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# Chromatography Columns & Accessories

1/2011

## Survey: Product Range

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### HPLC-Columns

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#### HPLC-Columns New or Refill by MZ-Analysentechnik

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## MZ-Analysentechnik: Developments & Trademarks

- |                      |                  |                 |
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| ➔ PerfectSil® Target | ➔ MZ-AquaPerfect | ➔ MZ-Gel SDplus |
| ➔ PerfectChrom®      | ➔ MZ-PAH         | ➔ MZ Super-FG   |
| ➔ PerfectBond®       | ➔ MZ-PBM         |                 |
| ➔ PerfectSil®        | ➔ Orbit          |                 |



## Manufacturing of HPLC-Columns: Available Packings

- |                   |                      |                |               |
|-------------------|----------------------|----------------|---------------|
| ➔ MZ-AquaPerfect® | ➔ PerfectSil® Target | ➔ Kromasil®    | ➔ Superspher® |
| ➔ PerfectSil®     | ➔ Orbit®             | ➔ LiChrosorb®  | ➔ µBondapak®  |
| ➔ PerfectChrom®   | ➔ Hypersil®          | ➔ LiChrospher® | ➔ Spherisorb® |
| ➔ PerfectBond®    | ➔ Inertsil®          | ➔ Nucleosil®   | ➔ Zorbax®     |

## Product Range HPLC-Products - Sales & Service

### EKA CHEMICALS

KROMASIL® · KROMASIL CHIRAL® ·  
CELLUCOAT® · AMYCOAT®



POLARIS® · PURSUIT® ·  
MICROSPHER®



CHIRAL AGP® / -CBH® / -HSA®  
BIO TRAP® · REPEAT®



BECKMANN ULTRASPHERE® · ...



ADVANCE® · AQUASIL® · BETASIL® ·  
HYPERASIL® · HYPERCARE®



LiCHROSPHER® · LiCHROSORB® ·  
PUROSPHER® · CHROMOLITH® ·  
ZIC®-pHILIC · ZIC®-HILIC



PLRP-S® · PL-SAX® · PL-SCX®  
PL-AQUAGEL OH® · PLGEL®



INERTSIL® · TITANS PHERE® ·  
BIOPTIC® · CAPILLARY EX®



PARTISIL® · PARTISPHERE® · UNI-  
SEP® C8 · TAC1 · MAX-1



ULTRON™ ES-OVM / -PEPSIN



CHROMEGABOND® · AQUASEP® ·  
FLUOROSEP® (PERFLUOROPHENYL)



PRO C4® · PRO C8® · PRO C18® ·  
J'S PHERE®



CHIRALCEL® · CHIRALPAK® ·  
CHROMPAK® · CROWNPAK®



ACE AQ® · ACE C18-HL® ·  
ACE CAPILLARY® · ACE C18-AR®



NUCLEOSIL® · NUCLEODUR®



ANTIBODIX® · PROTEOMIX® ·  
ZENIX® · SRT® · CARBOMIX®



VYDAC® · EVEREST® · DENALI® ·  
VENTURE®



UNISON® · CADENZA® ·  
Scherzo® · INTRADA®



AMINEX® · BIO-SIL® ·  
BIO-SILECT®

## Extended Product Range - Sales Only

- |                                                                                               |                                                                  |                                                                                       |
|-----------------------------------------------------------------------------------------------|------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Agilent Technologies ZORBAX® ·<br>ACCUBOND® · EVIDEX® · GC-pro-<br>duct line · LC-accessories | Restek GC-columns ...<br>Hamilton column programme ·<br>syringes | Perkin Elmer BROWNLEE®<br>Waters µBONDAPAK® · NOVAPAK® ·<br>SPHERISORB® · XTERRA® ... |
|-----------------------------------------------------------------------------------------------|------------------------------------------------------------------|---------------------------------------------------------------------------------------|

## Accessories & Consumables

MZ-Analysentechnik delivers quick and reliably all kind of accessories for LC and GC. We handpick our suppliers for best quality at reasonable prices:





# Available HPLC-Packings

## January 2011

All listed media are also available as preparative HPLC-columns with 8 - 50 mm ID, prices upon request.

### Hypersil™ Thermo Scientific

spherical • 120 Å / 170 m<sup>2</sup>g<sup>-1</sup>

	size	ec	USP	code	price-group
Hypersil 120 Si	3 µm		L3	<b>6013</b>	<b>F</b>
Hypersil 120 Si	5 µm		L3	<b>6015</b>	<b>E</b>
Hypersil 120 Si	10 µm		L3	<b>6010</b>	<b>E</b>
Hypersil SAS C1	3 µm		L13	<b>6023</b>	<b>F</b>
Hypersil SAS C1	5 µm		L13	<b>6025</b>	<b>E</b>
Hypersil SAS C1	10 µm		L13	<b>6020</b>	<b>E</b>
Hypersil MOS C8	3 µm		L7	<b>6033</b>	<b>F</b>
Hypersil MOS C8	5 µm		L7	<b>6035</b>	<b>E</b>
Hypersil MOS C8	10 µm		L7	<b>6030</b>	<b>E</b>
Hypersil ODS C18	3 µm	+	L1	<b>6043</b>	<b>F</b>
Hypersil ODS C18	5 µm	+	L1	<b>6045</b>	<b>E</b>
Hypersil ODS C18	10 µm	+	L1	<b>6040</b>	<b>D</b>
Hypersil CPS -CN	3 µm		L10	<b>6053</b>	<b>F</b>
Hypersil CPS -CN	5 µm		L10	<b>6055</b>	<b>E</b>
Hypersil CPS -CN	10 µm		L10	<b>6050</b>	<b>E</b>
Hypersil APS -NH2	3 µm		L8	<b>6063</b>	<b>F</b>
Hypersil APS -NH2	5 µm		L8	<b>6065</b>	<b>E</b>
Hypersil APS -NH2	10 µm		L8	<b>6060</b>	<b>E</b>
Hypersil APS-2	3 µm		L8	<b>6083</b>	<b>F</b>
Hypersil APS-2	5 µm		L8	<b>6085</b>	<b>E</b>
Hypersil APS-2	10 µm		L8	<b>6080</b>	<b>E</b>
Hypersil -Phenyl	3 µm		L11	<b>6073</b>	<b>F</b>
Hypersil -Phenyl	5 µm		L11	<b>6075</b>	<b>E</b>
Hypersil -Phenyl	10 µm		L11	<b>6070</b>	<b>E</b>
Hypersil BDS C18	5 µm	+	L1	<b>6195</b>	<b>E</b>

See also our special brochure "Thermo Scientific" with the complete range of original Hypersil-columns.

### LiChrosorb™ Merck / EMD

irregularly shaped • 60 Å / 550 m<sup>2</sup>g<sup>-1</sup> • 100 Å / 300 m<sup>2</sup>g<sup>-1</sup>

LiChrosorb Si 60	5 µm		L3	<b>0015</b>	<b>D</b>
LiChrosorb Si 60	7 µm		L3	<b>0017</b>	<b>D</b>
LiChrosorb Si 60	10 µm		L3	<b>0010</b>	<b>D</b>
LiChrosorb Si 100	5 µm		L3	<b>0025</b>	<b>D</b>
LiChrosorb Si 100	7 µm		L3	<b>0027</b>	<b>D</b>
LiChrosorb Si 100	10 µm		L3	<b>0020</b>	<b>D</b>
LiChrosorb RP-2	7 µm			<b>0035</b>	<b>D</b>
LiChrosorb RP-8	5 µm		L7	<b>0045</b>	<b>D</b>
LiChrosorb RP-8	7 µm		L7	<b>0047</b>	<b>D</b>
LiChrosorb RP-8	10 µm		L7	<b>0040</b>	<b>D</b>
LiChrosorb RP-18	5 µm		L1	<b>0055</b>	<b>D</b>
LiChrosorb RP-18	7 µm		L1	<b>0057</b>	<b>D</b>
LiChrosorb RP-18	10 µm		L1	<b>0050</b>	<b>D</b>
LiChrosorb-NH2	5 µm		L8	<b>0065</b>	<b>D</b>
LiChrosorb-NH2	7 µm		L8	<b>0067</b>	<b>D</b>
LiChrosorb-NH2	10 µm		L8	<b>0060</b>	<b>D</b>
LiChrosorb-CN	5 µm		L10	<b>0075</b>	<b>D</b>
LiChrosorb-CN	7 µm		L10	<b>0077</b>	<b>D</b>
LiChrosorb-CN	10 µm		L10	<b>0070</b>	<b>D</b>
LiChrosorb DIOL	5 µm		L20	<b>0085</b>	<b>D</b>
LiChrosorb DIOL	7 µm		L20	<b>0087</b>	<b>D</b>
LiChrosorb DIOL	10 µm		L20	<b>0080</b>	<b>D</b>
LiChrosorb RP-Select B	5 µm		L7	<b>0095</b>	<b>D</b>
LiChrosorb RP-Select B	10 µm		L7	<b>0090</b>	<b>D</b>

### µBondapak™ Waters

irregularly shaped • 125 Å / 300 m<sup>2</sup>g<sup>-1</sup>

	size	ec	USP	code	price-group
µBondapak C18	10 µm	+	L1	<b>8100</b>	<b>G</b>

### Inertsil™ GL-Sciences

spherical • 150 Å / 320 m<sup>2</sup>g<sup>-1</sup> • 100 Å / 450 m<sup>2</sup>g<sup>-1</sup>

Inertsil 150 Å ODS-2	5 µm	+	L1	<b>2010</b>	<b>F</b>
Inertsil 100 Å ODS-3	5 µm	+	L1	<b>2050</b>	<b>F</b>
Inertsil 150 Å C8	5 µm	+	L7	<b>2030</b>	<b>F</b>
Inertsil 150 Å C4	5 µm	+	L26	<b>2035</b>	<b>F</b>
Inertsil 150 Å Ph	5 µm	+	L11	<b>2040</b>	<b>F</b>
Inertsil 150 Å Sil	5 µm		L3	<b>2005</b>	<b>F</b>

See also our special brochure "Inertsil" with the complete range of original Inertsil-columns.

### Kromasil™ Eka Nobel

spherical • 60 Å / 550 m<sup>2</sup>g<sup>-1</sup> • 100 Å / 340 m<sup>2</sup>g<sup>-1</sup>

Kromasil 60 SIL	3.5 µm		L3	<b>0500</b>	<b>F</b>
Kromasil 60 SIL	5 µm		L3	<b>0501</b>	<b>D</b>
Kromasil 60 SIL	7 µm		L3	<b>0502</b>	<b>D</b>
Kromasil 60 SIL	10 µm		L3	<b>0503</b>	<b>D</b>
Kromasil 60 SIL	13 µm			<b>0504</b>	<b>D</b>
Kromasil 60 SIL	16 µm			<b>0505</b>	<b>D</b>
Kromasil 100 SIL	3.5 µm		L3	<b>0510</b>	<b>F</b>
Kromasil 100 SIL	5 µm		L3	<b>0511</b>	<b>D</b>
Kromasil 100 SIL	7 µm		L3	<b>0512</b>	<b>D</b>
Kromasil 100 SIL	10 µm		L3	<b>0513</b>	<b>D</b>
Kromasil 100 SIL	13 µm			<b>0514</b>	<b>D</b>
Kromasil 100 SIL	16 µm			<b>0515</b>	<b>D</b>
Kromasil 100 C1	5 µm		L13	<b>0521</b>	<b>D</b>
Kromasil 100 C1	7 µm		L13	<b>0522</b>	<b>D</b>
Kromasil 100 C1	10 µm		L13	<b>0523</b>	<b>D</b>
Kromasil 100 C1	13 µm			<b>0524</b>	<b>D</b>
Kromasil 100 C1	16 µm			<b>0525</b>	<b>D</b>
Kromasil 100 C4	3.5 µm	+	L26	<b>0530</b>	<b>F</b>
Kromasil 100 C4	5 µm	+	L26	<b>0531</b>	<b>D</b>
Kromasil 100 C4	7 µm	+	L26	<b>0532</b>	<b>D</b>
Kromasil 100 C4	10 µm	+	L26	<b>0533</b>	<b>D</b>
Kromasil 100 C4	13 µm	+		<b>0534</b>	<b>D</b>
Kromasil 100 C4	16 µm	+		<b>0535</b>	<b>D</b>
Kromasil 100 C8	3.5 µm	+	L7	<b>0540</b>	<b>F</b>
Kromasil 100 C8	5 µm	+	L7	<b>0541</b>	<b>D</b>
Kromasil 100 C8	7 µm	+	L7	<b>0542</b>	<b>D</b>
Kromasil 100 C8	10 µm	+	L7	<b>0543</b>	<b>D</b>
Kromasil 100 C8	13 µm	+		<b>0544</b>	<b>D</b>
Kromasil 100 C8	16 µm	+		<b>0545</b>	<b>D</b>
Kromasil 100 C18	3.5 µm	+	L1	<b>0550</b>	<b>F</b>
Kromasil 100 C18	5 µm	+	L1	<b>0551</b>	<b>D</b>
Kromasil 100 C18	7 µm	+	L1	<b>0552</b>	<b>D</b>
Kromasil 100 C18	10 µm	+	L1	<b>0553</b>	<b>D</b>
Kromasil 100 C18	13 µm	+		<b>0554</b>	<b>D</b>
Kromasil 100 C18	16 µm	+		<b>0555</b>	<b>D</b>
Kromasil 100 NH2	5 µm	+	L8	<b>0561</b>	<b>D</b>
Kromasil 100 NH2	7 µm	+	L8	<b>0562</b>	<b>D</b>
Kromasil 100 NH2	10 µm	+	L8	<b>0563</b>	<b>D</b>
Kromasil 100 NH2	13 µm	+		<b>0564</b>	<b>D</b>
Kromasil 100 NH2	16 µm	+		<b>0565</b>	<b>D</b>

