Epoxy Binder Systems for Civil Engineering
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Table of Contents

Introduction

Epikote™ Resins

Epikure™ Curing Agents

New Waterborne Curing Agents

Binder Systems by Application

Starting Formulations
Ambient Curing with Epoxy Binders – Some Important Aspects and Benefits

Epikote™ / Epikure™ epoxy binder

- easy to apply
- favourable mixing ratio
- low mixing viscosities
- wide range processing time possible
- excellent wetting properties and good adhesion to substrates
- high filler levels possible
- hydrolysis resistance on concrete surfaces
- good mechanical strength and high chemical resistance
Unmodified Epoxy Resins

Epikote™ 828 LVEL
liquid standard BPA resin

Epikote™ 862
liquid standard BPF resin

Epikote™ 235
liquid BPA/BPF resin, crystallisation free

Epikote™ 144
BPA/BPF resin, low viscous, crystallisation free

Epikote™ 828 LVEL
Epikote™ 862
### Reactive Diluted Epoxy Resins

<table>
<thead>
<tr>
<th>Diluent Heloxy™ Cardura™</th>
<th>Viscosity at 25°C [mPa·s]</th>
<th>Epoxy equivalent [g/eq.]</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Epikote™ 260</strong> Card.E10P / TP</td>
<td>1900 ± 200</td>
<td>175 - 183</td>
</tr>
<tr>
<td><strong>Epikote™ 357</strong> HD</td>
<td>700 ± 100</td>
<td>163 - 171</td>
</tr>
<tr>
<td><strong>Epikote™ 816</strong> Cardura E10P</td>
<td>1800 ± 300</td>
<td>189 - 200</td>
</tr>
<tr>
<td><strong>Epikote™ 816 LV</strong> Cardura E10P</td>
<td>500 ± 100</td>
<td>192 - 204</td>
</tr>
<tr>
<td><strong>Epikote™ 816 MV</strong> Cardura E10P</td>
<td>1000 ± 100</td>
<td>189 - 200</td>
</tr>
<tr>
<td><strong>Epikote™ 818</strong> Cardura E10P</td>
<td>1000 ± 200</td>
<td>184 - 195</td>
</tr>
</tbody>
</table>

**Low viscous epoxy resins for formulation of filler containing systems for various applications**

*March 9, 2007*
## Modified Epoxy Resins

<table>
<thead>
<tr>
<th></th>
<th>Viscosity at 25°C [mPa·s]</th>
<th>Epoxy equivalent [g/eq.]</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Epikote™ 896</strong></td>
<td>950 ± 150</td>
<td>194 ± 5</td>
<td>high chemical resistance</td>
</tr>
<tr>
<td><strong>Epikote™ 03121</strong></td>
<td>650 ± 150</td>
<td>182 ± 4</td>
<td>underwater cure</td>
</tr>
<tr>
<td><strong>Epikote™ 03141</strong></td>
<td>325 ± 50</td>
<td>180 ± 2</td>
<td>crack injection</td>
</tr>
<tr>
<td><strong>Epikote™ 03306</strong></td>
<td>125 ± 25</td>
<td>169 ± 2</td>
<td>crack injection</td>
</tr>
<tr>
<td><strong>Epikote™ 04851</strong></td>
<td>250 ± 75</td>
<td>200 ± 5</td>
<td>bridge renovation</td>
</tr>
</tbody>
</table>

Low viscous epoxy resins for formulation of filler containing systems for various applications
### Specialties: Hydrogenated Resins

<table>
<thead>
<tr>
<th>Eponex™ 1510</th>
<th>Viscosity at 25 °C [mPa·s]</th>
<th>Epoxy equivalent [g/eq.]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1800 - 2500</td>
<td>210 - 220</td>
</tr>
</tbody>
</table>

- Low viscosity
- Lowest yellowing characteristics
- Low Chlorine content / Very low color

**Starting Formulations**

**Yellowing**
Epikure™ adduct hardeners
for universal formulations with tack-free, glossy surfaces, light and high water spotting resistance as well as good final mechanical properties

Epikure™ mannich base hardeners
for high-performance grouting compounds and concrete adhesives
With excellent mechanical strength, high chemical resistance and good curing properties at temperatures down to 5 °C

Epikure™ blend hardeners
With good cost/performance-ratio and low viscosity
Resins, Reactive Diluents and Hardeners

Adduct Hardeners

Modified adduct hardeners for high-gloss surfaces with broad application range and good water spotting resistance.

<table>
<thead>
<tr>
<th></th>
<th>Viscosity at 25 °C [mPa·s]</th>
<th>H-active equivalent [g/eq.]</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epikure™ 207</td>
<td>150 ± 50</td>
<td>93</td>
<td>Versatile hardener</td>
</tr>
<tr>
<td>Epikure™ 530</td>
<td>200 ± 30</td>
<td>93</td>
<td>Versatile hardener</td>
</tr>
<tr>
<td>Epikure™ 541</td>
<td>275 ± 50</td>
<td>93</td>
<td>Versatile hardener</td>
</tr>
</tbody>
</table>
**Adduct Hardeners**

Specialties for low yellowing characteristics, high resistance against osmotic pressure / damp concrete and VOC-free according to the Decopaint Guideline.

<table>
<thead>
<tr>
<th>Resin</th>
<th>Viscosity at 25 °C [mPa·s]</th>
<th>H-active equivalent [g/eq]</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epikure™ 196</td>
<td>600 ± 100</td>
<td>109</td>
<td>Very low yellowing</td>
</tr>
<tr>
<td>Epikure™ F205</td>
<td>600 ± 100</td>
<td>105</td>
<td>Low yellowing / versatile</td>
</tr>
<tr>
<td>Epikure™ 548</td>
<td>450 ± 150</td>
<td>115</td>
<td>Low yellowing tendency</td>
</tr>
<tr>
<td>Epikure™ 04852</td>
<td>500 ± 75</td>
<td>66</td>
<td>Osmotic pressure resistant</td>
</tr>
<tr>
<td>Epikure™ 05418</td>
<td>350 ± 100</td>
<td>85</td>
<td>VOC-free</td>
</tr>
</tbody>
</table>
Mannich Base Hardeners

High reactive hardeners with good mechanical properties and high chemical resistance.

<table>
<thead>
<tr>
<th></th>
<th>Viscosity at 25 °C [mPa·s]</th>
<th>H-active-equivalent [g/eq.]</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epikure™ 105</td>
<td>2500 ± 500</td>
<td>92</td>
<td>Versatile hardener</td>
</tr>
<tr>
<td>Epikure™ 132</td>
<td>1600 ± 200</td>
<td>53</td>
<td>Potable water</td>
</tr>
<tr>
<td>Epikure™ 185</td>
<td>500 ± 200</td>
<td>110</td>
<td>Versatile hardener</td>
</tr>
<tr>
<td>Epikure™ 03121</td>
<td>2700 ± 300</td>
<td>95</td>
<td>Underwater-cure</td>
</tr>
<tr>
<td>Epikure™ 03141</td>
<td>300 ± 50</td>
<td>90</td>
<td>Injection system</td>
</tr>
</tbody>
</table>
Amine blend hardeners with good cost/performance-ratio and for special systems

<table>
<thead>
<tr>
<th></th>
<th>Viscosity at 25 °C [mPa·s]</th>
<th>H-active equivalent [g/eq.]</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Epikure™ 270</strong></td>
<td>9 ± 5</td>
<td>38</td>
<td>High chemical resistance</td>
</tr>
<tr>
<td><strong>Epikure™ 3203</strong></td>
<td>16 ± 5</td>
<td>56</td>
<td>Pipe rehabilitation</td>
</tr>
<tr>
<td><strong>Epikure™ 03306</strong></td>
<td>25 ± 5</td>
<td>51</td>
<td>Crack injection</td>
</tr>
</tbody>
</table>
Epikure™ 8545-W-52

- Solution stability 😊
- Very low free amine content 😊
- Visible end of pot-life 😊
- No co-solvent in the curing agent 😊
- Zero VOC system 😊
- Benzyl alcohol free 😊
- Resistant against water uptake 😊
- Light colored 😊
- Corrosion resistant 😊

Starting Formulations
**Standard Industrial Flooring Applications**

<table>
<thead>
<tr>
<th></th>
<th>Standard</th>
<th>Excellent</th>
<th>Special</th>
<th>Waterborne</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decorative System / Top Coat*</td>
<td>EP 816 / EK F205</td>
<td>EP 357 / EK 548</td>
<td>Eponex 1510 / EK 196</td>
<td>-</td>
</tr>
</tbody>
</table>

