➔ No glare effects for the driver (e.g. due to the lighting technology)
- ➔ Increase in lighting effectiveness (e.g. in tunnels by dimming)
- ➔ Saving of operating costs – lifetime up to 20 years (Frankfurter Kreuz)
- ➔ Considerable improvement in grip (pronounced surface texture)
- ➔ Reduction of the risk of aquaplaning and spray plume formation due to the drainage effect (micro and macro texture)
- ➔ Reduction of tire / road noise [approx. - 5 dB (A)]

## References

Project	m <sup>2</sup>	client
A 3 / A 52 / A 525, AK Breitscheid, Essen - Düsseldorf und Düsseldorf - Köln	14.500	Landesbetrieb Straßenbau NRW, NL Krefeld
A 46 / A 57, AD Neuss-Süd, Düsseldorf - Köln und Neuss - Düsseldorf	13.500	Landesbetrieb Straßenbau NRW, NL Krefeld
Luxemburg, A 4, Steinfort, Cessange, Lankels, FR Reims und FR Luxemburg	3.800	Administration des Ponts et Chaussées, Luxembourg
A 38, AD Drammetal, FR Göttingen und FR Leipzig	25.250	NLSTBV Bad Gandersheim
L 508 Vockenroter Steige - Wertheim	1.850	Strassen- und Tiefbauamt Tauberbischofsheim
A 7 / A 4, Kirchheimer Dreieck, FR Erfurt	3.975	Hessen Mobil, Kassel
A 61, AD Jackerath, FR Mönchengladbach	3.300	Landesbetrieb Straßenbau NRW, NL Krefeld
A 93s AS Reischenhart FR Inntaldreieck/Rosenheim	42.500	Autobahndirektion Südbayern, AM Rosenheim
A 4, AS Laurensberg, FR Niederlande	7.200	Landesbetrieb Straßenbau NRW, NL Krefeld
Luxemburg, A 4 / A 6, Gasperich, FR Trier und Luxemburg	7.200	Administration des Ponts et Chaussées, Luxembourg
Luxemburg, A 4 / A 13, Steinfort FR Arlon und Foetz FR Cessange	2.500	Administration des Ponts et Chaussées, Luxembourg
Neuburg/Donau, Driving Experience Center	10.900	Audi AG, Ingolstadt
B 294, Schloßburgtunnel Neuenburg, FR Pforzheim und Calw	1.510	Landratsamt Enzkreis
K 647, Wiesbaden - Naurod	2.000	Stadt Wiesbaden
B 96, Tunnel Bautzen, Westtangente	2.057	Deges, Berlin
Luxemburg, Kreuz Gasperich, A 3 zur A6 und A1 zur A 3	10.077	Administration des Ponts et Chaussées, Luxembourg
A 60/671, Mainspitz Dreieck, A-B	4.685	Hessen Mobil, Darmstadt
Darmstadt, Wendelstadtanlage Süd	1.425	Stadt Darmstadt
Oberhausen, Goebenstraße	1.250	WBO Wirtschaftsbetriebe Oberhausen
A 2, Tunnel Gräbern	30.600	Porr Bau GmbH
A 3, FR Frankfurt am Main	15.000	Landesbetrieb Mobilität Rheinland-Pfalz, AA Montabaur
A 3, Rosenheim - Kiefersfelden	50.400	Autobahndirektion Südbayern, München
B 7, AS Kaufungen, FR Kassel	2.960	Hessen Mobil, Kassel
A 7, A 96, Tunnel Füssen	10.224	Autobahndirektions Südbayern, Kempten
A 20, AM Glienke	7.500	Landesamt Straßenbau und Verkehr MV
A 4, Kirchheimer Dreieck	24.500	Hessen Mobil, Kassel
Freiberg-Beihingen, Neckarbrücke	11.000	Regierungspräsidium Stuttgart
diverse Autobahnanschlussstellen Krefeld	20.000	Autobahngesellschaft

➔ And also, the first 26.000m<sup>2</sup> this year in Poland

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## Thank you!

Michael Dirschedl (Civil Engineer)  
Division Manager Special coatings for  
Airfield and Road infrastructure

POSSEHL SPEZIALBAU GMBH

Gau-Bickelheimer Str. 72 ▪ 55576 Sprendlingen ▪ GERMANY  
Phone +49 173 5718618  
[m.dirschedl@possehl-spezialbau.de](mailto:m.dirschedl@possehl-spezialbau.de)  
[www.possehl-spezialbau.de](http://www.possehl-spezialbau.de)