**LiChrospher™ Merck / EMD**
spherical • 60 Å / 650 m<sup>2</sup>g<sup>-1</sup> • 100 Å / 420 m<sup>2</sup>g<sup>-1</sup>

LiChrospher Si 60	5 µm	L3	<b>0115</b>	<b>D</b>
LiChrospher Si 60	10 µm	L3	<b>0110</b>	<b>D</b>
LiChrospher Si 100	5 µm	L3	<b>0125</b>	<b>D</b>
LiChrospher Si 100	10 µm	L3	<b>0120</b>	<b>D</b>
LiChrospher 100 RP-8	5 µm	L7	<b>0135</b>	<b>D</b>
LiChrospher 100 RP-8	10 µm	L7	<b>0130</b>	<b>D</b>
LiChrospher 100 RP-8 endc.	5 µm	+ L7	<b>0136</b>	<b>D</b>
LiChrospher 100 RP-8 endc.	10 µm	+ L7	<b>0131</b>	<b>D</b>
LiChrospher 100 RP-18	5 µm	L1	<b>0145</b>	<b>D</b>
LiChrospher 100 RP-18	10 µm	L1	<b>0140</b>	<b>D</b>
LiChrospher 100 RP-18 endc.	5 µm	+ L1	<b>0146</b>	<b>D</b>
LiChrospher 100 RP-18 endc.	10 µm	+ L1	<b>0141</b>	<b>D</b>
LiChrospher 100 -NH <sub>2</sub>	5 µm	L8	<b>0155</b>	<b>D</b>
LiChrospher 100 -NH <sub>2</sub>	10 µm	L8	<b>0150</b>	<b>D</b>
LiChrospher 100 -CN	5 µm	L10	<b>0165</b>	<b>D</b>
LiChrospher 100 -CN	10 µm	L10	<b>0160</b>	<b>D</b>
LiChrospher 100 DIOL	5 µm	L20	<b>0175</b>	<b>D</b>
LiChrospher 100 DIOL	10 µm	L20	<b>0170</b>	<b>D</b>
LiChrospher 60 RP-Select B	5 µm	L7	<b>0185</b>	<b>E</b>
LiChrospher 60 RP-Select B	10 µm	L7	<b>0180</b>	<b>E</b>

**MZ-Aqua Perfect™ MZ-Analysentechnik**
spherical • 120 Å / 310 m<sup>2</sup>g<sup>-1</sup> • C18 = 15 %C

MZ-Aqua Perfect C18	3 µm	L1	<b>0610</b>	<b>F</b>
MZ-Aqua Perfect C18	5 µm	L1	<b>0612</b>	<b>D</b>
MZ-Aqua Perfect C18	7 µm	L1	<b>0613</b>	<b>D</b>
MZ-Aqua Perfect C18	10 µm	L1	<b>0614</b>	<b>D</b>

**Nucleosil™ 100 Macherey-Nagel**
spherical • 100 Å / 350 m<sup>2</sup>g<sup>-1</sup>

Nucleosil Si 100	3 µm	L3	<b>3013</b>	<b>F</b>
Nucleosil Si 100	5 µm	L3	<b>3015</b>	<b>C</b>
Nucleosil Si 100	7 µm	L3	<b>3017</b>	<b>C</b>
Nucleosil Si 100	10 µm	L3	<b>3010</b>	<b>C</b>
Nucleosil 100 C8	3 µm	L7	<b>3023</b>	<b>F</b>
Nucleosil 100 C8	5 µm	L7	<b>3025</b>	<b>D</b>
Nucleosil 100 C8	7 µm	L7	<b>3027</b>	<b>D</b>
Nucleosil 100 C8	10 µm	L7	<b>3020</b>	<b>D</b>
Nucleosil 100 C18	3 µm	+ L1	<b>3033</b>	<b>F</b>
Nucleosil 100 C18	5 µm	+ L1	<b>3035</b>	<b>D</b>
Nucleosil 100 C18	7 µm	+ L1	<b>3037</b>	<b>D</b>
Nucleosil 100 C18	10 µm	+ L1	<b>3030</b>	<b>D</b>
Nucleosil 100 C18 AB	5 µm	L1	<b>3031</b>	<b>F</b>
Nucleosil 100 C6H5	5 µm	L11	<b>3045</b>	<b>D</b>
Nucleosil 100 C6H5	7 µm	L11	<b>3047</b>	<b>D</b>
Nucleosil 100 -NH <sub>2</sub>	5 µm	L8	<b>3055</b>	<b>D</b>
Nucleosil 100 -NH <sub>2</sub>	10 µm	L8	<b>3050</b>	<b>D</b>
Nucleosil 100 -CN	5 µm	L10	<b>3065</b>	<b>D</b>
Nucleosil 100 -CN	10 µm	L10	<b>3060</b>	<b>D</b>
Nucleosil 100 -OH	5 µm	L20	<b>3075</b>	<b>D</b>
Nucleosil 100 -OH	7 µm	L20	<b>3077</b>	<b>D</b>
Nucleosil 100 -SA	5 µm	L14	<b>3085</b>	<b>E</b>
Nucleosil 100 -SA	10 µm	L14	<b>3080</b>	<b>E</b>
Nucleosil 100 -SB	5 µm	L9	<b>3095</b>	<b>E</b>
Nucleosil 100 -SB	10 µm	L9	<b>3090</b>	<b>E</b>

**Superspher™ Merck / EMD**
spherical • 60 Å / 700 m<sup>2</sup>g<sup>-1</sup> • 100 Å / 350 m<sup>2</sup>g<sup>-1</sup>

Superspher Si 60	4 µm	L3	<b>0214</b>	<b>E</b>
Superspher 60 RP-8	4 µm	L7	<b>0224</b>	<b>E</b>
Superspher 60 RP-8 (e)	4 µm	+ L7	<b>0234</b>	<b>E</b>
Superspher 100 RP-18	4 µm	L1	<b>0254</b>	<b>E</b>
Superspher 100 RP-18 (e)	4 µm	+ L1	<b>0264</b>	<b>E</b>
Superspher 60 RP-Select B	4 µm	L7	<b>0244</b>	<b>F</b>

See also our special brochure "Merck Chromatography"

**Nucleosil™ 120 Macherey-Nagel**
spherical • 120 Å / 200 m<sup>2</sup>g<sup>-1</sup>

Nucleosil Si 120	3 µm	L3	<b>3113</b>	<b>F</b>
Nucleosil Si 120	5 µm	L3	<b>3115</b>	<b>C</b>
Nucleosil Si 120	7 µm	L3	<b>3117</b>	<b>C</b>
Nucleosil Si 120	10 µm	L3	<b>3110</b>	<b>C</b>
Nucleosil 120 C4	5 µm	L26	<b>3111</b>	<b>D</b>
Nucleosil 120 C8	3 µm	L7	<b>3123</b>	<b>F</b>
Nucleosil 120 C8	5 µm	L7	<b>3125</b>	<b>D</b>
Nucleosil 120 C8	7 µm	L7	<b>3127</b>	<b>D</b>
Nucleosil 120 C8	10 µm	L7	<b>3120</b>	<b>D</b>
Nucleosil 120 C18	3 µm	+ L1	<b>3133</b>	<b>F</b>
Nucleosil 120 C18	5 µm	+ L1	<b>3135</b>	<b>D</b>
Nucleosil 120 C18	7 µm	+ L1	<b>3137</b>	<b>D</b>
Nucleosil 120 C18	10 µm	+ L1	<b>3130</b>	<b>D</b>
Nucleosil 120 C6H5	7 µm	L11	<b>3147</b>	<b>D</b>
Nucleosil 120 -CN	7 µm	L10	<b>3157</b>	<b>D</b>
Nucleosil 120 -NH <sub>2</sub>	7 µm	L8	<b>3158</b>	<b>D</b>

**Nucleosil™ 300 Macherey-Nagel**
spherical • 300 Å / 100 m<sup>2</sup>g<sup>-1</sup>

Nucleosil 300 C4	5 µm	L26	<b>3305</b>	<b>E</b>
Nucleosil 300 C4	7 µm	L26	<b>3307</b>	<b>E</b>
Nucleosil 300 C4	10 µm	L26	<b>3310</b>	<b>E</b>
Nucleosil 300 C8	5 µm	L7	<b>3325</b>	<b>E</b>
Nucleosil 300 C8	7 µm	L7	<b>3327</b>	<b>E</b>
Nucleosil 300 C8	10 µm	L7	<b>3320</b>	<b>E</b>
Nucleosil 300 C18	5 µm	L1	<b>3335</b>	<b>E</b>
Nucleosil 300 C18	7 µm	L1	<b>3337</b>	<b>E</b>
Nucleosil 300 C18	10 µm	L1	<b>3330</b>	<b>E</b>
Nucleosil 300 C6H5	7 µm	L11	<b>3347</b>	<b>E</b>
Nucleosil 300 OH	7 µm	L20	<b>3357</b>	<b>E</b>
Nucleosil 300 CN	7 µm	L10	<b>3367</b>	<b>E</b>
Nucleosil 300 NH <sub>2</sub>	7 µm	L8	<b>3377</b>	<b>E</b>

**Orbit™ 100 MZ**
spherical • 100 Å / 340 m<sup>2</sup>g<sup>-1</sup> • C8 = 12 %C • C18 = 19 %C

Orbit 100 C18	3,5 µm	+ L1	<b>0902</b>	<b>E</b>
Orbit 100 C18	5 µm	+ L1	<b>0901</b>	<b>C</b>
Orbit 100 C18	10 µm	+ L1	<b>0906</b>	<b>C</b>
Orbit 100 C8	3,5 µm	+ L7	<b>0912</b>	<b>E</b>
Orbit 100 C8	5 µm	+ L7	<b>0911</b>	<b>C</b>
Orbit 100 C8	10 µm	+ L7	<b>0916</b>	<b>C</b>
Orbit 100 C4	3,5 µm	+ L26	<b>0922</b>	<b>E</b>
Orbit 100 C4	5 µm	+ L26	<b>0921</b>	<b>C</b>
Orbit 100 C4	10 µm	+ L26	<b>0926</b>	<b>C</b>
Orbit 100 CN	5 µm	+ L10	<b>0875</b>	<b>C</b>

**PerfectSil™ Target MZ**
spherical • 100 Å / 450 m<sup>2</sup>g<sup>-1</sup> • ODS-3 = 17.5 %C

PerfectSil Target Sil 100	3 µm	- L3	<b>0803</b>	<b>F</b>
PerfectSil Target Sil 100	5 µm	- L3	<b>0800</b>	<b>E</b>
PerfectSil Target ODS-3	3 µm	+ L1	<b>0802</b>	<b>F</b>
PerfectSil Target ODS-3	5 µm	+ L1	<b>0801</b>	<b>E</b>
PerfectSil Target ODS-3	10 µm	+ L1	<b>0806</b>	<b>D</b>
PerfectSil Target C8-3	3 µm	+ L7	<b>0812</b>	<b>F</b>
PerfectSil Target C8-3	5 µm	+ L7	<b>0811</b>	<b>E</b>
PerfectSil Target CN-3	5 µm	- L10	<b>0818</b>	<b>E</b>