*All products are phenol and nonylphenol free*

**Special Systems**

<p>| Special Systems                  |  |  |  |
|---------------------------------|-------------------------------|-------------------------------|
| <strong>Chemical Resistant System</strong>   | EP 357 / EK 105               | EP 896 / EK 270               |
| <strong>Potable Water System</strong>        | EP 144 / EK 132               | EP 818 / EK 207               |
| <strong>Bridge Renovation</strong>           | EP 04851 / EK 04852          | -                             |
| <strong>Waterway Renovation / Pipe Rehabilitation</strong> | EP 260 / EK 3203 | - |
| <strong>Crack Injection</strong>             | EP 03141 / EK 03141          | EP 03306 / EK 03306          |
| <strong>Underwater Cure</strong>             | EP 03121 / EK 03121          | -                             |</p>
<table>
<thead>
<tr>
<th>System</th>
<th>Binder System</th>
<th>Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard System</td>
<td>Epikote™ 816 LV with Epikure™ F 205</td>
<td>- limited crosslinking density yields in poor chemical resistance</td>
</tr>
<tr>
<td>Excellent System</td>
<td>Epikote™ 357 with Epikure™ 530 or Epikure™ 541</td>
<td>- versatile primer for excellent surfaces - dilutable with organic solvents</td>
</tr>
<tr>
<td>Special System</td>
<td>Epikote™ 357 with Epikure™ 04852</td>
<td>- resistant against osmotic pressure - good adhesion even on damp concrete</td>
</tr>
<tr>
<td>Waterborne System</td>
<td>Epikote™ 816 with Epikure™ 8545-W-52</td>
<td>- zero VOC system</td>
</tr>
<tr>
<td>Selected Binder Systems</td>
<td>Standard System</td>
<td>Excellent System</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-----------------</td>
<td>------------------</td>
</tr>
<tr>
<td><strong>Epikote™ 816 MV with Epikure™ F 205</strong></td>
<td>Epikote™ 357 with Epikure™ 530 or Epikure™ 541</td>
<td>Epikote™ 357 with Epikure™ 185</td>
</tr>
<tr>
<td>- limited crosslinking density</td>
<td>- versatile epoxy binder system</td>
<td>- very good crosslinking</td>
</tr>
<tr>
<td>- yields in poor chemical resistance</td>
<td>- good processing characteristics</td>
<td>- good chemical resistance</td>
</tr>
</tbody>
</table>
### Standard System

**Epikote™ 816 MV** with **Epikure™ F 205**
- Limited crosslinking density yields in poor chemical resistance

### Excellent System

**Epikote™ 357** with **Epikure™ 530 or Epikure™ 541**
- Optimal processing characteristics
- High mechanical strengths
- Glossy surface

### Special System

**Epikote™ 357** with **Epikure™ 05418**
- VOC-free according to the Decopaint Guideline
- High mechanical strengths
- Glossy surface

### Waterborne System

**Epikote™ 816** with **Epikure™ 8545-W-52**
- Zero VOC system

**Binder Systems by Application**
### Standard System
- **Epikote™ 816** with **Epikure™ F 205**
  - optimal processing characteristics
  - high mechanical strengths
  - glossy surface

### Excellent System
- **Epikote™ 357** with **Epikure™ 548**
  - versatile system with good final properties
  - low yellowing tendency
  - lower reactivity

### Special System
- **Eponex™ 1510** with **Epikure™ 196**
  - lowest yellowing characteristics

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**Binder Systems by Application**
Chemical Resistant System

Standard System
Epikote™ 357 with Epikure™ 105
- very good crosslinking
- good adhesion even on damp concrete
- good chemical resistance

Excellent System
Epikote™ 896 with Epikure™ 270
- for use in chemical resistant top coats
- very good mechanical properties and high glass transition temperature: approx. 62 °C
- high crosslinking density yields in low flexibility of the finished product

Binder Systems by Application
Selected Binder Systems

Potable Water System

Standard System
Excellent System

Epikote™ 144 with Epikure™ 132
Epikote™ 818 with Epikure™ 207

- for coatings according to KTW –
- Guideline, list 1 / European Food Safety Authority (EFSA)
- for storage facilities and tanks for potable water

Binder Systems by Application

back to main menu
Special System

Epikote™ 04851 with Epikure™ 04852

- useful for versatile underground preparation
- good adhesion even on damp concrete
- certificate for bridge sealings
Special System

**Epikote™ 260 with Epikure™ 3203**

- minimum working time of 6 hours at ambient temperature
- cure at 60 – 80 °C
- compressive modulus after impregnation > 2500 MPa
- easy impregnating
- resistance creep under static load
- resistant to cleaning liquids

Binder Systems by Application
Standard System

Epikote™ 03141 with Epikure™ 03141

- Applications: concrete crack fillers
- Mixing viscosity at 25 °C: approx. 300 mPa·s
- Mixing ratio: 100 : 50 pbw
- Pot life: approx. 30 min

Excellent System

Epikote™ 03306 with Epikure™ 03306

- Applications: concrete crack fillers, stabilization of porous undergrounds
- Mixing viscosity at 25 °C: approx. 100 mPa·s
- Mixing ratio: 100 : 30 pbw
- Pot life: approx. 80 min

Binder Systems by Application
Special System

Epikote™ 03121 with Epikure™ 03121

- binder for the formulation of
  “Off Shore“ - paint compounds
- underwater curing
- processing time approx. 20 minutes
The chemical resistance of Hexion binder systems is tested by exposing the surface of flat samples to various aggressive chemicals. According to DIN EN ISO 868 Shore D hardness is measured as a function of exposure time. Following DIN EN ISO 2812-1, method 2, the test is realised at room temperature.
Chemical resistance is shown in the following graphs as relative variation of Shore D hardness. The starting point is defined as Shore D value measured after curing for 7 d at 23 °C. The test duration is four weeks with chemical exposure (with ten selected chemicals) and one week of relaxation without exposure to chemicals.
In the graphs which are attached to the product profiles you get relative values of the hardness because of better comparability.

The Shore D hardness after seven days curing at room temperature is defined as the starting point (100%).
Chemical Resistance

The applied chemicals contain the following components:

**Petrol:**

- 47.5 vol% Toluene; 30.4 vol% Isooctane; 17.1 vol% n-Heptane;
- 3.0 vol% Methanol

**Aromates:**

- 60.0 vol% Toluene; 30.0 vol% o-/m-Xylene; 10.0 vol% Methylc
- Naphthalene

**Alcohol:**

- 48.0 vol% Methanol; 48.0 vol% iso-Propanol; 4.0 vol% Water

**Ester/Ketone:**

- 50.0 vol% Ethylacetate; 50.0 vol% Isobutylmethylketone
Samples of Hexion binder systems are placed in a QUV accelerated weathering tester. This equipment reproduces the damage (colour change) that occurs over months or years outdoors.
The clear binder is cured for 7 days at 23°C. Then the specimens are exposed to UV-light for 5 days (UVA-340 lamp; 80 W/m²/nm).

Colour change according to CIELab metrics measured every 24 hours. “b-values” indicating yellowing vs. exposure time are shown on the following graphs.
Reactivity of a 100 g resin–hardener mix is measured at a starting temperature of 23 °C. Temperature trend and maximum are recorded. Following values are defined:

**Working time** = period of time until a temperature of 40 °C (through exotherm reaction) is achieved.

**Pot life** = time to peak temperature.
Hexion is utilizing “Gelnorm®” equipment according to DIN 16945 and ISO 9396. A test tube, partially filled with resin-hardener mix and equipped with a plunger is placed in a constant temperature bath at 23 °C. The plunger is moved up in short intervals. If the gel point is reached, the test tube is lifted with the plunger and stops a timer.
Surface properties:
Red pigmented binder systems are applied on glass plats (thickness 120µm).
Wetting, levelling and gloss are determined visually after curing.

Early water resistance:
After a curing time of 4, 8, 24 and 48 h surfaces are applied with water. Surface changes and formation of carbamate are determined. The tests are conducted at 10 °C and 23 °C.
Mechanical Properties

Test Standards

- Compressive strength: EN ISO 604
- Tensile strength: EN ISO 527
- Flexural strength: EN ISO 178
- E-modulus: EN ISO 178
- Glass transition temperature (Tg - DSC): IEC 1006

The mechanical properties are measured after seven days curing at room temperature plus postcuring of 5 h / 50 °C and 2 h / 100 °C.

These values are for general information only and should guide the customer in choosing the appropriate epoxy system. To some extent they are based on individual measurements which are subject to the usual fluctuations and are not binding. For practical applications, the properties of coatings processed and hardened under building site conditions are decisive.

Binder Systems by Application
Epikote™ 816 LV with Epikure™ F 205

Epikote™ 816 LV
Reactivity diluted epoxy resin based on bisphenol A

Epoxy equivalent: 198 ± 6 g/equiv.
Viscosity (25 °C): 500 ± 100 mPa·s

Epikure™ F 205
Modified, cycloaliphatic polyamine-adduct

H - active equivalent: 104 g/equiv.
Viscosity (25 °C): 600 ± 100 mPa·s

Mixing ratio (resin : hardener) [pbw] 100 : 52.5

Pot life:
t to 40 °C 28 m in
t to T_{max} 70 m in
T_{max} 107 °C

Gel time:

next back

Binder Systems by Application

back to main menu
Epikote™ 816 LV with Epikure™ F 205

Surface
at 23 °C  good, glossy surface
at 10 °C  little gloss, little irregularities

Early Water Resistance (1 = good ... 5 = poor)

at 23 °C  5
at 10 °C  5

Shore D - Hardness
after 24 h 48 h 7 d
at 23 °C  30  62  76
at 10 °C  -  20  72

Chemical Resistance

Yellowing Tendency
<table>
<thead>
<tr>
<th>Property</th>
<th>7 d</th>
<th>7 d + post curing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexural strength</td>
<td>34</td>
<td></td>
</tr>
<tr>
<td>E-modulus</td>
<td>893</td>
<td></td>
</tr>
<tr>
<td>Tensile strength</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Compressive strength</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>Tg – DSC</td>
<td>36</td>
<td></td>
</tr>
</tbody>
</table>
Epikote™ 816 MV with Epikure™ F 205