**PerfectSil™ Target HD MZ**
spherical • 50 Å / 450 m<sup>2</sup>g<sup>-1</sup> • ODS-3 HD=25.0 %C • C8 HD=15.0 %C

PerfectSil Target ODS-3 HD	3 µm	+ L1	<b>0833</b>	<b>F</b>
PerfectSil Target ODS-3 HD	5 µm	+ L1	<b>0831</b>	<b>E</b>
PerfectSil Target ODS-3 HD	10 µm	+ L1	<b>0830</b>	<b>E</b>
PerfectSil Target C8 HD	3 µm	+ L7	<b>0843</b>	<b>F</b>
PerfectSil Target C8 HD	5 µm	+ L7	<b>0845</b>	<b>E</b>

Available HPLC-Packings

## PerfectBond™ MZ-Analysentechnik

spherical • technical data & details: see page 16

PerfectBond ODS-H	5 µm	+	L1	<b>1195</b>	<b>E</b>
PerfectBond ODS-HD	3 µm	+	L1	<b>1200</b>	<b>F</b>
PerfectBond ODS-HD	5 µm	+	L1	<b>1198</b>	<b>E</b>
PerfectBond C18 ODS	5 µm	+	L1	<b>1190</b>	<b>E</b>
PerfectBond C18	10 µm	+	L1	<b>1011</b>	<b>E</b>
PerfectBond C8-HD	3 µm	+	L7	<b>1202</b>	<b>F</b>
PerfectBond C8-HD	5 µm	+	L7	<b>1204</b>	<b>E</b>
PerfectBond C8-H	5 µm	+	L7	<b>1192</b>	<b>E</b>
PerfectBond C8	5 µm	+	L7	<b>1018</b>	<b>E</b>
PerfectBond C1	3 µm	+	L13	<b>1180</b>	<b>F</b>
PerfectBond C1	5 µm	+	L13	<b>1182</b>	<b>E</b>
PerfectBond Ph	5 µm	+	L11	<b>1220</b>	<b>E</b>
PerfectBond Ph-H	5 µm	+	L11	<b>1222</b>	<b>E</b>

## PerfectSil™ MZ-Analysentechnik

spherical • 100 Å / 450 m<sup>2</sup>g<sup>-1</sup> • 120 Å / 300 m<sup>2</sup>g<sup>-1</sup> • 300 Å / 100 m<sup>2</sup>g<sup>-1</sup>

PerfectSil 100 Sil	5 µm	-	L3	<b>0705</b>	<b>D</b>
PerfectSil 100 ODS-3	3 µm	+	L1	<b>0708</b>	<b>F</b>
PerfectSil 100 ODS-3	5 µm	+	L1	<b>0710</b>	<b>D</b>
PerfectSil 100 C8-3	5 µm	+	L7	<b>0715</b>	<b>D</b>
PerfectSil 100 Phenyl-3	5 µm	-	L11	<b>0735</b>	<b>D</b>
PerfectSil 100 NH2	5 µm	-	L8	<b>0720</b>	<b>D</b>
PerfectSil 100 CN-3	5 µm	-	L10	<b>0725</b>	<b>D</b>
PerfectSil 100 Diol	5 µm	-	L20	<b>0730</b>	<b>D</b>
PerfectSil 120 Sil	5 µm	-	L3	<b>1410</b>	<b>D</b>
PerfectSil 120 ODS	3 µm	+	L1	<b>1421</b>	<b>F</b>
PerfectSil 120 ODS	5 µm	+	L1	<b>1420</b>	<b>D</b>
PerfectSil 120 ODS	7 µm	+	L1	<b>1398</b>	<b>D</b>
PerfectSil 120 ODS	10 µm	+	L1	<b>1400</b>	<b>D</b>
PerfectSil 120 ODS-L	3 µm	+	L1	<b>1675</b>	<b>F</b>
PerfectSil 120 ODS-L	5 µm	+	L1	<b>1680</b>	<b>E</b>
PerfectSil 120 ODS-2	3 µm	+	L1	<b>1424</b>	<b>F</b>
PerfectSil 120 ODS-2	5 µm	+	L1	<b>1425</b>	<b>D</b>
PerfectSil 120 C1	3 µm	-	L13	<b>1429</b>	<b>F</b>
PerfectSil 120 C1	5 µm	-	L13	<b>1430</b>	<b>D</b>
PerfectSil 120 C4	3 µm	+	L26	<b>1433</b>	<b>F</b>
PerfectSil 120 C4	5 µm	+	L26	<b>1435</b>	<b>D</b>
PerfectSil 120 C8	3 µm	+	L7	<b>1441</b>	<b>F</b>
PerfectSil 120 C8	5 µm	+	L7	<b>1440</b>	<b>D</b>
PerfectSil 120 C8	10 µm	+	L7	<b>1442</b>	<b>D</b>
PerfectSil 120 CN	3 µm	-	L10	<b>1379</b>	<b>F</b>
PerfectSil 120 CN	5 µm	-	L10	<b>1380</b>	<b>D</b>
PerfectSil 120 NH2	3 µm	-	L8	<b>1446</b>	<b>F</b>
PerfectSil 120 NH2	5 µm	-	L8	<b>1445</b>	<b>D</b>
PerfectSil 120 Phenyl	3 µm	-	L11	<b>1447</b>	<b>F</b>
PerfectSil 120 Phenyl	5 µm	-	L11	<b>1448</b>	<b>D</b>
PerfectSil 120 Phenyl-M	5 µm	-	L11	<b>1449</b>	<b>D</b>
PerfectSil 300 Sil	5 µm	-	L13	<b>1450</b>	<b>E</b>
PerfectSil 300 Sil	10 µm	-	L13	<b>1840</b>	<b>D</b>
PerfectSil 300 Sil	15-20 µm	-		<b>1845</b>	<b>D</b>
PerfectSil 300 ODS C18	5 µm	+	L1	<b>1455</b>	<b>E</b>
PerfectSil 300 ODS C18	10 µm	+	L1	<b>1805</b>	<b>D</b>
PerfectSil 300 ODS C18	15-20 µm	+		<b>1810</b>	<b>D</b>
PerfectSil 300 C4	5 µm	+	L26	<b>1460</b>	<b>E</b>
PerfectSil 300 C4	10 µm	+	L26	<b>1830</b>	<b>D</b>
PerfectSil 300 C4	15-20 µm	+		<b>1835</b>	<b>D</b>
PerfectSil 300 C8	5 µm	+	L7	<b>1465</b>	<b>E</b>
PerfectSil 300 C8	10 µm	+	L7	<b>1820</b>	<b>D</b>
PerfectSil 300 C8	15-20 µm	+		<b>1825</b>	<b>D</b>
PerfectSil 300 Diol	5 µm	-	L20	<b>1858</b>	<b>E</b>
PerfectSil 1000 Sil	5 µm	-	L3	<b>1475</b>	<b>D</b>

## Zorbax™ Rockland Technologies

spherical • 70 Å / 330 m<sup>2</sup>g<sup>-1</sup>

Zorbax Si	5 µm		L3	<b>0415</b>	<b>G</b>
Zorbax TMS C1	5 µm		L13	<b>0425</b>	<b>G</b>
Zorbax C8	5 µm		L7	<b>0445</b>	<b>G</b>
Zorbax C18	5 µm		L1	<b>0455</b>	<b>G</b>

Original Zorbax-HPLC-Columns available on request.

## PerfectChrom™ MZ-Analysentechnik

spherical • 60 Å / 550 m<sup>2</sup>g<sup>-1</sup> • 100 Å / 350 m<sup>2</sup>g<sup>-1</sup>

PerfectChrom 60 Sil	5 µm	-	L3	<b>1575</b>	<b>C</b>
PerfectChrom 60 Sil	10 µm	-	L3	<b>1577</b>	<b>C</b>
PerfectChrom 100 Sil	5 µm	-	L3	<b>1525</b>	<b>C</b>
PerfectChrom 100 Sil	10 µm	-	L3	<b>1527</b>	<b>C</b>
PerfectChrom 100 C18	3 µm	+	L1	<b>1503</b>	<b>F</b>
PerfectChrom 100 C18	5 µm	+	L1	<b>1505</b>	<b>C</b>
PerfectChrom 100 C18	10 µm	+	L1	<b>1500</b>	<b>C</b>
PerfectChrom 100 C18	15 µm	+		<b>1506</b>	<b>C</b>
PerfectChrom 100 C18L	5 µm	+	L1	<b>1494</b>	<b>C</b>
PerfectChrom 100 C18L	10 µm	+	L1	<b>1496</b>	<b>C</b>
PerfectChrom 100 C18M	5 µm	+	L1	<b>1504</b>	<b>C</b>
PerfectChrom 100 C18AB	5 µm	+	L1	<b>1580</b>	<b>D</b>
PerfectChrom 100 C8	3 µm	+	L7	<b>1513</b>	<b>F</b>
PerfectChrom 100 C8	5 µm	+	L7	<b>1515</b>	<b>C</b>
PerfectChrom 100 C8M	5 µm	+	L7	<b>1514</b>	<b>C</b>
PerfectChrom 100 C8	10 µm	+	L7	<b>1510</b>	<b>C</b>
PerfectChrom 100 C1	5 µm	-	L13	<b>1535</b>	<b>C</b>
PerfectChrom 100 C4	5 µm	+	L26	<b>1539</b>	<b>C</b>
PerfectChrom 100 C6	5 µm	+	L15	<b>1543</b>	<b>C</b>
PerfectChrom 100 CN	5 µm	-	L10	<b>1555</b>	<b>C</b>
PerfectChrom 100 CN	10 µm	-	L10	<b>1557</b>	<b>C</b>
PerfectChrom 100 Diol	5 µm	-	L20	<b>1559</b>	<b>C</b>
PerfectChrom 100 Diol	10 µm	-	L20	<b>1560</b>	<b>C</b>
PerfectChrom 100 NH2	5 µm	-	L8	<b>1551</b>	<b>C</b>
PerfectChrom 100 NH2	10 µm	-	L8	<b>1552</b>	<b>C</b>
PerfectChrom 100 Phenyl	3 µm	-	L11	<b>1545</b>	<b>F</b>
PerfectChrom 100 Phenyl	5 µm	-	L11	<b>1547</b>	<b>C</b>
PerfectChrom 100 Phenyl	10 µm	-	L11	<b>1549</b>	<b>C</b>
PerfectChrom 100 Phenyl M	10 µm	-	L11	<b>1550</b>	<b>C</b>
PerfectChrom 100 SAX	5 µm	-	L14	<b>1563</b>	<b>D</b>
PerfectChrom 100 SAX	10 µm	-	L14	<b>1565</b>	<b>D</b>
PerfectChrom 100 SCX	5 µm	-	L9	<b>1567</b>	<b>D</b>
PerfectChrom 100 SCX	10 µm	-	L9	<b>1569</b>	<b>D</b>

## Spherisorb™ Waters

spherical • 80 Å / 320 m<sup>2</sup>g<sup>-1</sup>

Spherisorb Si	3 µm		L3	<b>7013</b>	<b>F</b>
Spherisorb Si	5 µm		L3	<b>7015</b>	<b>D</b>
Spherisorb Si	10 µm		L3	<b>7010</b>	<b>D</b>
Spherisorb C1	3 µm		L13	<b>7023</b>	<b>F</b>
Spherisorb C1	5 µm		L13	<b>7025</b>	<b>D</b>
Spherisorb C1	10 µm		L13	<b>7020</b>	<b>D</b>
Spherisorb C6	3 µm	+	L15	<b>7033</b>	<b>F</b>
Spherisorb C6	5 µm	+	L15	<b>7035</b>	<b>D</b>
Spherisorb C6	10 µm	+	L15	<b>7030</b>	<b>D</b>
Spherisorb C8	3 µm	+	L7	<b>7043</b>	<b>F</b>
Spherisorb C8	5 µm	+	L7	<b>7045</b>	<b>D</b>
Spherisorb C8	10 µm	+	L7	<b>7040</b>	<b>D</b>
Spherisorb ODS-1 C18	3 µm	+/-	L1	<b>7053</b>	<b>F</b>
Spherisorb ODS-1 C18	5 µm	+/-	L1	<b>7055</b>	<b>D</b>
Spherisorb ODS-1 C18	10 µm	+/-	L1	<b>7050</b>	<b>D</b>
Spherisorb ODS-2 C18	3 µm	+	L1	<b>7063</b>	<b>F</b>
Spherisorb ODS-2 C18	5 µm	+	L1	<b>7065</b>	<b>D</b>
Spherisorb ODS-2 C18	10 µm	+	L1	<b>7060</b>	<b>D</b>
Spherisorb -CN	3 µm		L10	<b>7073</b>	<b>F</b>
Spherisorb -CN	5 µm		L10	<b>7075</b>	<b>D</b>
Spherisorb -CN	10 µm		L10	<b>7070</b>	<b>D</b>
Spherisorb -NH2	3 µm		L8	<b>7083</b>	<b>F</b>
Spherisorb -NH2	5 µm		L8	<b>7085</b>	<b>D</b>
Spherisorb -NH2	10 µm		L8	<b>7080</b>	<b>D</b>
Spherisorb -Phenyl	3 µm	+/-	L11	<b>7093</b>	<b>F</b>
Spherisorb -Phenyl	5 µm	+/-	L11	<b>7095</b>	<b>D</b>
Spherisorb -Phenyl	10 µm	+/-	L11	<b>7090</b>	<b>D</b>

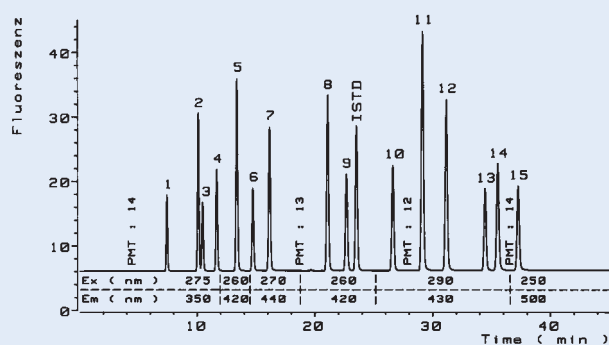
## MZ-PAH: Separation of Polyaromatic Hydrocarbons

Especially developed for the separation of Polyaromatic Hydrocarbons: **MZ-PAH**-Columns by MZ-Analysentechnik.

**MZ-PAH**-Columns are well-known for their outstanding performance:

- ➔ Excellent selectivity
- ➔ Guaranteed separation of 6 PAK (DIN 38407-F8) and 16 PAK (EPA Method 610)
- ➔ High efficiency: > 75,000 m<sup>-1</sup>
- ➔ High reproducibility between column-to-column
- ➔ Long lifetime
- ➔ Refillable stainless steel column

### Separation of 16 PAH / EPA



Column: MZ-PAH C18 5 µm 250 x 3 mm

### MZ-PAH 3 µm N=New R=Refill

length x ID	Part-No.	€
150 x 3.0 mm	150.3,0.1100.N	376.--
150 x 3.0 mm	150.3,0.1100.R	338.--

### MZ-PAH 5 µm N=New R=Refill

length x ID	Part-No.	€
250 x 1.0 mm	250.1,0.1111.N	358.--
250 x 1.0 mm	250.1,0.1111.R	307.--
250 x 1.6 mm	250.1,6.1111.N	333.--
250 x 1.6 mm	250.1,6.1111.R	282.--
250 x 2.1 mm	250.2,1.1111.N	333.--
250 x 2.1 mm	250.2,1.1111.R	282.--
250 x 3.0 mm	250.3,0.1111.N	333.--
250 x 3.0 mm	250.3,0.1111.R	282.--
250 x 4.0 mm	250.4,0.1111.N	384.--
250 x 4.0 mm	250.4,0.1111.R	338.--

### Guard Cartridges

length x ID	Part-No.	€
10 x 1.0mm 5 pc.	VK.10.1,0.xxxx	205.--
20 x 1.0mm 5 pc.	VK.20.1,0.xxxx	205.--
10 x 1.6mm 5 pc.	VK.10.1,6.xxxx	205.--
20 x 1.6mm 5 pc.	VK.20.1,6.xxxx	205.--
10 x 2.1mm 5 pc.	VK.10.2,1.xxxx	205.--
20 x 2.1mm 5 pc.	VK.20.2,1.xxxx	205.--
10 x 3.0mm 5 pc.	VK.10.3,0.xxxx	205.--
20 x 3.0mm 5 pc.	VK.20.3,0.xxxx	205.--
10 x 4.0mm 5 pc.	VK.10.4,0.xxxx	205.--
20 x 4.0mm 5 pc.	VK.20.4,0.xxxx	205.--

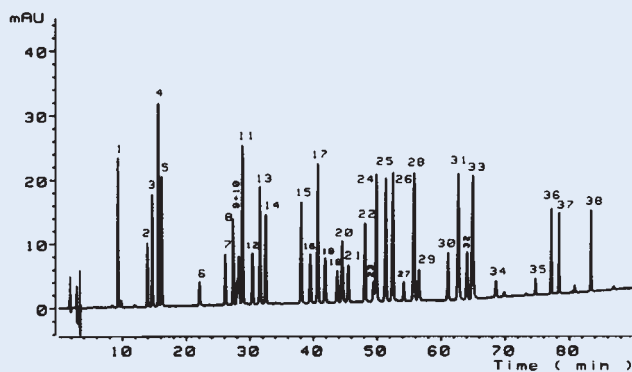
**i** Material = xxxx  
 MZ-PAH 3 µm = 1100  
 MZ-PAH 5 µm = 1111  
 MZ-PBM 3 µm = 1122

## MZ-PBM: Separation of Pesticides

Especially developed for the separation of nitrogen-containing pesticides: MZ-PBM - proven by being part of DIN 38407-F12.

- ➔ Outstanding selectivity for nitrogen-containing pesticides
- ➔ High efficiency: > 110.000 m<sup>-1</sup>
- ➔ High reproducibility from batch-to-batch thanks to a unique modification procedure
- ➔ Long lifetime
- ➔ Refillable stainless steel column

### Separation of 38 Pesticides

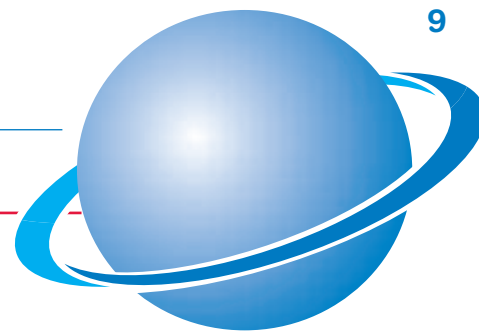


Column: MZ-PBM C18 3 µm 250 x 3 mm

### MZ-PBM 3 µm N=New R=Refill

Length x ID	Part-No.	€
250 x 1.0 mm	250.1,0.1122.N	358.--
250 x 1.0 mm	250.1,0.1122.R	307.--
250 x 1.6 mm	250.1,6.1122.N	333.--
250 x 1.6 mm	250.1,6.1122.R	282.--
250 x 2.1 mm	250.2,1.1122.N	333.--
250 x 2.1 mm	250.2,1.1122.R	282.--
250 x 3.0 mm	250.3,0.1122.N	333.--
250 x 3.0 mm	250.3,0.1122.R	282.--
250 x 4.0 mm	250.4,0.1122.N	384.--
250 x 4.0 mm	250.4,0.1122.R	338.--





# Orbit State-of-the-Art for Routine Analytics

Our completely new-developed product-line Orbit is based on extremely pure and ultra-stable porous silica with 100 Å mean pore size. The State-of-the-Art base silica is especially optimized for the requirements of today's routine analytics. Orbit is as well robust and shows an excellent chromatographic resolution plus it offers a high cost-efficiency - which may be further increased employing our Refill-service at very reasonable prices.

Customers from routine analytics are thus now enabled to use the latest stationary phase technology without loss in suitability for daily use or a trade-off in chromatographic resolution. Orbit features excellent chromatographic separations with high efficiencies and symmetrical peaks - while an excellent reproducibility from batch to batch and column to column is given.

As all HPLC-columns from MZ-Analysentechnik, Orbit HPLC-columns are manu-

factured by a fully ISO9001-certified process and ship with a quality certificate including the original test chromatogram.

Orbit can be packed in the full range of column dimensions (also available preparative) and is shipping with 3.5, 5 or 10 µm particle size and the following chemistries:

- Orbit 100 C18: 3.5, 5 & 10 µm**
- Orbit 100 C8: 3.5, 5 & 10 µm**
- Orbit 100 C4: 3.5, 5 & 10 µm**
- Orbit 100 CN: 5 µm**

Orbit	Technical Data
pore size	100 Å
pore volume	0.9 cm <sup>3</sup> /g
surface area (BET)	340 m <sup>2</sup> /g
particle shape	spherical
silica purity	> 99.999 %
endcapping	complete
carbon contents	C4: 7 %C C8: 12 %C C18: 19 %C

**PART-No.**

Column length [mm]    .    .    .    .    .    .    .    .    .

Column-ID [mm]    .    .    .    .    .    .    .    .    .

Materialcode    .    .    .    .    .    .    .    .    .

N: new, R: refill

**Example:** HPLC-column (new) 250 x 4.6 mm  
Orbit C18 5 µm => **Part-No.: 250.4.6.0901.N**

**Materialcode**

Orbit 100 C18 3.5 µm = **0902**

Orbit 100 C18 5 µm = **0901**

Orbit 100 C18 10 µm = **0906**

Orbit 100 C8 3.5 µm = **0912**

Orbit 100 C8 5 µm = **0911**

Orbit 100 C8 10 µm = **0916**

Orbit 100 C4 3.5 µm = **0922**

Orbit 100 C4 5 µm = **0921**

Orbit 100 C4 10 µm = **0926**

Orbit 100 CN 5 µm = **0875**

length x ID [mm]	3 µm		5 & 10 µm	
	New	Refill	New	Refill
50 x 2.1	154.--	113.--	154.--	113.--
100 x 2.1	192.--	151.--	192.--	151.--
125 x 2.1	213.--	172.--	213.--	172.--
150 x 2.1	225.--	185.--	225.--	185.--
200 x 2.1	238.--	200.--	238.--	200.--
250 x 2.1	248.--	205.--	248.--	205.--
50 x 3.0	149.--	121.--	149.--	121.--
100 x 3.0	179.--	149.--	169.--	139.--
125 x 3.0	185.--	151.--	174.--	141.--
150 x 3.0	200.--	167.--	185.--	152.--
200 x 3.0	210.--	175.--	190.--	155.--
250 x 3.0	215.--	177.--	197.--	159.--
20 x 4.0	130.--	108.--	109.--	87.--
33 x 4.0	143.--	119.--	119.--	95.--
40 x 4.0	154.--	132.--	128.--	106.--
50 x 4.0	162.--	136.--	134.--	108.--
60 x 4.0	169.--	142.--	141.--	114.--
75 x 4.0	176.--	148.--	147.--	119.--
100 x 4.0	183.--	154.--	152.--	123.--
125 x 4.0	189.--	159.--	157.--	127.--
150 x 4.0	195.--	163.--	163.--	131.--
200 x 4.0	207.--	175.--	172.--	140.--
250 x 4.0	217.--	185.--	181.--	149.--
300 x 4.0	246.--	203.--	203.--	160.--
20 x 4.6	137.--	115.--	114.--	92.--
33 x 4.6	150.--	126.--	125.--	101.--
40 x 4.6	162.--	140.--	135.--	113.--
50 x 4.6	170.--	144.--	141.--	115.--
60 x 4.6	178.--	151.--	148.--	121.--
75 x 4.6	185.--	157.--	154.--	126.--
100 x 4.6	192.--	163.--	160.--	131.--
125 x 4.6	198.--	168.--	165.--	135.--
150 x 4.6	205.--	173.--	171.--	139.--
200 x 4.6	217.--	185.--	181.--	149.--
250 x 4.6	227.--	195.--	189.--	157.--
300 x 4.6	265.--	222.--	219.--	176.--

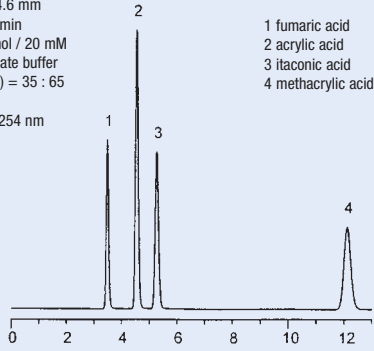
all prices in EUR excluding VAT



## PerfectSil® 100 C8-3

### Carbonic Acids

Column: PerfectSil® C8-3  
150 x 4.6 mm  
Flow: 1.0 ml/min  
Eluent: methanol / 20 mM  
phosphate buffer  
(pH 7.0) = 35 : 65  
Temperature: 40 °C  
Detection: UV @ 254 nm  
Inj.-Volume: 1 µL