**Epikote™ 816 MV**
Reactively diluted epoxy resin based on bisphenol A

Epoxide equivalent: 194.5 ± 5.5 g/equiv.
Viscosity (25 °C): 1000 ± 100 mPa·s

**Epikure™ F 205**
Modified, cycloaliphatic polyamine-adduct

H-active equivalent: 104 g/equiv.
Viscosity (25 °C): 600 ± 100 mPa·s

Mixing ratio (resin : hardener) [pbw] 100 : 53.5

Pot life:
- t to 40 °C 25 min
- t to T_{max} 58 min
- T_{max} 138 °C

Gel time:

next

Binder Systems by Application
Product Profiles

Epikote™ 816 MV with Epikure™ F 205

Surface
at 23 °C   little glossy surface
at 10 °C   non-glossy surface

Early Water Resistance  (1 = good ... 5 = poor)
at 23 °C   3
at 10 °C   4

Shore D - Hardness
after 24 h
at 23 °C   56
at 10 °C   -

Chemical Resistance
Yellowing Tendency

next  back  Binder Systems by Application
Epikote™ 816 with Epikure™ F 205

**Epikote™ 816**

*Reactively diluted epoxy resin based on bisphenol A*

- Epoxy equivalent: \( 194.5 \pm 5.5 \text{ g/equiv.} \)
- Viscosity (25 °C): \( 1800 \pm 300 \text{ mPa}\cdot\text{s} \)

**Epikure™ F 205**

*Modified, cycloaliphatic polyamine-adduct*

- H-active equivalent: \( 104 \text{ g/equiv.} \)
- Viscosity (25 °C): \( 600 \pm 100 \text{ mPa}\cdot\text{s} \)

**Mixing ratio (resin : hardener) [pbw]**

\[ 100 : 53.5 \]

**Pot life:**

- \( t \) to 40 °C: \( 24 \text{ m in} \)
- \( t \) to \( T_{max} \): \( 55 \text{ m in} \)
- \( T_{max} \): \( 136 \text{ °C} \)

**Gel time:**

**back**  **next**
Product Profiles

Epikote™ 816 with Epikure™ F 205

Surface
at 23 °C  good, glossy surface
at 10 °C  non-glossy surface

Early Water Resistance  
(1 = good ... 5 = poor)

at 23 °C  3
at 10 °C  4

Shore D - Hardness  
after 24 h  48 h  7 d

at 23 °C  65  77  81
at 10 °C  -  55  78

Chemical Resistance

Yellowing Tendency

next  back  Binder Systems by Application

back to main menu
**Epikote™ 357 with Epikure™ 04852**

**Epikote™ 357**
Reactively diluted, non-crystallizing epoxy resin based on bisphenol A/F

- Epoxide equivalent: $167 \pm 4$ g/equiv.
- Viscosity (25 °C): $700 \pm 100$ mPa·s

**Epikure™ 04852**
Modified, cycloaliphatic polyamine-adduct

- H-Active equivalent: $66$ g/equiv.
- Viscosity (25 °C): $500 \pm 75$ mPa·s

Mixing ratio (resin : hardener) [pbw] 100 : 39.5

- Pot life: t to 40 °C 27 min 
t to $T_{\text{max}}$ 42 min 
$T_{\text{max}}$ 221 °C
- Gel time: 127 min

[next]  [back]  [Binder Systems by Application]
Product Profiles

Epikote™ 357 with Epikure™ 04852

**Surface**
- at 23 °C: good, glossy surface
- at 10 °C: non-glossy surface

**Early Water Resistance** (1 = good ... 5 = poor)
- at 23 °C: 3
- at 10 °C: 4

**Shore D - Hardness**
- at 23 °C: after 24 h = 82, 48 h = 82, 7 d = 83
- at 10 °C: - after 24 h = 78, 48 h = 80

**Chemical Resistance**

**Yellowing Tendency**

next  back  Binder Systems by Application
## Mechanical Properties

**Curing**

<table>
<thead>
<tr>
<th>Property</th>
<th>7 d</th>
<th>7 d + post curing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Flexural strength</strong></td>
<td>[MPa]</td>
<td>46</td>
</tr>
<tr>
<td><strong>E-modulus</strong></td>
<td>[MPa]</td>
<td>3028</td>
</tr>
<tr>
<td><strong>Tensile strength</strong></td>
<td>[MPa]</td>
<td>73</td>
</tr>
<tr>
<td><strong>Compressive strength</strong></td>
<td>[MPa]</td>
<td>92</td>
</tr>
<tr>
<td><strong>Tg - DSC</strong></td>
<td>[°C]</td>
<td>50</td>
</tr>
</tbody>
</table>
Chemical Resistance

Epikote™ 357 with Epikure™ 04852

Shore D in % (relative values)

- Petrol
- Aromates
- Alcohol
- Ester/Ketone
- Acetic Acid 10%
- DETA 50% in Water
- Nitric Acid 25%
- Sulphuric Acid 36%
- Lactic Acid 10%
- Brake Fluid

Without contamination, 1 week, 2 weeks, 3 weeks, 4 weeks, 1 week relaxation
Epikote™ 357 with Epikure™ 530
Epikote™ 357 with Epikure™ 541
Epikote™ 357 with Epikure™ 530

**Epikote™ 357**
- Reactively diluted, non-crystallizing epoxy resin based on bisphenol A/F
- Epoxide equivalent: \(167 \pm 4\) g/equiv.
- Viscosity (25 °C): \(700 \pm 100\) mPa·s

**Epikure™ 530**
- Modified, cycloaliphatic polyamine-adduct (nonylphenol-free)
- H-Active equivalent: \(93\) g/equiv.
- Viscosity (25 °C): \(200 \pm 30\) mPa·s

**Mixing ratio (resin : hardener) [pbw]**
- \(100 : 56\)

**Pot life**:
- t to 40 °C
- t to \(T_{\text{max}}\)
- \(T_{\text{max}}\)
- Gel time:
  - 32 min
  - 53 min
  - 184 °C
  - 194 min

[next] [back]  [Binder Systems by Application]
**Product Profiles**

**Epikote™ 357 with Epikure™ 530**

**Surface**
- at 23 °C: good, glossy surface
- at 10 °C: good, glossy surface with light irregulars

**Early Water Resistance** (1 = good ... 5 = poor)
- at 23 °C: 3
- at 10 °C: 4

**Shore D - Hardness**
- after 24 h: 63
- after 48 h: 75
- after 7 d: 80
- at 10 °C:
  - after 24 h: 15
  - after 48 h: 62
  - after 7 d: 76

**Chemical Resistance**

**Yellowing Tendency**
### Epikote™ 357 with Epikure™ 530

**Mechanical Properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>7 d</th>
<th>7 d + post curing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Flexural strength</strong> [MPa]</td>
<td>65</td>
<td>82</td>
</tr>
<tr>
<td><strong>E-modulus</strong> [MPa]</td>
<td>2084</td>
<td>2593</td>
</tr>
<tr>
<td><strong>Tensile strength</strong> [MPa]</td>
<td>38</td>
<td>47</td>
</tr>
<tr>
<td><strong>Compressive strength</strong> [MPa]</td>
<td>75</td>
<td>82</td>
</tr>
<tr>
<td><strong>Tg – DSC</strong> [°C]</td>
<td>39</td>
<td>50</td>
</tr>
</tbody>
</table>

[back to main menu]
Chemical Resistance

Epikote™ 357 with Epikure™ 530

Chemical Resistance

- Petrol
- Aromates
- Alcohol
- Ester/Ketone
- Acetic Acid 10%
- DETA 50% in Water
- Nitric Acid 25%
- Sulphuric Acid 36%
- Lactic Acid 10%
- Brake Fluid

Test method

Back to main menu
Product Profiles

Epikote™ 357 with Epikure™ 541

Epikote™ 357
Reactively diluted, non-crystallizing epoxy resin based on bisphenol A/F

Epoxide equivalent: 167 ± 4 g/equiv.
Viscosity (25 °C): 700 ± 100 mPa·s

Epikure™ 541
Modified, cycloaliphatic polyamine-adduct (nonylphenol-free)

H- active equivalent: 93 g/equiv.
Viscosity (25 °C): 275 ± 50 mPa·s

Mixing ratio (resin : hardener) [pbw] 100 : 56

Pot life:
t to 40 °C 15 min
t to T_max 30 min
T_max 190 °C

Gel time:
104 min

next back Binder Systems by Application
Epikote™ 357 with Epikure™ 541

Surface
at 23 °C  very good, glossy surface
at 10 °C  good, glossy surface with light irregularities

Early Water Resistance (1 = good ... 5 = poor)

<table>
<thead>
<tr>
<th></th>
<th>23 °C</th>
<th>10 °C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Shore D - Hardness

<table>
<thead>
<tr>
<th></th>
<th>24 h</th>
<th>48 h</th>
<th>7 d</th>
</tr>
</thead>
<tbody>
<tr>
<td>at 23 °C</td>
<td>66</td>
<td>74</td>
<td>79</td>
</tr>
<tr>
<td>at 10 °C</td>
<td>33</td>
<td>56</td>
<td>77</td>
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</table>