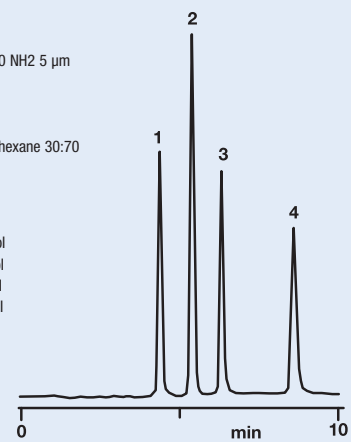


## PerfectSil® 100 NH2

### Tocopherol

Column: PerfectSil® 100 NH2 5 µm  
250 x 4.6 mm  
Flow: 1.0 ml/min  
Inj. volume: 1.0 µl  
Eluent: ethylacetate : hexane 30:70  
Temperature: 30 °C  
Detection: UV @ 290 nm

1 α-tocopherol  
2 β-tocopherol  
3 γ-tocopherol  
4 δ-tocopherol



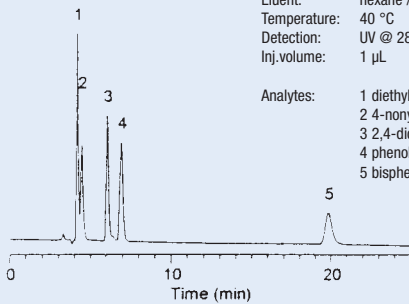
## PerfectSil® 100 CN-3

### Separation of Phenoles

#### normal-phase mode

Column: PerfectSil® CN-3  
250 x 4.6 mm  
Flow: 1.0 ml/min  
Eluent: hexane / ethanol = 90/10  
Temperature: 40 °C  
Detection: UV @ 280 nm  
Inj. volume: 1 µL

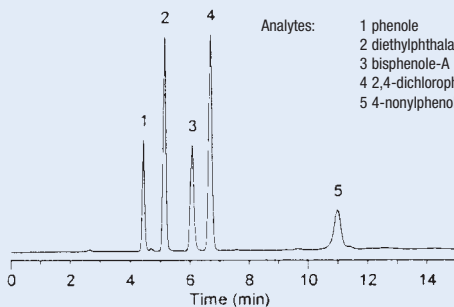
Analytes: 1 diethylphthalate  
2 4-nonylphenole  
3 2,4-dichlorophenole  
4 phenole  
5 bisphenole-A



#### reversed-phase-mode

Column: PerfectSil® CN-3  
250 x 4.6 mm  
Flow: 1.0 ml/min  
Eluent: acetonitrile / 20 mM phos-  
phate-buffer (pH 3.0) = 45/55  
Temperature: 40 °C  
Detection: UV @ 280 nm  
Inj. volume: 1 µL

Analytes: 1 phenole  
2 diethylphthalate  
3 bisphenole-A  
4 2,4-dichlorophenole  
5 4-nonylphenole

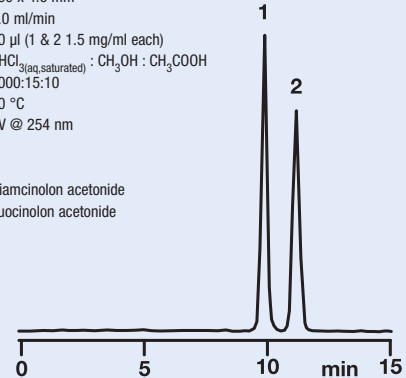


## PerfectSil® 100 Si

### Fluocinolon Acetonide

Column: PerfectSil® 100 Si 5 µm  
150 x 4.6 mm  
Flow: 1.0 ml/min  
Inj. volume: 20 µl (1 & 2 1.5 mg/ml each)  
Eluent: CHCl<sub>3</sub>(aq, saturated) : CH<sub>3</sub>OH : CH<sub>3</sub>COOH  
1000:15:10  
Temperature: 30 °C  
Detection: UV @ 254 nm

1 triamcinolon acetonide  
2 fluocinolon acetonide

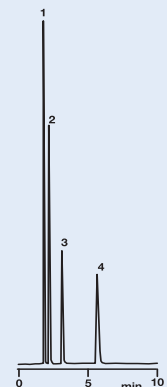


## PerfectSil® 120 ODS-2

### Nitrosoamine-derivatives

Column: PerfectSil® 120 ODS-2 5 µm  
150 x 4.6 mm  
Flow: 1.0 ml/min  
Eluent: CH<sub>3</sub>CN / 10 mM KH<sub>2</sub>PO<sub>4</sub>  
60 / 40  
Temperature: 40 °C  
Detection: UV @ 230 nm

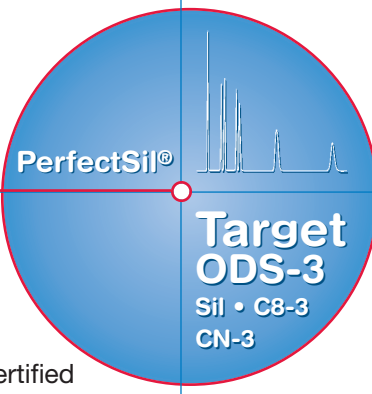
1 N-nitrosodimethylamine  
2 N-nitrosodiethylamine  
3 N-nitrosodi-n-propylamine  
4 N-nitrosodiphenylamine



# PerfectSil® Target

## Excellent Performance + Peak Symmetry = Aim Achieved

- ➔ Chemistries: Sil • ODS-3 • C8-3 • CN-3
- ➔ Available with 3 µm & 5 µm particle size
- ➔ Highly pure silica: 99,999 %
- ➔ High mechanical & chemical resistibility
- ➔ Elaborated endcapping
- ➔ Excellent peak symmetry even for basic compounds
- ➔ Exquisite reproducibility
- ➔ Each column tested individually
- ➔ Particularly suitable for LC/MS
- ➔ Manufacturing process ISO 9001-certified
- ➔ Ships with HPLC-Column Quality Certificate including authentic test-chromatogram

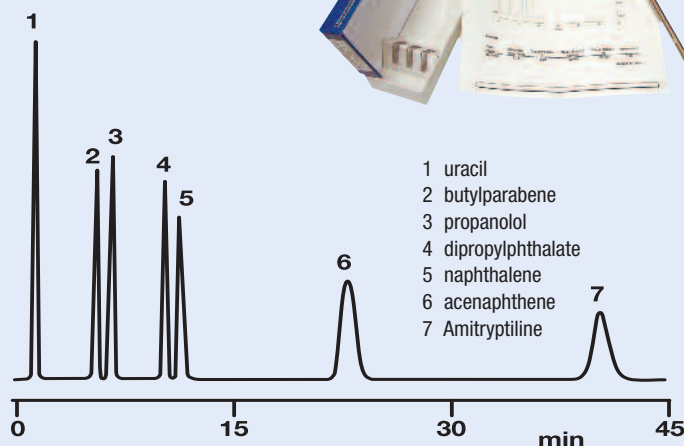


TECHNICAL DATA	ODS-3
chemistry	C18
pore width	100 Å
pore volume	1.1 cm <sup>3</sup> /g
surface area (BET)	450 m <sup>2</sup> /g
carbon load	17 %
silica purity	> 99.999 %
metal impurities	< 5 ppm

### Amitriptyline

PerfectSil Target ODS-3 5 µm 200 x 4.6 mm

Flow: 1.5 ml/min  
 Inj. volume: 5 µl  
 Eluent: methanol / 20 mM phosphate buffer  
 pH=7.0  
 Temperature: 40 °C  
 Detection: UV @ 254 nm



- 1 uracil
- 2 butylparabene
- 3 propanolol
- 4 dipropylphthalate
- 5 naphthalene
- 6 acenaphthene
- 7 Amitriptyline

length x ID [mm]	3 µm		5 µm	
	New	Refill	New	Refill
50 x 2.1	195.--	154.--	154.--	113.--
100 x 2.1	251.--	210.--	192.--	151.--
125 x 2.1	256.--	215.--	213.--	172.--
150 x 2.1	270.--	230.--	225.--	185.--
200 x 2.1	287.--	249.--	238.--	200.--
250 x 2.1	307.--	264.--	248.--	205.--
50 x 3.0	169.--	141.--	149.--	121.--
100 x 3.0	192.--	162.--	179.--	149.--
125 x 3.0	200.--	167.--	185.--	151.--
150 x 3.0	210.--	177.--	200.--	167.--
200 x 3.0	230.--	195.--	210.--	175.--
250 x 3.0	243.--	205.--	215.--	177.--
20 x 4.0	151.--	129.--	130.--	108.--
33 x 4.0	167.--	143.--	143.--	119.--
40 x 4.0	179.--	157.--	154.--	132.--
50 x 4.0	189.--	163.--	162.--	136.--
60 x 4.0	197.--	170.--	169.--	142.--
75 x 4.0	205.--	177.--	176.--	148.--
100 x 4.0	213.--	184.--	183.--	154.--
125 x 4.0	220.--	190.--	189.--	159.--
150 x 4.0	227.--	195.--	195.--	163.--
200 x 4.0	241.--	209.--	207.--	175.--
250 x 4.0	253.--	221.--	217.--	185.--
300 x 4.0	287.--	244.--	246.--	203.--
20 x 4.6	160.--	138.--	137.--	115.--
33 x 4.6	175.--	151.--	150.--	126.--
40 x 4.6	189.--	167.--	162.--	140.--
50 x 4.6	198.--	172.--	170.--	144.--
60 x 4.6	208.--	181.--	178.--	151.--
75 x 4.6	216.--	188.--	185.--	157.--
100 x 4.6	224.--	195.--	192.--	163.--
125 x 4.6	231.--	201.--	198.--	168.--
150 x 4.6	239.--	207.--	205.--	173.--
200 x 4.6	253.--	221.--	217.--	185.--
250 x 4.6	265.--	233.--	227.--	195.--
300 x 4.6	289.--	246.--	265.--	222.--

### PART-No.

Column length [mm] ●  
 Column-ID [mm] ●  
 Materialcode ●  
 N: new, R: refill ●

**Example:** HPLC-column (new) 200 x 4.6 mm  
 PerfectSil Target ODS-3 5 µm  
 => **200.4.6.0801.N**

### Materialcode

PerfectSil Target...  
 Sil 100 3 µm = 0803  
 Sil 100 5 µm = 0800  
 ODS-3 3 µm = 0802  
 ODS-3 5 µm = 0801  
 ODS-3 10 µm = 0806  
 C8-3 3 µm = 0812  
 C8-3 5 µm = 0811  
 CN-3 5 µm = 0818

# PerfectSil® Target HD

PerfectSil®  
Target

## Reversed-Phase with Extended pH-Stability

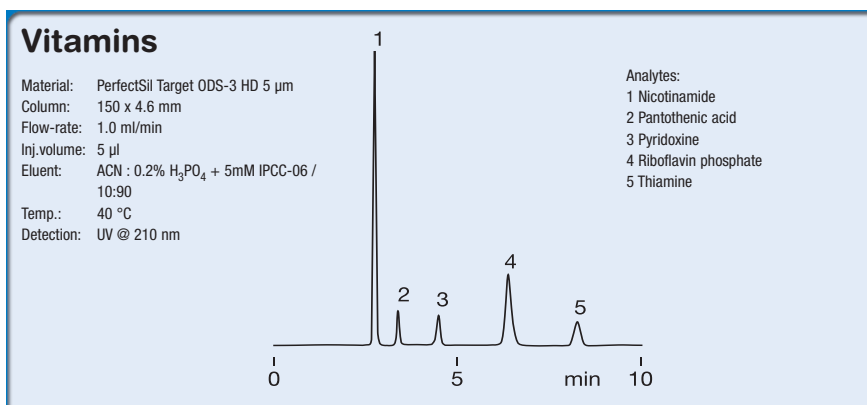
Some applications in modern reversed-phase-HPLC require pH-conditions, under which most of today's silica-based stationary phase materials show degradation. Having those applications in mind, we developed **PerfectSil® Target HD**, enabling permanent operation under conditions from pH = 2-11 without any noticeable loss of performance or sign of degradation.

**PerfectSil® Target HD** is based upon the same highly pure silica skeleton as **PerfectSil® Target**, which is surface-shielded against basic and acidic degradation by a special pre-treatment and a complete multiple-step endcapping procedure. The uniform reversed-phase chemistry in combination with its fully accessible 100 Å-pore-system, an optimized packing procedure and our state-of-the-art stainless-steel-column-hardware enables us to produce and deliver HPLC-columns at the highest level of quality.

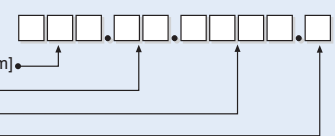
- ➔ Elaborated endcapping
- ➔ Maximum shielding of silica-surface
- ➔ pH-Stable from pH = 2-11
- ➔ Excellent chemical stability
- ➔ Extended usability range
- ➔ Outstanding reproducibility
  - between batch-to-batch and column-to-column
- ➔ Excellent peak symmetries for basic substances
- ➔ Enables to employ extremely steep gradients

Technical Data	Target HD
pore size	100 Å
pore volume	1.1 cm <sup>3</sup> /g
surface area (BET)	450 m <sup>2</sup> /g
carbon contents	ODS-3 HD: 25.0 % C8 HD: 15.0 %
pH-stability	pH 2-11
endcapping	complete
silica purity	> 99.999 %
metal impurities	< 5 ppm

Length x ID [mm]	3 µm		5/10 µm	
	New	Refill	New	Refill
50 x 2.1	195.--	154.--	154.--	113.--
100 x 2.1	251.--	210.--	192.--	151.--
125 x 2.1	256.--	215.--	213.--	172.--
150 x 2.1	270.--	230.--	225.--	185.--
200 x 2.1	287.--	249.--	238.--	200.--
250 x 2.1	307.--	264.--	248.--	205.--
50 x 3.0	169.--	141.--	149.--	121.--
100 x 3.0	192.--	162.--	179.--	149.--
125 x 3.0	200.--	167.--	185.--	151.--
150 x 3.0	210.--	177.--	200.--	167.--
200 x 3.0	230.--	195.--	210.--	175.--
250 x 3.0	243.--	205.--	215.--	177.--
20 x 4.0	151.--	129.--	130.--	108.--
33 x 4.0	167.--	143.--	143.--	119.--
40 x 4.0	179.--	157.--	154.--	132.--
50 x 4.0	189.--	163.--	162.--	136.--
60 x 4.0	197.--	170.--	169.--	142.--
75 x 4.0	205.--	177.--	176.--	148.--
100 x 4.0	213.--	184.--	183.--	154.--
125 x 4.0	220.--	190.--	189.--	159.--
150 x 4.0	227.--	195.--	195.--	163.--
200 x 4.0	241.--	209.--	207.--	175.--
250 x 4.0	253.--	221.--	217.--	185.--
300 x 4.0	287.--	244.--	246.--	203.--
20 x 4.6	160.--	138.--	137.--	115.--
33 x 4.6	175.--	151.--	150.--	126.--
40 x 4.6	189.--	167.--	162.--	140.--
50 x 4.6	198.--	172.--	170.--	144.--
60 x 4.6	208.--	181.--	178.--	151.--
75 x 4.6	216.--	188.--	185.--	157.--
100 x 4.6	224.--	195.--	192.--	163.--
125 x 4.6	231.--	201.--	198.--	168.--
150 x 4.6	239.--	207.--	205.--	173.--
200 x 4.6	253.--	221.--	217.--	185.--
250 x 4.6	265.--	233.--	227.--	195.--
300 x 4.6	289.--	246.--	265.--	222.--



**PART-NO.**



Column length [mm] →  
 Column-ID [mm] →  
 Materialcode →  
 N: new, R: refill

**Materialcode**

PerfectSil Target ODS-3 HD	3 µm =	<b>0833</b>
PerfectSil Target ODS-3 HD	5 µm =	<b>0831</b>
PerfectSil Target ODS-3 HD	10 µm =	<b>0830</b>
PerfectSil Target C8 HD	3 µm =	<b>0843</b>
PerfectSil Target C8 HD	5 µm =	<b>0845</b>

**Example:** HPLC-column (new) 150x4.0 mm PerfectSil Target ODS-3 HD 3 µm  
 => **Part-No.: 150.4.0.0833.N**





# MZ-Aqua Perfect

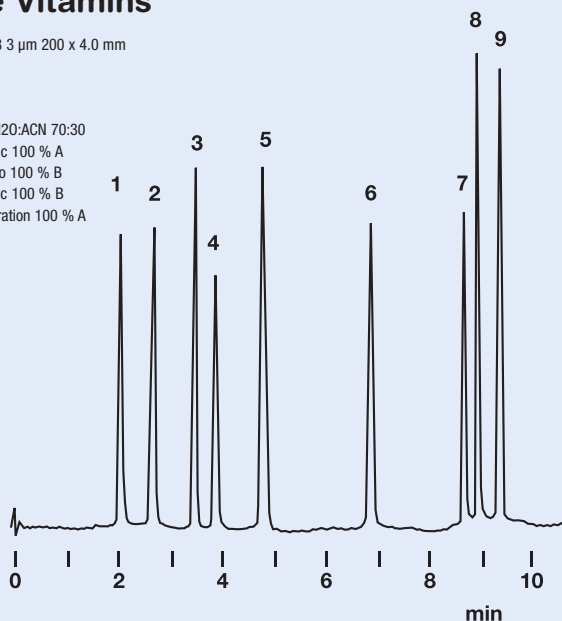
## C18 for up to 100% Aqueous Applications

- Elaborate C18-chemistry combined with new hydrophilic endcapping
- Compatible with up to 100% aqueous eluents
- Enables design of extremely steep gradients
- Short recalibration time
- Excellent reproducibility
- Highly pure porous base silica
- Spherical particles with low polydispersity
- High chemical and mechanical resistibility
- Manufacturing process fully ISO 9001-certified
- Low backpressure
- High durability

Technical Data	
chemistry	C18
particle size	3/5/7/10 µm
particle shape	spherical
pore size	120 Å
surface area (BET)	310 m <sup>2</sup> /g
carbon content	15 %

### Water Soluble Vitamins

Column: MZ-Aqua Perfect C18 3 µm 200 x 4.0 mm  
 Flow: 1.25 ml/min  
 Inj. volume: 10 µl  
 Eluent: A: 0,05 M H<sub>3</sub>PO<sub>4</sub>  
 B: 0,05 M H<sub>3</sub>PO<sub>4</sub> in H<sub>2</sub>O:ACN 70:30  
 Gradient: 0-3 min isocratic 100 % A  
 3-6 min linear to 100 % B  
 6-12 min isocratic 100 % B  
 12-15 min equilibration 100 % A  
 Temperature: ambient  
 Detection: UV @ 230 nm



#### analytes:

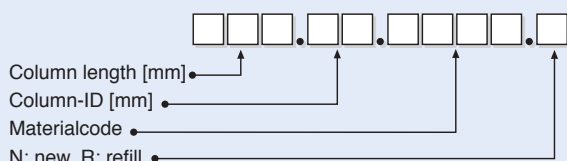
- 1 thiamin (B1)
- 2 ascorbic acid (C)
- 3 nicotinic acid (B)
- 4 nicotinamide (B3)
- 5 pyridoxal
- 6 pyridoxine (B6)
- 7 folic acid
- 8 cyanocobalmine (B12)
- 9 riboflavine (B2)

length x ID [mm]	3 µm New Refill	5/7/10 µm New Refill
50 x 2.1	195.-- 154.--	154.-- 113.--
100 x 2.1	251.-- 210.--	192.-- 151.--
125 x 2.1	256.-- 215.--	213.-- 172.--
150 x 2.1	270.-- 230.--	225.-- 185.--
200 x 2.1	287.-- 249.--	238.-- 200.--
250 x 2.1	307.-- 264.--	248.-- 205.--
50 x 3.0	169.-- 141.--	149.-- 121.--
100 x 3.0	192.-- 162.--	169.-- 139.--
125 x 3.0	200.-- 167.--	174.-- 141.--
150 x 3.0	210.-- 177.--	185.-- 152.--
200 x 3.0	230.-- 195.--	190.-- 155.--
250 x 3.0	243.-- 205.--	197.-- 159.--
20 x 4.0	151.-- 129.--	116.-- 94.--
33 x 4.0	167.-- 143.--	128.-- 104.--
40 x 4.0	179.-- 157.--	138.-- 116.--
50 x 4.0	189.-- 163.--	145.-- 119.--
60 x 4.0	197.-- 170.--	151.-- 124.--
75 x 4.0	205.-- 177.--	157.-- 129.--
100 x 4.0	213.-- 184.--	164.-- 135.--
125 x 4.0	220.-- 190.--	169.-- 139.--
150 x 4.0	227.-- 195.--	174.-- 152.--
200 x 4.0	241.-- 209.--	185.-- 153.--
250 x 4.0	253.-- 221.--	194.-- 162.--
300 x 4.0	287.-- 244.--	222.-- 179.--
20 x 4.6	160.-- 138.--	124.-- 102.--
33 x 4.6	175.-- 151.--	135.-- 111.--
40 x 4.6	189.-- 167.--	146.-- 124.--
50 x 4.6	198.-- 172.--	153.-- 127.--
60 x 4.6	208.-- 181.--	160.-- 133.--
75 x 4.6	216.-- 188.--	167.-- 139.--
100 x 4.6	224.-- 195.--	173.-- 144.--
125 x 4.6	231.-- 201.--	179.-- 149.--
150 x 4.6	239.-- 207.--	185.-- 153.--
200 x 4.6	253.-- 221.--	196.-- 164.--
250 x 4.6	265.-- 233.--	205.-- 173.--
300 x 4.6	289.-- 246.--	246.-- 203.--

### APPLICATIONS

tricyclic antidepressants • theophylline • water-soluble vitamins • organic acids • catecholamines • caffeine • all other C18 applications

### PART-No.



**Example:** HPLC-column (new) 250 x 4.6 mm  
 MZ-AquaPerfect 5 µm  
 => **250.4.6.0612.N**

**Materialcode MZ-AquaPerfect**  
 3 µm = 0610  
 5 µm = 0612  
 7 µm = 0613  
 10 µm = 0614

# PerfectBond®

## State-of-the-Art- + Best Value-Replacement for Classical Applications

Our recently introduced product-line **PerfectBond™** is based on a series of selected state-of-the-art silica (99.999 % purity), to provide modern replacements for traditional stationary phases. The **PerfectBond™**-product-range is continuously extended, enabling us to offer our customers reliable and cost-effective replacements for various well-known classical stationary phases.

Classical stationary phases like  $\mu$ Bondapak™ are still frequently used for many applications. Mainly because of their unique selectivity and retentivity - and despite some disadvantages like the high back-pres-

sure resulting from their irregularly shaped particle morphology. For  $\mu$ Bondapak™ we offer **PerfectBond™ C18** as excellent replacement: based on spherical and totally porous base silica, all chromatographic performance values are widely enhanced.

**PerfectBond™** is based on an ultra pure, state-of-the-art-silica, which is absolutely spherical and chemically modified under ISO-9001-certified conditions. We carefully select base silica, chemistry and carbon load to get an optimum match of the classical material. This enables us to deliver replacements for traditional stationary phases with

the same retentivity and selectivity as the original - in most cases with lower back-pressure and enhanced efficiency plus longer column lifetime due to higher mechanical and chemical resistibility.

Replace your classic column with a **PerfectBond™-HPLC-Column** and even cost-efficiency will benefit from longer column-lifetime and guaranteed refill-service.

Our range of **PerfectBond™-HPLC-columns** is continuously growing. Please ask us, when we can provide a state-of-the-art replacement for your "classical" HPLC-column.