Chemical Resistance

Yellowing Tendency

Binder Systems by Application
## Epikote™ 357 with Epikure™ 541

### Mechanical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>7 d</th>
<th>7 d + post curing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexible strength [MPa]</td>
<td>77</td>
<td>93</td>
</tr>
<tr>
<td>Elastic modulus [MPa]</td>
<td>2200</td>
<td>2725</td>
</tr>
<tr>
<td>Tensile strength [MPa]</td>
<td>45</td>
<td>53</td>
</tr>
<tr>
<td>Compressive strength [MPa]</td>
<td>88</td>
<td>88</td>
</tr>
<tr>
<td>Tg – DSC [°C]</td>
<td>42</td>
<td>45</td>
</tr>
</tbody>
</table>
Chemical Resistance

Epikote™ 357 with Epikure™ 541

Chemical Resistance Chart:

- Petrol
- Aromates
- Alcohol
- Ester/Ketone
- Acetic Acid 10%
- DETA 50% in Water
- Nitric Acid 25%
- Sulphuric Acid 36%
- Lactic Acid 10%
- Brake Fluid

Shore D in % (relative values)

- Without contamination
- 1 week
- 2 weeks
- 3 weeks
- 4 weeks
- 1 week relaxation

Test method
Product Profiles

Epikote™ 357 with Epikure™ 548

Epikote™ 357
Reactively diluted, non-crystallizing epoxy resin based on bisphenol A/F

Epoxide equivalent: 167 ± 4 g/equiv.
Viscosity (25 °C): 700 ± 100 mPa•s

Epikure™ 548
Modified, cycloaliphatic polyamine-adduct

H – active equivalent: 115 g/equiv.
Viscosity (25 °C): 450 ± 150 mPa•s

Mixing ratio (resin : hardener) [pbw] 100 : 69

Pot life: t to 40 °C
          t to Tmax
          Tmax
Gel time:  

next  back

Binder Systems by Application
Product Profiles

Epikote™ 357 with Epikure™ 548

Surface
at 23 °C very good, glossy surface
at 10 °C little gloss, little irregularities

Early Water Resistance (1 = good ... 5 = poor)
at 23 °C 2
at 10 °C 3

Shore D - Hardness after 24 h 48 h 7 d
at 23 °C 38 68 77
at 10 °C < 10 40 77

Chemical Resistance

Yellowing Tendency

next back Binder Systems by Application
## Epikote™ 357 with Epikure™ 548

### Mechanical Properties

<table>
<thead>
<tr>
<th>Curing</th>
<th>7 d</th>
<th>7 d + post curing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexural strength [MPa]</td>
<td>51</td>
<td>67</td>
</tr>
<tr>
<td>E-modulus [MPa]</td>
<td>1772</td>
<td>2158</td>
</tr>
<tr>
<td>Tensile strength [MPa]</td>
<td>28</td>
<td>38</td>
</tr>
<tr>
<td>Compressive strength [MPa]</td>
<td>58</td>
<td>66</td>
</tr>
<tr>
<td>Tg - DSC [°C]</td>
<td>34</td>
<td>56</td>
</tr>
</tbody>
</table>

[back to main menu](#)
Decorative Systems / Top Coat

Yellowing

Days UV-irradiation stress (92 W/m²/nm UVA 340)

- *Epikote™ 816 + Epikure™ F 205*
- *Epikote™ 357 + Epikure™ 548*
- *Eponex™ 1510 + Epikure™ 196*
### Eponex™ 1510 with Epikure™ 196

#### Eponex™ 1510
- **Hydrogenated epoxy resin**
- **Based on bisphenol A**

**Epoxy equivalent:** 215 ± 5 g/equiv.

**Viscosity (25 °C):** 2150 ± 350 mPa·s

#### Epikure™ 196
- **Modified, cycloaliphatic polyamine-adduct**

**H - active equivalent:** 109 g/equiv.

**Viscosity (25 °C):** 600 ± 100 mPa·s

**Mixing ratio (resin : hardener) [pbw]** 100 : 51

**Pot life:**
- t to 40 °C
- t to T<sub>max</sub>
- T<sub>max</sub>

**Gel time:**

49 min
111 min
66 °C
362 min

**Binder Systems by Application**
Product Profiles

Eponex™ 1510 with Epikure™ 196

Surface
at 23 °C  very good, glossy surface
at 10 °C  little gloss, little irregularities

Early Water Resistance (1 = good ... 5 = poor)
at 23 °C  3
at 10 °C  5

Shore D - Hardness
after 24 h  48 h  7 d
at 23 °C  –  48  77
at 10 °C  –  –  70

Chemical Resistance
Yellowing Tendency
next  back  Binder Systems by Application

back to main menu
## Eponex™ 1510 with Epikure™ 196

### Mechanical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>7 d</th>
<th>7 d + post curing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexural strength</td>
<td>41</td>
<td></td>
</tr>
<tr>
<td>E-modulus</td>
<td>1419</td>
<td></td>
</tr>
<tr>
<td>Tensile strength</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>Compressive strength</td>
<td>41</td>
<td></td>
</tr>
<tr>
<td>Tg - DSC</td>
<td>35</td>
<td></td>
</tr>
</tbody>
</table>

**Curing**

**Binder Systems by Application**
Chemical Resistance

Eponex™ 1510 with Epikure™ 196

Shore D in % (relative values)

Petrol
Aromates
Alcohol
Ester/Ketone
Acetic Acid 10%
DETA 50% in Water
Nitric Acid 25%
Sulphuric Acid 36%
Lactic Acid 10%
Brake Fluid

Without contamination 1 week 2 weeks 3 weeks 4 weeks 1 week relaxation
Decomposition Systems / Top Coat

Yellowing

Days UV-irradiation stress (92 W/m²/nm UV A 340)

- Epikote™ 816 + Epikure™ F 205
- Epikote™ 357 + Epikure™ 548
- Eponex™ 1510 + Epikure™ 196
**Product Profiles**

**Epikote™ 357 with Epikure™ 185**

**Epikote™ 357**

*Reactively diluted, non-crystallizing epoxy resin based on bisphenol A/F*

- **Epoxy equivalent:** 167 ± 4 g/equiv.
- **Viscosity (25 °C):** 700 ± 100 mPa·s

**Epikure™ 185**

*Modified, special hardener based on polyamine, fast curing*

- **H – active equivalent:** 110 g/equiv.
- **Viscosity (25 °C):** 500 ± 200 mPa·s

**Mixing ratio (resin : hardener) [pbw]** 100 : 66

**Pot life:**
- t to 40 °C
- t to T<sub>max</sub>
- T<sub>max</sub>

**Gel time:**

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>196 °C</td>
<td>93 m in</td>
</tr>
<tr>
<td>t to T&lt;sub&gt;max&lt;/sub&gt;</td>
<td>19 m in</td>
</tr>
<tr>
<td>t to 40 °C</td>
<td>12 m in</td>
</tr>
</tbody>
</table>

**Binder Systems by Application**
Product Profiles

Epikote™ 357 with Epikure™ 185

Surface
at 23 °C  little glossy surface
at 10 °C  little glossy surface

Early Water Resistance (1 = good ... 5 = poor)
at 23 °C  2
at 10 °C  3

Shore D – Hardness after 24 h
at 23 °C  72
at 10 °C  63

Chemical Resistance

Yellowing Tendency

next  back  Binder Systems by Application
# Epikote™ 357 with Epikure™ 185

## Mechanical Properties

<table>
<thead>
<tr>
<th></th>
<th>7 d</th>
<th>7 d + post curing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Curing</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flexural strength</td>
<td>[MPa]</td>
<td>52</td>
</tr>
<tr>
<td>E-modulus</td>
<td>[MPa]</td>
<td>1822</td>
</tr>
<tr>
<td>Tensile strength</td>
<td>[MPa]</td>
<td>32</td>
</tr>
<tr>
<td>Compressive strength</td>
<td>[MPa]</td>
<td>51</td>
</tr>
<tr>
<td>Tg – DSC</td>
<td>[°C]</td>
<td>36</td>
</tr>
</tbody>
</table>
Chemical Resistance

Epikote™ 357 with Epikure™ 185

Shore D in % (relative values)

- Without contamination
- 1 week
- 2 weeks
- 3 weeks
- 4 weeks
- 1 week relaxation

Test method

Petrol
Aromates
Alcohol
Ester/Ketone
Acetic Acid 10%
DETA 50% in Water
Nitric Acid 25%
Sulphuric Acid 36%
Lactic Acid 10%
Brake Fluid
Epikote™ 357 with Epikure™ 105

Epikote™ 357
Reactively diluted, non-crystallizing epoxy resin based on bisphenol A/F
Epoxide equivalent: 167 ± 4 g/equiv.
Viscosity (25 °C): 700 ± 100 mPa·s

Epikure™ 105
Modified, special hardener based on polyamine, fast curing
H – active equivalent: 92 g/equiv.
Viscosity (25 °C): 2500 ± 500 mPa·s

Mixing ratio (resin : hardener) [pbw] 100 : 55

Pot life:
t to 40 °C
9 m in
t to $T_{\text{max}}$
17 m in
$T_{\text{max}}$
225 °C
71 m in

Binder Systems by Application
Product Profiles

Epikote™ 357 with Epikure™ 105

Surface
at 23 °C  good, glossy surface
at 10 °C  little glossy surface

Early Water Resistance (1 = good ... 5 = poor)
at 23 °C  2
at 10 °C  3

Shore D - Hardness
after 24 h  48 h  7 d
at 23 °C  83  83  83
at 10 °C  82  82  82