PerfectBond™-Series								Technical Data			
	particle size	code	price group	pore size	surface area	chemistry	carbon contents	endcapping	particle shape	silica purity	
PerfectBond ODS-H	5 $\mu$ m	1195	E	120 Å	170 m <sup>2</sup> /g	C18	10.0 %	+	spherical	99.999 %	
PerfectBond ODS-HD	3 $\mu$ m	1200	F	150 Å	320 m <sup>2</sup> /g	C18	18.5 %	+	spherical	99.999 %	
PerfectBond ODS-HD	5 $\mu$ m	1198	E	150 Å	320 m <sup>2</sup> /g	C18	18.5 %	+	spherical	99.999 %	
PerfectBond C18 ODS	5 $\mu$ m	1190	E	125 Å	300 m <sup>2</sup> /g	C18	10.0 %	+	spherical	99.999 %	
PerfectBond C18*	10 $\mu$ m	1011	E	125 Å	300 m <sup>2</sup> /g	C18	10.0 %	+	spherical	99.999 %	
* Replacement for $\mu$ Bondapak™ C18 10 $\mu$ m											
PerfectBond C8-HD	3 $\mu$ m	1202	F	150 Å	320 m <sup>2</sup> /g	C8	10.5 %	+	spherical	99.999 %	
PerfectBond C8-HD	5 $\mu$ m	1204	E	150 Å	320 m <sup>2</sup> /g	C8	10.5 %	+	spherical	99.999 %	
PerfectBond C8-H	5 $\mu$ m	1192	E	120 Å	170 m <sup>2</sup> /g	C8	6.5 %	+	spherical	99.999 %	
PerfectBond C8	5 $\mu$ m	1018	E	125 Å	300 m <sup>2</sup> /g	C8	7.0 %	+	spherical	99.999 %	
PerfectBond C1	3 $\mu$ m	1180	F	120 Å	170 m <sup>2</sup> /g	C1	5.0 %	-	spherical	99.999 %	
PerfectBond C1	5 $\mu$ m	1182	E	120 Å	170 m <sup>2</sup> /g	C1	5.0 %	-	spherical	99.999 %	
PerfectBond Ph	5 $\mu$ m	1220	E	120 Å	200 m <sup>2</sup> /g	Phenyl	6.0 %	+	spherical	99.999 %	
PerfectBond Ph-H	5 $\mu$ m	1222	E	120 Å	170 m <sup>2</sup> /g	Phenyl	5.0 %	+	spherical	99.999 %	

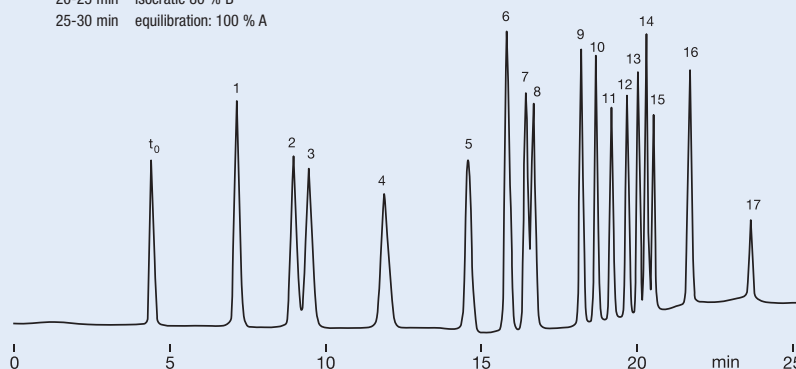
refer to page 3 for part-no. and price

### Chlorophenoles

column: PerfectBond ODS-HD 5  $\mu$ m  
250 x 4.0 mm  
flow rate: 1 ml/min  
temperature: 30 °C  
detection: UV @ 280 nm  
eluent: A: 50 % methanol/H<sub>2</sub>O + 0.1 % H<sub>3</sub>PO<sub>4</sub>  
B: 100 % methanol  
gradient: 0-10 min isocratic 100 % A  
10-20 min linear to 80 % B  
20-25 min isocratic 80 % B  
25-30 min equilibration: 100 % A

**Analytes:**

1	2-chlorophenole	9	3,5-dichlorophenole
2	4-chlorophenole	10	2,3,6-trichlorophenole
3	3-chlorophenole	11	2,3,4-trichlorophenole
4	2,6-dichlorophenole	12	2,4,6-trichlorophenole
5	2,3-dichlorophenole	13	2,4,5-trichlorophenole
6	2,5-dichlorophenole	14	2,3,5-trichlorophenole
7	2,4-dichlorophenole	15	2,3,5,6-tetrachlorophenole
8	3,4-dichlorophenole	16	2,3,4,5-tetrachlorophenole
		17	pentachlorophenole



- ➡ Spherical, porous and ultra pure state-of-the-art silica
- ➡ Silica purity > 99,999 %
- ➡ Low polydispersity => high efficiency + small back-pressure
- ➡ High chemical and mechanical resistibility => long column lifetime
- ➡ Manufacturing process ISO-9001-certified
- ➡ High reproducibility from batch-to-batch & column-to-column
- ➡ Excellent cost-/performance ratio + guaranteed refill-service
- ➡ Please ask us for the optimum **PerfectBond™**-replacement for your classical stationary phase media:  
**phone +49-6131-68 66 19**

High Performance Packings by  
EKA CHEMICALS AB / Sweden



**Kromasil®**  
High performance  
chromatography silica

Best value for your money



**Kromasil®** is produced in multi-kilogram lots with excellent batch-to-batch reproducibility. Thanks to its outstanding performance combined with great price, **Kromasil®** is first choice for the whole range of applications in modern HPLC.

Kromasil® HPLC-columns		100 C1 • C4 • C8 • C18 • NH <sub>2</sub>				60 SIL • 100 SIL			
Semiprep & Prep	Dimension	5/7/10 µm		13/16 µm		5/7/10 µm		13/16 µm	
		New	Refill	New	Refill	New	Refill	New	Refill
	4 x 8 mm	167.--	114.--	159.--	105.--	167.--	114.--	159.--	105.--
125 x 8 mm	256.--	202.--	243.--	188.--	224.--	171.--	202.--	149.--	
250 x 8 mm	371.--	297.--	333.--	259.--	320.--	246.--	283.--	207.--	
250 x 10 mm	471.--	390.--	436.--	355.--	398.--	318.--	369.--	288.--	
50 x 20 mm	431.--	323.--	409.--	302.--	431.--	323.--	409.--	302.--	
250 x 20 mm	1,445.--	1,305.--	1,021.--	881.--	994.--	866.--	923.--	782.--	

Columns with ID 30, 40 & 50 mm available: price upon request.

## Kromasil®-Bulk Media

60 SIL & 100 SIL					€	C1   C4   C8   C18   NH <sub>2</sub>   CN   Diol					€
	10 g	50 g	100 g	> 100 g			10 g	50 g	100 g	> 100 g	
3.5 µm	249.00	1,136.00	2,054.00	inquire		7 µm	159.80	685.50	1,177.00	inquire	
5 µm	149.40	693.00	1,277.00	inquire		10 µm	102.40	463.50	830.00	inquire	
7 µm	100.00	450.50	802.00	inquire		13 µm	102.40	463.50	830.00	inquire	
10 µm	69.50	637.00	579.00	inquire		16 µm	81.70	369.50	661.00	inquire	
13 µm	69.50	637.00	579.00	inquire		25 µm	75.00	337.00	595.00	inquire	
16 µm	57.30	259.00	462.00	inquire							
25 µm	51.80	233.50	416.00	inquire							

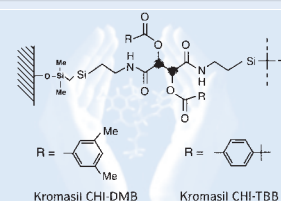
Further chemistries and particle sizes available. Please ask for an individual quotation, if you need larger quantities of **Kromasil®**-bulk media.

## Kromasil® Chiral • TBB & DMB • CelluCoat™ • AmyCoat™

Kromasil® Chiral is based upon an ultra stable silica skeleton. **CelluCoat™** and **AmyCoat™** are chiral functionalised via a covalently bound polymer layer of tris-(3,5-dimethylphenyl)carbonyl cellulose (**CelluCoat™**) respectively tris-(3,5-dimethylphenyl)carbonyl amylose (**AmyCoat™**). The excellent chemical and mechanical stability of these recently developed materials enables the operation at high flow rates in combination with high efficiencies.

tris-(3,5-dimethylphenyl)carbonyl cellulose      tris-(3,5-dimethylphenyl)carbonyl amylose

Kromasil® Chiral TBB and DMB are chiral modified by the following covalently bound and highly crosslinked polymer (CHI-DMB oder CHI-TBB):



**Kromasil Chiral Test-Kit 50 x 4.6 mm** € 3,285.--

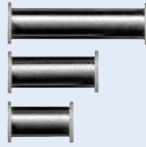
1 column each: DMB 5 µm • TBB 5 µm • AmyCoat 3 µm • CelluCoat 3 µm





length x ID	3 µm	5 µm	10 µm	16 µm
50 x 4.6 mm	1,332.--	1,195.--	1,099.--	1,099.--
150 x 4.6 mm	1,598.--	1,440.--	1,325.--	1,325.--
250 x 4.6 mm	1,598.--	1,440.--	1,325.--	1,325.--

Chiral Bulk-media / preparative columns available: ☎

all prices in EUR excluding VAT

## Guard Columns

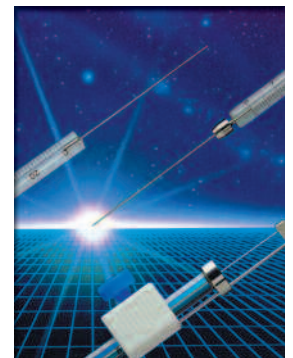
Guard Cartridges Analytical/Narrow-Bore	Art. No.	price/€
<p>MZ-guard cartridges for analytical/narrow-bore HPLC-columns are available in dimensions with 3 different lengths and 4 different ID's. Please check below for suitable cartridge holders.</p> <p><b>Guard cartridges</b> 5 pieces see below  113,--</p> <p>ID: 2,1 mm, 3,0 mm, 4,0 mm und 4,6 mm Length: 5 mm, 10 mm und 20 mm</p> <p><b>Part-Number for Cartridges</b></p> <p>VK. <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p> <p>Column length [mm] → Column-ID [mm] → Materialcode →</p> <p><b>example:</b> 1 pack with 5 cartridges 20 x 4.0 mm (L x ID) filled with Inertsil ODS-2 5 µm (materialcode 2010; see page 4ff) =&gt; part-no.: VK.20.4,0.2010</p>		

Cartridge Holder Analytical/Narrow-Bore	Art. No.	price/€
<b>suitable for MZ-columns ID 2.1, 3.0, 4.0 &amp; 4.6 mm</b>		
cartridge holder <b>integrated</b> suitable for cartridges of 20 & 10 mm length)	VI 74000	 82.--
cartridge holder <b>integrated</b> suitable for cartridges of 5 mm length)	VI 74005	68.--
<b>free standing</b> cartridge holder for <b>standard fitting</b> (suitable for cartridges of 20 mm length)	FG 71020	 62.--
<b>free standing</b> cartridge holder for <b>standard fitting</b> (suitable for cartridges of 10 mm length)	FG 71010	 62.--
<b>free standing</b> cartridge holder for <b>standard fitting</b> (suitable for cartridges of 5 mm length)	FG 71005	 62.--

## HPLC-Syringes



Exmire® HPLC-High Quality Sampling Syringes						
volume	smallest amount		Code		price/€	
5 µl	0.1	µl	MSR	05	36.--	
10 µl	0.2	µl	MSR	10	27.--	
25 µl	0.5	µl	MSR	25	27.--	
50 µl	1.0	µl	MSR	50	28.--	
100 µl	2.0	µl	MSR	100	33.--	
250 µl	5.0	µl	MSR	250	35.--	
500 µl	10.0	µl	MSR	500	42.--	





We offer the complete range of RHEODYNE products. The following list is based upon most frequently requested parts. Further prices on request.