Chemical Resistance
Yellowing Tendency

next  back  Binder Systems by Application
### Mechanical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>7 d</th>
<th>7 d + post curing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Flexural strength</strong></td>
<td>115 MPa</td>
<td>108 MPa</td>
</tr>
<tr>
<td><strong>E-modulus</strong></td>
<td>3150 MPa</td>
<td>3340 MPa</td>
</tr>
<tr>
<td><strong>Tensile strength</strong></td>
<td>79 MPa</td>
<td>71 MPa</td>
</tr>
<tr>
<td><strong>Compressive strength</strong></td>
<td>114 MPa</td>
<td>111 MPa</td>
</tr>
<tr>
<td><strong>Tg – DSC</strong></td>
<td>50 °C</td>
<td>50 °C</td>
</tr>
</tbody>
</table>
Chemical Resistance

Epikote™ 357 with Epikure™ 105

Shore D in % (relative values)

- Petrol
- Aromates
- Alcohol
- Ester/Ketone
- Acetic Acid 10%
- DETA 50% in Water
- Nitric Acid 25%
- Sulphuric Acid 36%
- Lactic Acid 10%
- Brake Fluid

Without contamination 1 week 2 weeks 3 weeks 4 weeks 1 week relaxation
Chemical Resistant Systems

Days UV-irradiation stress (92 W/m²/nm UVW 340)

Epirke™ 357 + Epirke™ 105

Epirke™ 896 + Epirke™ 270
Product Profiles

Epikote™ 03141 with Epikure™ 03141

Epikote™ 03141
Reactively diluted epoxy resin based on bisphenol A

Epoxide equivalent: 180 ± 2 g/equiv.
Viscosity (25 °C): 325 ± 50 mPa·s

Epikure™ 03141
Modified, special hardener based on polyamine, fast curing

H-activity equivalent: 90 g/equiv.
Viscosity (25 °C): 300 ± 50 mPa·s

Mixing ratio (resin : hardener) [pbw] 100 : 50

Pot life:
t to 40 °C
15 m in
t to T_{max}
27 m in
T_{max} 204 °C

Gel time:

next back

Binder Systems by Application
Epikote™ 03141 with Epikure™ 03141

**Surface**
- at 23 °C: good, glossy surface
- at 10 °C: little glossy surface

**Early Water Resistance** (1 = good ... 5 = poor)
- at 23 °C: 2
- at 10 °C: 4

**Shore D - Hardness**
- after 24 h: 78
- after 48 h: 82
- after 7 days: 82

**Chemical Resistance**

**Yellowing Tendency**
## Mechanical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>7 d</th>
<th>7 d + post curing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Flexural strength</strong></td>
<td>84 [MPa]</td>
<td>84</td>
</tr>
<tr>
<td><strong>E-modulus</strong></td>
<td>2775 [MPa]</td>
<td>2563</td>
</tr>
<tr>
<td><strong>Tensile strength</strong></td>
<td>59 [MPa]</td>
<td>60</td>
</tr>
<tr>
<td><strong>Compressive strength</strong></td>
<td>75 [MPa]</td>
<td>75</td>
</tr>
<tr>
<td><strong>Tg - DSC</strong></td>
<td>46 [°C]</td>
<td>45</td>
</tr>
</tbody>
</table>
Yellowing

Crack Injection

Days UV-irradiation stress (92 W/m²/nm UVA 340)

b*-value

- Epikote™ 03141 + Epikure™ 03141
- Epikote™ 03306 + Epikure™ 03306

back to main menu
Epikote™ 03306 with Epikure™ 03306

**Epikote™ 03306**

Low-viscous, non-crystallizing epoxy resin based on bisphenol A/F

Epoxide equivalent: 169 ± 2 g/equiv.

Viscosity (25 °C): 125 ± 25 mPa·s

**Epikure™ 03306**

Modified, cycloaliphatic polyamine

H-active equivalent: 51 g/equiv.

Viscosity (25 °C): 25 ± 5 mPa·s

Mixing ratio (resin : hardener) [pbw] 100 : 30

Pot life: t to 40 °C 15 min
t to $T_{max}$ 27 min

$T_{max}$ 204 °C

Gel time: m in
Epikote™ 03306 with Epikure™ 03306

**Surface**
- at 23 °C: little glossy surface
- at 10 °C: non-glossy surface with irregularities

**Early Water Resistance**
- at 23 °C: 4
- at 10 °C: 4

**Shore D - Hardness**
- after 24 h: 45
- after 48 h: 77
- after 7 d: 81
- at 10 °C: –

**Chemical Resistance**

**Yellowing Tendency**
## Epikote™ 03306 with Epikure™ 03306

### Mechanical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>7 d</th>
<th>7 d + post curing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexural strength [MPa]</td>
<td>94</td>
<td></td>
</tr>
<tr>
<td>E-modulus [MPa]</td>
<td>2633</td>
<td></td>
</tr>
<tr>
<td>Tensile strength [MPa]</td>
<td>68</td>
<td></td>
</tr>
<tr>
<td>Compressive strength [MPa]</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>Tg – DSC [°C]</td>
<td>61</td>
<td></td>
</tr>
</tbody>
</table>
Yellowing

Crack Injection

Days UV-irradiation stress (92 W/m²/hm UVA 340)

$ b^* $-value

- Epikote™ 03141 + Epikure™ 03141
- Epikote™ 03306 + Epikure™ 03306

back to main menu
Epikote™ 03121 with Epikure™ 03121

Epikote™ 03121

Reactivity diluted, non-crystallizing epoxy resin based on bisphenol A/F

Epoxide equivalent: 182 ± 4 g/equiv.
Viscosity (25 °C): 650 ± 150 mPa·s

Epikure™ 03121

Modified, special hardener based on polyamine, fast curing

H – active equivalent: 95 g/equiv.
Viscosity (25 °C): 2700 ± 300 mPa·s

Mixing ratio (resin : hardener) [pbw] 100 : 52

Pot life:
- t to 40 °C
- t to T_{max}
- T_{max}

10 m in
17 m in
211 °C

Gel time:

Binder Systems by Application
Product Profiles

Epikote™ 03121 with Epikure™ 03121

Surface
at 23 °C  
good, glossy surface
at 10 °C  
little glossy surface

Early Water Resistance  
(1 = good ... 5 = poor)

at 23 °C  
2
at 10 °C  
4

Shore D - Hardness
after 24 h  48 h  7 d
at 23 °C  
78  82  82
at 10 °C  
60  75  80

Chemical Resistance

Yellowing Tendency

next  back  Binder Systems by Application
**Epikote™ 03121 with Epikure™ 03121**

**Mechanical Properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>7 d [MPa]</th>
<th>7 d + post curing [MPa]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexural strength</td>
<td>87</td>
<td>95</td>
</tr>
<tr>
<td>E - modulus</td>
<td>2767</td>
<td>2725</td>
</tr>
<tr>
<td>Tensile strength</td>
<td>62</td>
<td>64</td>
</tr>
<tr>
<td>Compressive strength</td>
<td>80</td>
<td>83</td>
</tr>
<tr>
<td>Tg - DSC</td>
<td>44</td>
<td>46</td>
</tr>
</tbody>
</table>
Underwater Cure

Yellowing

b*-value

Days UV-irradiation stress (92 W/m²/nm UVA 340)

Epikote™ 03121 + Epikure™ 3121
Epikote™ 144 with Epikure™ 132

**Epikote™ 144**
*Non crystallizing epoxy resin based on bisphenol A/F*

*Epoxy equivalent:* $173 \pm 4$ g/equiv.
*Viscosity (25 °C):* $4200 \pm 500$ mPa·s

**Epikure™ 132**
*Modified, special hardener based on polyamine, fast curing*

*H - active equivalent:* $52.5$ g/equiv.
*Viscosity (25 °C):* $1600 \pm 200$ mPa·s

**Mixing ratio (resin : hardener) [pbw]** 100 : 30

**Pot life:**
- t to 40 °C
- t to $T_{\text{max}}$
- $T_{\text{max}}$

**Gel time:**
- 18 min
- 28 min
- 248 °C
- 42 min

*Binder Systems by Application*
Product Profiles

Epikote™ 144 with Epikure™ 132

Surface
at 23 °C  non-glossy surface
at 10 °C  non-glossy surface with irregularities

Early Water Resistance (1 = good ... 5 = poor)

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>23 °C</td>
<td>4</td>
</tr>
<tr>
<td>10 °C</td>
<td>4</td>
</tr>
</tbody>
</table>

Shore D - Hardness after 24 h, 48 h, 7 d

<table>
<thead>
<tr>
<th>Temperature</th>
<th>24 h</th>
<th>48 h</th>
<th>7 d</th>
</tr>
</thead>
<tbody>
<tr>
<td>23 °C</td>
<td>81</td>
<td>85</td>
<td>85</td>
</tr>
<tr>
<td>10 °C</td>
<td>75</td>
<td>78</td>
<td>78</td>
</tr>
</tbody>
</table>

Chemical Resistance

Yellowing Tendency back to main menu

next back Binder Systems by Application
### Epikote™ 144 with Epikure™ 132

#### Mechanical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>7 d</th>
<th>7 d + post curing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexural strength</td>
<td>52 MPa</td>
<td></td>
</tr>
<tr>
<td>E-modulus</td>
<td>3333 MPa</td>
<td></td>
</tr>
<tr>
<td>Tensile strength</td>
<td>53 MPa</td>
<td></td>
</tr>
<tr>
<td>Compressive strength</td>
<td>118 MPa</td>
<td></td>
</tr>
<tr>
<td>Tg – DSC</td>
<td>56 °C</td>
<td>111 °C</td>
</tr>
</tbody>
</table>
Epikote™ 818 with Epikure™ 207

**Epikote™ 818**

Non crystallizing epoxy
Based on bisphenol A/F

Epoxide equivalent: 189.5 ± 5.5 g/equiv.
Viscosity (25 °C): 1000 ± 200 mPa·s

**Epikure™ 207**

Modified, cycloaliphatic polyamine-adduct
H-active equivalent: 93 g/equiv.
Viscosity (25 °C): 450 ± 100 mPa·s

Mixing ratio (resin : hardener) [pbw] 100 : 49

Pot life:
t to 40 °C 19 m in
t to \( T_{\text{max}} \) 38 m in
\( T_{\text{max}} \) 171 °C

Gel time:

next back

Binder Systems by Application
Product Profiles

Epikote™ 818 with Epikure™ 207

Surface
at 23 °C  good, glossy surface
at 10 °C  little glossy surface

Early Water Resistance  
(1 = good ... 5 = poor)
at 23 °C  2
at 10 °C  4

Shore D - Hardness  
after 24 h  64  75  81
at 23 °C  48 h  75  81
at 10 °C  7 d  52  77

Chemical Resistance
Yellowing Tendency
# Epikote™ 818 with Epikure™ 207

## Mechanical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>7 d</th>
<th>7 d + post curing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Flexural strength</strong></td>
<td>56</td>
<td></td>
</tr>
<tr>
<td><strong>E-modulus</strong></td>
<td>1748</td>
<td></td>
</tr>
<tr>
<td><strong>Tensile strength</strong></td>
<td>36</td>
<td></td>
</tr>
<tr>
<td><strong>Compressive strength</strong></td>
<td>49</td>
<td></td>
</tr>
<tr>
<td><strong>Tg – DSC</strong></td>
<td>39</td>
<td></td>
</tr>
</tbody>
</table>
Epikote™ 04851 with Epikure™ 04852

**Epikote™ 04851**
Reactively diluted, non-crystallizing epoxy resin based on bisphenol A/F

Epoxide equivalent: 200 ± 5 g/equiv.
Viscosity (25 °C): 250 ± 50 mPa·s

**Epikure™ 04852**
Modified, cycloaliphatic polyamine-adduct

H - active equivalent: 66 g/equiv.
Viscosity (25 °C): 500 ± 75 mPa·s

Mixing ratio (resin : hardener) [pbw] 100 : 33

Pot life:
t to 40 °C 17 min
t to T_{max} 34 min
T_{max} 196 °C

Gel time:

back to main menu

Binder Systems by Application
Epikote™ 04851 with Epikure™ 04852

Surface
at 23 °C: good, glossy surface
at 10 °C: non-glossy, worse surface

Early Water Resistance (1 = good ... 5 = poor)
at 23 °C: 2
at 10 °C: 4

Shore D - Hardness after 24 h
at 23 °C: 74
at 10 °C: 35

Chemical Resistance

Yellowing Tendency

next back Binder Systems by Application
## Epikote™ 04851 with Epikure™ 04852

### Mechanical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>7 d</th>
<th>7 d + post curing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Flexural strength</strong> ([MPa])</td>
<td>91</td>
<td>97</td>
</tr>
<tr>
<td><strong>E-modulus</strong> ([MPa])</td>
<td>2960</td>
<td>2910</td>
</tr>
<tr>
<td><strong>Tensile strength</strong> ([MPa])</td>
<td>62</td>
<td>63</td>
</tr>
<tr>
<td><strong>Compressive strength</strong> ([MPa])</td>
<td>106</td>
<td>96</td>
</tr>
<tr>
<td><strong>Tg – DSC</strong> ([°C])</td>
<td>45</td>
<td>49</td>
</tr>
</tbody>
</table>
Chemical Resistance

Epikote™ 04851 with Epikure™ 04852

Chemical Resistance

Petrol
Aromates
Alcohol
Ester/Ketone
Acetic Acid 10%
DETA 50% in Water
Nitric Acid 25%
Sulphuric Acid 36%
Lactic Acid 10%
Brake Fluid

Shore D in % (relative Values)

Without contamination
1 week
2 weeks
3 weeks
4 weeks
1 week relaxation

March 9, 2007
**Product Profiles**

**Epikote™ 357 with Epikure™ 05418**

**Epikote™ 357**
- Reactively diluted, non-crystallizing epoxy resin based on bisphenol A/F
- Epoxide equivalent: 167 ± 4 g/equiv.
- Viscosity (25 °C): 700 ± 100 mPa·s

**Epikure™ 05418**
- Modified, cycloaliphatic polyamine-adduct (VOC-free)
- H-active equivalent: 85 g/equiv.
- Viscosity (25 °C): 350 ± 100 mPa·s

**Mixing ratio (resin : hardener) [pbw]** 100 : 51

**Pot life:**
- t to 40 °C 25 min
- t to T_{max} 44 min
- T_{max} 190 °C

**Gel time:**

---

**Binder Systems by Application**

March 9, 2007
Epikote™ 357 with Epikure™ 05418

**Surface**

- at 23 °C: very good, glossy surface
- at 10 °C: good, glossy surface with light irregularities

**Early Water Resistance**

\[
\begin{array}{ccc}
\text{at 23 °C} & 2 \\
\text{at 10 °C} & 3 \\
\end{array}
\]

**Shore D - Hardness**

\[
\begin{array}{ccc}
\text{at 23 °C} & 65 \\
48 \text{ h} & 76 \\
7 \text{ d} & 82 \\
\text{at 10 °C} & 48 \\
& 79 \\
\end{array}
\]

**Chemical Resistance**

**Yellowing Tendency**
### Mechanical Properties

**Curing**

<table>
<thead>
<tr>
<th>Property</th>
<th>Unit</th>
<th>7 d</th>
<th>7 d + post curing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexural strength</td>
<td>MPa</td>
<td>83</td>
<td>91</td>
</tr>
<tr>
<td>E-modulus</td>
<td>MPa</td>
<td>2551</td>
<td>2709</td>
</tr>
<tr>
<td>Tensile strength</td>
<td>MPa</td>
<td>58</td>
<td>63</td>
</tr>
<tr>
<td>Compressive strength</td>
<td>MPa</td>
<td>78</td>
<td>81</td>
</tr>
<tr>
<td>Tg - DSC</td>
<td>°C</td>
<td>40</td>
<td>49</td>
</tr>
</tbody>
</table>

**Epikote™ 357 with Epikure™ 05418**
Epikote™ 357 with Epikure™ 05418

Chemical Resistance

Shore D in % (relative values)

- Petrol
- Aromates
- Alcohol
- Ester/Ketone
- Acetic Acid 10%
- DETA 50% in Water
- Nitric Acid 25%
- Sulphuric Acid 36%
- Lactic Acid 10%
- Brake Fluid

Without contamination
1 week
2 weeks
3 weeks
4 weeks
1 week relaxation
Product Profiles

Epikote™ 896 with Epikure™ 270

Epikote™ 896
Low-viscous, non-crystallizing epoxy resin based on bisphenol A/F

Epoxide equivalent: 194 ± 5 g/equiv.
Viscosity (25 °C): 950 ± 150 mPa·s

Epikure™ 270
Modified, aliphatic polyamine

H–active equivalent: 38 g/equiv.
Viscosity (25 °C): 9 ± 5 mPa·s

Mixing ratio (resin : hardener) [pbw] 100 : 20

Pot life:
t to 40 °C 14 min

Pot life:
t to T_max 23 min

T_max 252 °C

Gel time:
126 min

next back

Binder Systems by Application
Epikote™ 896 with Epikure™ 270

**Surface**
- At 23 °C: good, glossy surface
- At 10 °C: good, little glossy surface

**Early Water Resistance**
- At 23 °C: 2
- At 10 °C: 3

**Shore D - Hardness**
- After 24 h: 83
- After 48 h: 83
- After 7 days: 84
- At 23 °C (24 h): 83
- At 23 °C (48 h): 83
- At 23 °C (7 days): 84
- At 10 °C (24 h): 77
- At 10 °C (48 h): 82
- At 10 °C (7 days): 82

**Chemical Resistance**

**Yellowing Tendency**
Epikote™ 896 with Epikure™ 270

Mechanical Properties

<table>
<thead>
<tr>
<th></th>
<th>7 d</th>
<th>7 d + post curing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexural strength</td>
<td>[M P a ]</td>
<td>130</td>
</tr>
<tr>
<td>E - modulus</td>
<td>[M P a ]</td>
<td>3460</td>
</tr>
<tr>
<td>Tensile strength</td>
<td>[M P a ]</td>
<td>65</td>
</tr>
<tr>
<td>Compressive strength</td>
<td>[M P a ]</td>
<td>125</td>
</tr>
<tr>
<td>Tg - DSC</td>
<td>[°C ]</td>
<td>59</td>
</tr>
</tbody>
</table>
Chemical Resistance

Epikote™ 896 with Epikure™ 270

Shore D in % (relative values)