Part-no.	Product	Price/€
RH7010	sample injection valve <i>rear loading, for analytical HPLC</i>	783.--
RH7010-039	rotor seal Vespel for 7010/7000/7040	111.--
RH7010-040	stator for 7010/7125	328.--
RH7010-071	rotor seal Tefzel for 7010/7000/7040	101.--
RH7010-999	RheBuild Kit for 7010	118.--
RH7020	sample loop 5 µl	51.--
RH7021	sample loop 10 µl	50.--
RH7022	sample loop 20 µl	45.--
RH7023	sample loop 50 µl	49.--
RH7024	sample loop 100 µl	50.--
RH7025	sample loop 200 µl	53.--
RH7026	sample loop 500 µl	60.--
RH7027	sample loop 1 ml	69.--
RH7028	sample loop 2 ml	101.--
RH7029	sample loop 5 ml	174.--
RH7000	switching valve	734.--
RH7030	3-way switching valve	724.--
RH7040	4-way switching valve	783.--
RH7060	6-positions switching valve	815.--
RH7125	sample injector	1,362.--
RH7725	sample injector with MBB <i>front-loading, follow-up of 7125</i>	1,133.--
RH7725i	sample injector with position sensing switch and MBB	1,241.--
RH8125	syringe loading injector <i>front-loading, for micro-HPLC</i>	1,553.--
RH8125-038	rotor seal for 8125/8126	124.--
RH7520	syringe loading injector <i>front-loading, for micro-HPLC</i>	1,441.--
RH7520-999	RheBuilt Kit for 7520/7526	280.--
RH7410	sample injection valve <i>rear-loading, for micro-HPLC</i>	1,441.--
RH7413	sample injection valve <i>rear-loading, for micro-HPLC</i>	1,441.--
RH3725i	sample injector PEEK <i>front-loading, preparative scale</i>	1,597.--
RH3725i-038	sample injector stainless steel <i>front-loading, preparative scale</i>	1,762.--
RH9010	sample injection valve PEEK <i>rear-loading, for analytical HPLC</i>	1,064.--
RH9725	sample injector PEEK with MBB (ex-9125) <i>front-loading, for analytical HPLC</i>	1,133.--
RH9055-020	sample loop PEEK 5 µl	36.--
RH9055-021	sample loop PEEK 10 µl	39.--
RH9055-022	sample loop PEEK 20 µl	39.--
RH9055-023	sample loop PEEK 50 µl	39.--
RH9055-024	sample loop PEEK 100 µl	43.--
RH9055-025	sample loop PEEK 200 µl	60.--
RH9055-026	sample loop PEEK 500 µl	63.--
RH9055-027	sample loop PEEK 1 ml	84.--
RH9055-028	sample loop PEEK 2 ml	117.--
RH7315	column inlet filter micro	131.--
RH7315-010	replace filter (5 pieces)	68.--
RH7335	column inlet filter analytical	131.--
RH7335-010	replace filter (5 pieces)	68.--



all prices in EUR excluding VAT

## Tools & Accessories - PEEK / Biocompatible

# HPLC-Accessories

Part No.	Product			Price/€
AP0313	PEEK-tubing	AD 1/16" x 0.13 mm ID	3 m	18.--
AP0317		AD 1/16" x 0.17 mm ID	3 m	18.--
AP0325		AD 1/16" x 0.25 mm ID	3 m	18.--
AP0350		AD 1/16" x 0.50 mm ID	3 m	18.--
AP0375		AD 1/16" x 0.75 mm ID	3 m	18.--
AP0316		AD 1/8" x 1.60 mm ID	1 m	17.--
AP0513	PEEK-tubings kit	AD 1/16" x 0.13 mm ID	50, 100, 200 mm	25.--
AP0517	- precut -	AD 1/16" x 0.17 mm ID	50, 100, 200 mm	25.--
AP0525	5 pieces of each length	AD 1/16" x 0.25 mm ID	50, 100, 200 mm	25.--
AP0550		AD 1/16" x 0.50 mm ID	50, 100, 200 mm	25.--
AP0575		AD 1/16" x 0.75 mm ID	50, 100, 200 mm	25.--
AP5001	 fingertight-fittings	PEEK	10 pieces	50.--
AP5101	 coupler universal fingertight 0.25mm ID	PEEK	1 piece	19.--
AP5201	 union PEEK (incl. 2 fingertight-fittings)	1/16"	1 Set	18.--
AP5301	 tee-piece PEEK (incl. 3 fingertight-fittings)	1/16"	1 Set	52.--
AP5401	 cross PEEK (incl. 4 fingertight-fittings)	1/16"	1 Set	63.--
AP5601	 plug PEEK fingertight	1/16"	1 piece	4.--
AN5501	 plug Nylon	1/16"	10 pieces	7.--
AN5510			100 pieces	39.--

AR6200 15.--  
Clean-Cut for cutting  
polymeric tubings



AR6201 2.--  
Replacement blade for  
Clean-Cut

AR6300 7.50  
Guillotine-Cutter



AR6301 2.75  
Replacement blade for  
Guillotine-Cutter

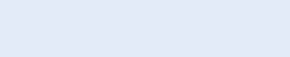
AP7500 20.50  
Last-drop mobile  
phase-filter with  
2.5 µm  
PTFE-  
Frit



elbow for PEEK-tubing  
AP0901 90 ° 1.50



AP1801 180 ° 1.50



## Tools & Accessories - Stainless Steel

Part No.	Product			Price/€
AS0301	stainless steel tubing	AD 1/16" x 0.13 mm ID	3 m	20.--
AS0318		AD 1/16" x 0.18 mm ID	3 m	18.--
AS0325		AD 1/16" x 0.25 mm ID	3 m	18.--
AS0350		AD 1/16" x 0.50 mm ID	3 m	18.--
AS0370		AD 1/16" x 0.75 mm ID	3 m	18.--
AS0310		AD 1/16" x 1.00 mm ID	3 m	18.--
AS0501	stainless steel tubing	AD 1/16" x 0.13 mm ID	50 mm	2.50
AS0341	- pre-cut -	AD 1/16" x 0.13 mm ID	100 mm	4.40
AS0201		AD 1/16" x 0.13 mm ID	200 mm	5.50
AS0525		AD 1/16" x 0.25 mm ID	50 mm	2.50
AS0125		AD 1/16" x 0.25 mm ID	100 mm	4.40
AS0225		AD 1/16" x 0.25 mm ID	200 mm	5.50
AS0550		AD 1/16" x 0.50 mm ID	50 mm	2.50
AS0150		AD 1/16" x 0.50 mm ID	100 mm	4.40
AS0250		AD 1/16" x 0.50 mm ID	200 mm	5.50
AS0570		AD 1/16" x 0.75 mm ID	50 mm	2.50
AS0170		AD 1/16" x 0.75 mm ID	100 mm	4.40
AS0270		AD 1/16" x 0.75 mm ID	200 mm	5.50
AS1001	stainless steel ferrules	1/16"	10 pieces	11.--
AS1010	stainless steel ferrules	1/16"	100 pieces	62.--
AR1101	stainless steel ferrules	1/16" Rheodyne	10 pieces	13.--
AS2001	fitting screws	stainless steel short	10 pieces	11.--
AS2101	fitting screws	stainless steel long	10 pieces	13.--
AS2201	fitting screws	stainless steel large	10 pieces	39.--
AS3301	plug stainless steel	1/16" 1 piece	14.--	
AS3001	ZDV-union stainless steel	1/16" 1 piece	27.50	
AS3101	tee-piece stainless steel	1/16" 1 piece	46.--	
AS3201	cross stainless steel	1/16" 1 piece	68.--	
<b>Accessories for HPLC-Columns</b>				
AS0110	sieve (glass fibre) analytical		10 pieces	5.--
AS0115	PTFE sealing gasket		25 pieces	12.--
AS0101	sieve (metal) analytical	5 µm	10 pieces	8.--
AS0105	sieve (metal) analytical	3 µm	10 pieces	9.--
AS0120	sieve sandwich for column end 4.6 mm ID		1 Set	3.--
	(2 metal sieves, 3 glass fibre sieves, 1 sealing gasket)			

AS6001 50.--  
stainless steel tubing  
cutter



AS6000 17.--  
pliers for stainless steel  
tubings



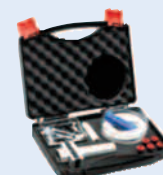
AS7500 20.50  
Last-drop mobile  
phase-filter with  
2.0 µm  
stainless  
steel frit



AR6100 21.--  
Rheotool



AC7000 145.--  
EasyFlange Kit



AC7100 170.--  
EasyFlange Combi-Kit



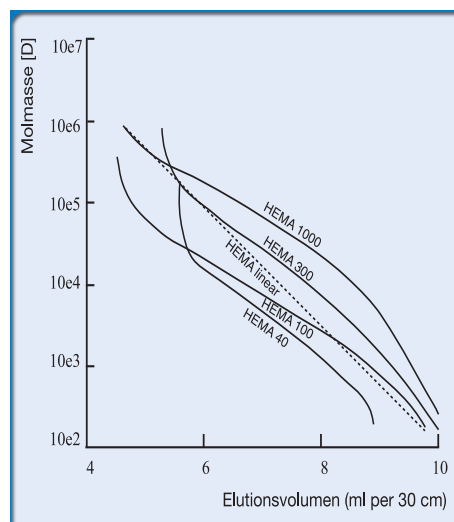
# HPLC-Accessories

## HEMA/HEMA-Bio

### Molecular Mass Range & Exclusion Limit

HEMA & HEMA-Bio-SEC-columns are available as four different porosities & a linear mix. The following table shows the mass range and exclusion limit for pullulanes (linear polysaccharides)\*:

HEMA/HEMA-Bio	Molecular Mass Range [D]	Exclusion Limit
40	< 20,000	40,000
100	2,000 - 80,000	120,000
300	8,000 - 250,000	500,000
1000	20,000 - 3,000,000	7,000,000
linear	1,000 - 1,000,000	3,000,000

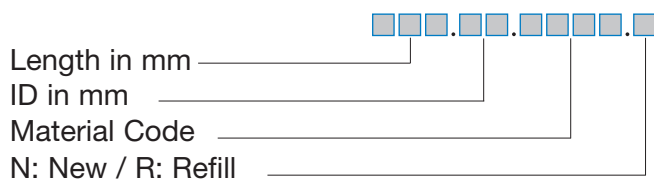


### Prices and Ordering Information

Analytical			Price/€	New	Refill
300 x 8 mm	10 µm	all porosities		1,090.--	988.--
	10 µm	linear mix		1,230.--	1,128.--
50 x 8 mm	10 µm	all porosities + linear		312.--	271.--

Preparative			Price/€	New	Refill
300 x 20 mm	10 µm	all porosities		2,600.--	2,345.--
	10 µm	linear mix		2,880.--	2,633.--
50 x 20 mm	10 µm	all porosities + linear		540.--	392.--

### Part-No. for MZ-SEC-Columns:



**Example:** GPC-Column (new) 300 x 8.0 mm  
HEMA-Linear 10 µm  
=> **300.8,0.4000.N**

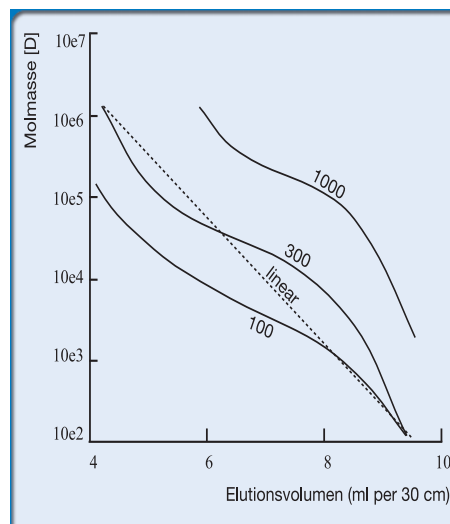
### Codes

	HEMA	HEMA-Bio
40	4040	4041
100	4010	4011
300	4030	4031
1000	4100	4101
Linear	4000	4001

## MZ Super-FG: SEC-Columns for Fluorinated Eluents

MZ Super-FG SEC-Columns are based on especially modified Silica. They are the ideal media for separations performed in fluorinated mobile phases like TFE or HFIP.

TECHNICAL DATA	MZ-GEL SUPER FG
Particle size	7 µm
Pressure stability	max. 300 bar
Max. flow rate:	
Analytical 8 mm ID	3 ml/min
Preparative 20 mm ID	20 ml/min
Temperature-stability	max. 80 °C
pH-Stability	2 – 9
Pore volume	0.6 – 1.0 ml/g



POROSITY	MOLECULAR MASS RANGE [D]	EXCLUSION LIMIT
100	100 - 30,000	100,000
300	1,000 - 100,000	1,000,000
1000	20,000 - 1,000,000	10,000,000
4000	100,000 - 10,000,000	20,000,000
linear	100 - 1,000,000	10,000,000

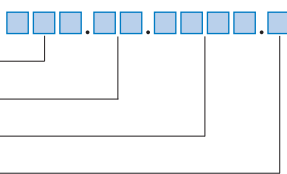
MZ-Super FG-columns are available as four different porosities, plus 1 linear mix. The table shows the molecular mass range and the exclusion limit.

### PRICES AND ORDERING INFORMATION

Analytical			Price/€	New	Refill
300 x 8 mm	7 µm	all porosities		767.--	665.--
	7 µm	linear		870.--	767.--
600 x 8 mm	7 µm	all porosities		1,074.--	921.--
	7 µm	linear		1,222.--	1,069.--
50 x 8 mm	7 µm	all porosities + linear		312.--	271.--
Preparative					
300 x 20 mm	7 µm	all porosities		2,071.--	1,816.--
	7 µm	linear		2,301.--	2,046.--
50 x 20 mm	7 µm	all porosities + linear		430.--	282.--

### PART-NO. FOR MZ-SEC-COLUMNS:

Length in mm \_\_\_\_\_  
 ID in mm \_\_\_\_\_  
 Material Code \_\_\_\_\_  
 N: New / R: Refill \_\_\_\_\_



**Example:**  
 GPC-Column (new)  
 300 x 8.0 mm  
 MZ Super-FG linear 7 µm  
**=> 300.8,0.9000.N**

Porosity	Code
100	9010
300	9030
1000	9100
4000	9400
linear	9000

all prices in EUR excluding VAT