Without contamination 1 week 2 weeks 3 weeks 4 weeks 1 week relaxation

- Petrol
- Aromates
- Alcohol
- Ester/Ketone
- Acetic Acid 10%
- DETA 50% in Water
- Nitric Acid 25%
- Sulphuric Acid 36%
- Lactic Acid 10%
- Brake Fluid

back to main menu
Chemical Resistant Systems

Days UV-irradiation stress (92 W/m²/nm UV 340)

- **EpiKote™ 357 + EpiKure™ 105**
- **EpiKote™ 896 + EpiKure™ 270**
Epikote™ 816 with Epikure™ 8545-W-52

**Epikote™ 816**

*Reactively diluted epoxy resin based on bisphenol A*

**Epoxy equivalent:** $194.5 \pm 5.5$ g/equiv.

**Viscosity (25 °C):** $1800 \pm 300$ mPa·s

**Mixing ratio (resin : hardener) [pbw]** 100 : 165

**Pot life:**
- t to 40 °C m in
- t to $T_{\text{max}}$ m in
- $T_{\text{max}}$ °C

**Gel time:**

**Epikure™ 8545-W-52**

*Non-ionic, water reducible, modified epoxy-amine adduct supplied at 52% solids in water*

**H – active equivalent:** 320 g/equiv.

**Viscosity (25 °C):** $14000 \pm 100$ mPa·s

**Binder Systems by Application**
### Starting Formulations

<table>
<thead>
<tr>
<th>Part A</th>
<th>Parts by weight</th>
<th>Parts by weight</th>
<th>Parts by weight</th>
<th>Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epikote 816</td>
<td>49.44</td>
<td>46.67</td>
<td></td>
<td>Hexion</td>
</tr>
<tr>
<td>Eponex 1510</td>
<td></td>
<td>48.31</td>
<td></td>
<td>Hexion</td>
</tr>
<tr>
<td>TiO2 R960</td>
<td>16.11</td>
<td>16.26</td>
<td>16.16</td>
<td>DuPont</td>
</tr>
<tr>
<td>Micro Talc AT1</td>
<td>4.02</td>
<td>4.06</td>
<td>4.03</td>
<td>Mondo Minerals</td>
</tr>
<tr>
<td>SE extender</td>
<td>5.64</td>
<td>5.69</td>
<td>5.66</td>
<td>Naintsch</td>
</tr>
<tr>
<td>Syloid 244</td>
<td>0.8</td>
<td>0.80</td>
<td>0.80</td>
<td>Grace</td>
</tr>
<tr>
<td>Byk A530</td>
<td>0.20</td>
<td>0.20</td>
<td>0.20</td>
<td>Byk Chemie</td>
</tr>
<tr>
<td><strong>Total part A</strong></td>
<td>76.21</td>
<td>73.68</td>
<td>75.16</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Part B</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Epikure 550</td>
<td>23.79</td>
<td></td>
<td></td>
<td>Hexion</td>
</tr>
<tr>
<td>Epikure 196</td>
<td></td>
<td>26.32</td>
<td>24.84</td>
<td>Hexion</td>
</tr>
<tr>
<td><strong>Total part B</strong></td>
<td>23.79</td>
<td>26.32</td>
<td>24.84</td>
<td></td>
</tr>
<tr>
<td><strong>Total Part A+B</strong></td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td></td>
</tr>
</tbody>
</table>
Low Yellowing

Epikote 816 / Epikure 550

Epikote 816 / Epikure 196

Eponex 1510 / Epikure 196
Formulation | % m/m
--- | ---
Epikure 8545-W-52 | 47.71
Epikote 818 | 29.48
Water | 22.81
| 100.00

Optionally a defoamer e.g. Tego Foamex 7447 can be added

**Procedure**
- Emulsify gradually epoxy resin into curing agent solution with appropriate mixing equipment
- Add water until required viscosity is obtained

**Properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>% m/m</th>
<th>Pa.s</th>
<th>minutes</th>
<th>hours</th>
<th>1/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solids content</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>55</td>
</tr>
<tr>
<td>Application viscosity@23°C</td>
<td></td>
<td></td>
<td>0.96</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tecam gelation time</td>
<td></td>
<td>minutes</td>
<td>60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beck-Koller drying time@23°C</td>
<td></td>
<td>hours</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soft gel</td>
<td></td>
<td></td>
<td>0.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hard gel</td>
<td></td>
<td></td>
<td>2.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Koenig hardness</td>
<td></td>
<td>1/s</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>after 1 day cure@23°C</td>
<td></td>
<td></td>
<td>47</td>
<td></td>
<td></td>
</tr>
<tr>
<td>after 7 days cure@23°C</td>
<td></td>
<td></td>
<td>141</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Curing Agent Component (A)

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Weight (parts)</th>
<th>Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPIKURE 8545-W-52</td>
<td>15.91</td>
<td>Hexion</td>
</tr>
<tr>
<td>EPIKURE 3253</td>
<td>0.48</td>
<td>Hexion</td>
</tr>
<tr>
<td>BYK 045</td>
<td>0.67</td>
<td>BYK CHEMIE</td>
</tr>
</tbody>
</table>

*Mix the additive into the EPIKURE curing agents before filler addition*

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Weight (parts)</th>
<th>Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ti Pure R960</td>
<td>2.75</td>
<td>DuPont</td>
</tr>
<tr>
<td>Water</td>
<td>10.76</td>
<td></td>
</tr>
</tbody>
</table>

*Disperse the pigment for 10 minutes at 2000 rpm. Add water at 500 rpm*

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Weight (parts)</th>
<th>Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albaryte</td>
<td>32.59</td>
<td>Sachtleben Chemie</td>
</tr>
<tr>
<td>Quartzflour M10</td>
<td>27.20</td>
<td>SCR Sibelco NV</td>
</tr>
</tbody>
</table>

*Disperse fillers at 2000 rpm for 10 minutes*

| Total A             | 90.36          |

### Resin Component (B)

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Weight (parts)</th>
<th>Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPIKOTE 816</td>
<td>9.64</td>
<td>Hexion</td>
</tr>
</tbody>
</table>

*Mix the EPIKURE curing agent base well with the EPIKOTE resin base before application*

| Total B             | 9.64           |

| Total formulation A+B | 100.00         |
## Typical properties EK 8545-W -52 self levelling formulation

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pigment/filler to binder weight ratio</td>
<td>3.4 : 1</td>
</tr>
<tr>
<td>Binder / Water ratio</td>
<td>50 : 50</td>
</tr>
<tr>
<td>Flow at 23°C (mm) *</td>
<td></td>
</tr>
<tr>
<td>after 10 minutes</td>
<td>DIN 53211</td>
</tr>
<tr>
<td></td>
<td>203</td>
</tr>
<tr>
<td>after 24 hours</td>
<td></td>
</tr>
<tr>
<td></td>
<td>209</td>
</tr>
<tr>
<td>Shore D hardness</td>
<td></td>
</tr>
<tr>
<td>after 7 days at 23°C</td>
<td>DIN 53505</td>
</tr>
<tr>
<td></td>
<td>72</td>
</tr>
<tr>
<td>after 1 month at 23°C</td>
<td></td>
</tr>
<tr>
<td></td>
<td>75</td>
</tr>
</tbody>
</table>
Preliminary information 3 mm thick self-leveling flooring formulation

Competitive material

Epikote 816 / Epikure 8545-W-52
Epikure 3253
Sewer Rehabilitation: The Inversion Process

The technique:
A synthetic fiber felt of the required diameter and length of the pipe to be repaired is fabricated. The wall thickness of the tube controls the final impregnated felt thickness.

The felt tube [see Figure 1, right] is impregnated with the required amount of epoxy resin (Epkote 260) and curing agent (EpiKure 3203).

A cross section of the cured, inverted, impregnated felt is shown in Figure 1, left.

A hydrostatic head drives the saturated tube into the damaged pipe, inverting it as it goes in (Figure 2). As a result of the inversion the resin-saturated surface is pressed snugly against the pipe wall. When fully extended, heated water or steam is circulated through the pipe curing the binder composite into a homogeneous rock-hard pipe within the damaged pipe.

The system:
Epkote 260 / EpiKure 3203 offers the customer a system with a long potlife, excellent wetting characteristics and high mechanical properties.

Fig. 1: Felt tube before impregnation and inverting (right). Cross section of cured, inverted, impregnated felt tube (left).

Fig. 2: Inversion technique. Inverted with water under pressure. Cure with steam / hot water.
Epikote™ 260 is a low viscosity epoxy resin based on Bisphenol A and Bisphenol F resins, containing proportions of a mono-functional and a multi-functional reactive diluent. The resin has agreeable handling characteristics and does not crystallize on storage even at low temperatures.

Epikote™ 3203 is a very low viscosity modified aliphatic amine blend and is recommended in combinations with epoxy resins for application at ambient conditions and cured at moderately elevated temperatures, although cure at a temperature above 15 °C is feasible. In combination with Epikote 260 excellent results can be obtained for the rehabilitation of sewers and pipes.

**System Features**
- Easy mixing*
- Long pot life
- Excellent wetting
- Superior mechanical properties
- Also possibility to adjust mixing viscosity by using curing agent with the appropriate 

### Formulation

<table>
<thead>
<tr>
<th>Formulation</th>
<th>Unit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resin Epikote 260</td>
<td>plw</td>
<td>76.6</td>
</tr>
<tr>
<td>Curing Agent Epikote 3203</td>
<td>plw</td>
<td>23.4</td>
</tr>
<tr>
<td>Total</td>
<td>plw</td>
<td>100.0</td>
</tr>
</tbody>
</table>

### Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Unit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viscosity at 25 °C</td>
<td>mPa</td>
<td>0.31</td>
</tr>
<tr>
<td>Gel time at 25 °C (100 g)</td>
<td>min</td>
<td>383</td>
</tr>
</tbody>
</table>

**Cure 2 weeks at 25 °C**

### Flexural properties ISO 178:

<table>
<thead>
<tr>
<th>Property</th>
<th>Unit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum strength</td>
<td>MPa</td>
<td>114.7</td>
</tr>
<tr>
<td>Strain at maximum strength</td>
<td>%</td>
<td>4.36</td>
</tr>
<tr>
<td>Stress at 5 % strain</td>
<td>MPa</td>
<td>111.2</td>
</tr>
<tr>
<td>Modulus (Elastic Young)</td>
<td>MPa</td>
<td>3300</td>
</tr>
</tbody>
</table>

**+ Post cure 4 hours at 80 °C**

### Flexural properties ISO 178:

<table>
<thead>
<tr>
<th>Property</th>
<th>Unit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum strength</td>
<td>MPa</td>
<td>105.0</td>
</tr>
<tr>
<td>Strain at maximum strength</td>
<td>%</td>
<td>5.37</td>
</tr>
<tr>
<td>Stress at 5 % strain</td>
<td>MPa</td>
<td>104.5</td>
</tr>
<tr>
<td>Modulus (Elastic Young)</td>
<td>MPa</td>
<td>3100</td>
</tr>
</tbody>
</table>

### Compressive properties ISO 654:

<table>
<thead>
<tr>
<th>Property</th>
<th>Unit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum strength</td>
<td>MPa</td>
<td>84.9</td>
</tr>
<tr>
<td>Modulus (Elastic Young)</td>
<td>MPa</td>
<td>3350</td>
</tr>
<tr>
<td>Tg after post cure</td>
<td>°C</td>
<td>73</td>
</tr>
</tbody>
</table>

back

**Binder Systems by Application**
Starting Formulations

- **LF 156**  Solvent-free Coating System (Airless Spraying)
- **LH 151**  Thixotropic, electrically conductive primer
- **RS 1107/EL**  Self levelling, electrically conductive floor coating
- **RS 1106**  Self levelling floor coating
Starting Formulation LF 156

Solvent-free Coating Systems, (Airless Spraying)

Component A:

Epikote 357 40.0 pbw Hexion Specialty Chemicals GmbH, Duisburg
Luvothix HT 1.0 pbw Lehmann & Voss, Hamburg
Aerosil 380 0.2 pbw Degussa AG, Frankfurt
Microdol 325 50.8 pbw Norwegian -Talk, Frankfurt
Dissolve up to 60°C, then solve with Benzyl alcohol 8.0 pbw Biesterfeld, Hamburg

Component B:

Epikure 541 20.0 pbw Hexion Specialty Chemicals GmbH, Duisburg
Novares LA 700 24.0 pbw Rütgers Chemicals, Duisburg
Luvothix HT 1.0 pbw Lehmann & Voss, Hamburg
Microdol 325 51.0 pbw Norwegian -Talk, Frankfurt
Dissolve up to 60°C, then solve with Benzyl alcohol 4.0 pbw Biesterfeld, Hamburg

Pot life: appr. 1.5 h
Density at 20 °C Comp. A: 1.57 g/cm³
Density at 20 °C Comp. B: 1.50 g/cm³
Working Pressure: appr. 360 bar
### Starting Formulation LH 151

**Thixotropic, solvent-coating conductive enamel as a base coat for electrically conductive flooring compounds**

#### Component A:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity (pbw)</th>
<th>Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epikote 357</td>
<td>50.0</td>
<td>HEXION Specialty Chemicals GmbH, Duisburg</td>
</tr>
<tr>
<td>BYK 141</td>
<td>0.35</td>
<td>BYK-Chemie, Wesel</td>
</tr>
<tr>
<td>BYKETOL OK</td>
<td>0.10</td>
<td>BYK-Chemie, Wesel</td>
</tr>
<tr>
<td>BYK P 104 S</td>
<td>0.05</td>
<td>BYK-Chemie, Wesel</td>
</tr>
<tr>
<td>Printex L 6</td>
<td>7.5</td>
<td>Degussa, Frankfurt/Main</td>
</tr>
<tr>
<td>Xylene</td>
<td><strong>42.0 pbw</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>100.0 pbw</strong></td>
<td></td>
</tr>
</tbody>
</table>

#### Component B:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity (pbw)</th>
<th>Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epikure 541</td>
<td>27.5</td>
<td>HEXION Specialty Chemicals GmbH, Duisburg</td>
</tr>
</tbody>
</table>

#### Manufacturing:

- **Mixture ratio**: comp.A : comp.B = 100 : 27.5 pbw
- **Tone**: black
- **Consumption**: appr. 0.2 kg/m²
- **Grounding resistance (DIN 51953)**: < 5·10⁵ Ohm

Prepare the substrate to be coated using presently customary methods such as steel shoot blasting.

Porous substrates should be prepared with an epoxy primer to prevent absorption of the conductive enamel into the substrate.

The conductive enamel may not be sanded.
Self leveling, elektrically conductive, solvent free floor coating

**Component A:**

<table>
<thead>
<tr>
<th>Ingredient</th>
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</thead>
<tbody>
<tr>
<td>Epikote 357</td>
<td>45.00</td>
<td>HEXION Specialty Chemicals GmbH, Duisburg</td>
</tr>
<tr>
<td>Tego Glide B 1484</td>
<td>0.30</td>
<td>Tego Chemie Service GmbH, Essen</td>
</tr>
<tr>
<td>Byk A 501</td>
<td>0.40</td>
<td>BYK-Chemie, Wesel</td>
</tr>
<tr>
<td>Antifloat D 14</td>
<td>0.60</td>
<td>Lubrizol Langer &amp; Co, Ritterhude</td>
</tr>
<tr>
<td>Titandioxide 2056</td>
<td>1.72</td>
<td>Kronos Titan GmbH, Leverkusen</td>
</tr>
<tr>
<td>Bayferrox 306 (black iron oxide)</td>
<td>0.25</td>
<td>Bayer AG, Leverkusen</td>
</tr>
<tr>
<td>Bayferrox 920 (yellow iron oxide)</td>
<td>0.03</td>
<td>Bayer AG, Leverkusen</td>
</tr>
<tr>
<td>Plastorit 000</td>
<td>15.20</td>
<td>Gustav Grolman, Düsseldorf</td>
</tr>
<tr>
<td>Quartz powder W8</td>
<td>11.50</td>
<td>Quarzwerke GmbH, Frechen</td>
</tr>
<tr>
<td>Sigrafil SFC 3 EPB</td>
<td>0.50</td>
<td>SGL Technik GmbH, Meitingen</td>
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<tr>
<td></td>
<td>100.00</td>
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</table>

**Component B:**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>pbw</th>
<th>Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epikure 541</td>
<td>25.00</td>
<td>HEXION Specialty Chemicals GmbH, Duisburg</td>
</tr>
</tbody>
</table>

**Manufacturing:**

- Pot life (100 g mixture): approx. 35 minutes
- Surface: bright
# Starting Formulation RS 1106

Self levelling, solvent free, floor coating (grey, ca. RAL 7030)

## Component A:

<table>
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</thead>
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<td>Epikote 357</td>
<td>45.00</td>
<td>HEXION Specialty Chemicals GmbH, Duisburg</td>
</tr>
<tr>
<td>Tego Glide B 1484</td>
<td>0.30</td>
<td>Tego Chemie Service GmbH, Essen</td>
</tr>
<tr>
<td>BYK A 501</td>
<td>0.40</td>
<td>BYK-Chemie, Wesel</td>
</tr>
<tr>
<td>Antifloat D 14</td>
<td>0.60</td>
<td>Lubrizol Langer &amp; Co, Ritterhude</td>
</tr>
<tr>
<td>Titandioxide 2056</td>
<td>1.72</td>
<td>Kronos Titan GmbH, Leverkusen</td>
</tr>
<tr>
<td>Bayferrox 306 (black iron oxide)</td>
<td>0.25</td>
<td>Bayer AG, Leverkusen</td>
</tr>
<tr>
<td>Bayferrox 920 (yellow iron oxide)</td>
<td>0.03</td>
<td>Bayer AG, Leverkusen</td>
</tr>
<tr>
<td>Plastorit 000</td>
<td>15.20</td>
<td>Gustav Grolman, Düsseldorf</td>
</tr>
<tr>
<td>Quartz powder W8</td>
<td>11.50</td>
<td>Quarzwerke GmbH, Frechen</td>
</tr>
<tr>
<td>EWO-Heavy Spar</td>
<td>25.00</td>
<td>Sachtleben AG, Duisburg</td>
</tr>
<tr>
<td></td>
<td>100.00</td>
<td></td>
</tr>
</tbody>
</table>

## Component B:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Amount (pbw)</th>
<th>Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epikure 541</td>
<td>25.00</td>
<td>HEXION Specialty Chemicals GmbH, Duisburg</td>
</tr>
</tbody>
</table>

## Manufacturing:

- **Mixture ratio**: comp. A : comp. B = 100 : 25 pbw
- **Pot life (100 g mixture)**: appr. 35 minutes
- **Surface**: bright