

# EPIDIAN® DECO SYSTEM

## EPOXY COMPOSITION FOR DECORATIVE WORKS

**EPIDIAN® DECO** epoxy system is a solvent-free low viscosity composition that creates transparent and highly aesthetic coating intended for manufacturing of decorative elements in furniture and interior design.

### APPLICATION

- casting of fully transparent items
- sealing of small items in transparent resin
- creating furniture and decoration based on wood combined with transparent and coloured resin compositions
- filling „canyons” in decorative table tops
- coating wooden surfaces
- other artistic and decorative solutions

### PROPERTIES

- fully transparent finish
- enables smooth decorative surfaces
- can be easily pigmented
- possible to create layers up to 4 cm thick
- mechanical resistance
- chemical resistance
- water resistant
- easy to clean
- does not contain nonylphenol

### PACKAGING

**EPIDIAN® DECO:** 1kg, 5 kg, 20 kg, 50 kg, 200 kg.

**HARDENER DECO:** 1 kg, 5 kg, 20 kg, 40 kg, 180 kg.

**HARDENER DECO K:** 1 kg, 5 kg, 20 kg, 40 kg, 180 kg.

### FEATURES AND COLOURS

**EPIDIAN® DECO** - colourless liquid

**HARDENER DECO** - colourless liquid

**HARDENER DECO K** - colourless liquid

### SHELF LIFE

12 months after manufacture date

### STORAGE

**EPIDIAN® DECO** must be stored in its original airtight packaging in a dry and airy warehouse. Avoid direct sunlight, sources of heat and fire.

### SPECIFICATION

#### Density at 20 °C

<b>EPIDIAN® DECO</b>	1,12 g/cm <sup>3</sup>
<b>HARDENER DECO</b>	1,00-1,02 g/cm <sup>3</sup>
<b>HARDENER DECO K</b>	0,95 g/cm <sup>3</sup>

### MIXING PROPORTIONS

#### Composition with HARDENER DECO:

- EPIDIAN® DECO 100 parts by weight
- HARDENER DECO 40 parts by weight

#### Composition with HARDENER DECO K:

- EPIDIAN® DECO 100 parts by weight
- HARDENER DECO K 30 parts by weight

### APPLICATION AND HARDENING

Air temperature and humidity when preparing, applying and hardening epoxy composition have a considerable influence on quality and properties of the coating.

The optimal operating air temperature is 20 °C (at least 18 °C) and relative humidity max. 60%. If the humidity is higher, the hardened surface may get muddy, pinholed or viscous. If the floor/surface temperature is reduced below the dew point when hardening, the look and quality of coating will be highly affected. These conditions entail emergence of condensate drops on the surface, which makes the finish less attractive.

Other essential and decisive factors are weighing out and mixing resin composition ingredients. It is important that relevant weight proportions are followed.

The mixing process must be based on two stages: after adding ingredient A to ingredient B, it is necessary to mix them with a

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low-speed drill (max. 400 rpm) for about 3 minutes. Next the mixture should be poured into a clean reservoir and mix again for about 3 minutes. Now the composition is ready and can be applied.



## EPIDIAN® DECO + HARDENER DECO - FLAT SURFACES

Prepare the composition based on the following proportions:

EPIDIAN® DECO	100 parts by weight
HARDENER DECO	40 parts by weight

It is necessary to prepare a mixture of max. 1 kg once. Life time - 10 minutes.

**IMPORTANT:** In order to make sure the resin does not penetrate the material and to prevent air bubbles from escaping the wood uncontrollably, the material must be primed beforehand. For priming, use EPIDIAN® DECO with HARDENER DECO. The surface must be filled after hardening of the base layer. The coating must be left for 16-24 hours at the temperature of 20 °C. If the interval between subsequent layers exceeds 48 hours, it is necessary to tarnish, dedust and degrease the surface before applying another layer. When hardening the surface, avoid dusting, drafts, moisture, and ventilating.

## EPIDIAN® DECO+HARDENER DECO K - THE SO-CALLED CANYONS

To prepare the so-called canyons, the composition in the following proportions is required:

EPIDIAN® DECO	100 parts by weight
HARDENER DECO K	30 parts by weight

**REMEMBER:** In order to prevent the wood from aeration, it must be primed beforehand. For priming, use EPIDIAN® DECO with HARDENER DECO.

Before you fill the canyon space, make sure the primer has hardened (is not sticky), level everything and seal at joints.

After filling the canyon, vent the mass with an electric heat gun. Start venting shortly after filling the canyon and repeat the operation after about 10 minutes. The hardening lasts 48 hours at the temperature of 20 °C.

When hardening the filled surface, avoid dusting, drafts, moisture and ventilating as these factors will determine the end result.

## MATERIAL CONSUMPTION

Material consumption of EPIDIAN® DECO with HARDENER DECO in case of single application is about 1,0-1,1 kg/m<sup>2</sup>/1mm (layer should not exceed 0,5cm at a time).

Material consumption of EPIDIAN® DECO with HARDENER DECO K in case of single application is about 1,0-1,1 kg/m<sup>2</sup>/mm. It is advisable to make canyons of max. dimensions - 9 cm x 4 cm x 100 cm.

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## RESISTANCE PARAMETERS

PARAMETER IN QUESTION	EPIDIAN® DECO + HARDENER DECO	
	7 days at room temperature	6h at 80 °C
<b>Hardening period</b>		
<b>Bending resistance, [MPa]</b> PN-EN ISO 178:2006	66,60	72,60
<b>Modulus of elasticity at bending, [MPa]</b> PN-EN ISO 178:2006	2380,00	2480,00
<b>Deflection, [mm]</b> PN-EN ISO 178:2006	6,50	7,10
<b>Rupture strengths, [MPa]</b> PN-EN ISO 527-1:1998 PN-EN ISO 527-2:1998	28,60	35,50
<b>Modulus of elasticity at tension, [MPa]</b> PN-EN ISO 527-1:1998 PN-EN ISO 527-2:1998	2450,00	2490,00
<b>Compression resistance, [MPa]</b> PN-EN ISO 604:2006	63,70	64,20
<b>Impact strength, [kJ/m<sup>2</sup>]</b> PN-EN ISO 179-1:2004	66,00	69,00
<b>Barcol hardness, [B]</b> ASTM D2583-07	5,00	16,00
<b>Hardness by ball indentation method [MPa]</b> PN-EN ISO 2039-1:2002	105,00	106,00
<b>Martens Heat-Deflection Temperature, [°C]</b> PN-90/C-89025:1990	43,00	47,00
<b>Heat deflection temperature HDT, [°C]</b>	44,00	48,40

## TOOL CLEANING

All equipment used to make epoxy coatings should be cleaned on a regular basis with an acetone type solvent, in order to prevent residues of the epoxy composition from hardening on the tools.

All impurities should be removed immediately to avoid curing.

## USAGE AND CARE

The composition achieves its full mechanical strength 7 days after hardening. In 14 days it reaches its full chemical resistance. The first washing is recommended not earlier than 14 days from manufacturing and hardening of the element/surface.

To prevent quick damage of the surface, it is recommended to observe the following rules:

- Lift items when moving from one place to another - do not slide them on the surface.
- Remove spilled sugar, salt or other loose products immediately.
- Use trivets for hot dishes or warm drinks.
- Do not use chemical scrubbing agents to clean the surface.

## HEALTH AND SAFETY INFORMATION

Information on the safe handling of epoxy compositions is available in "**Instructions for the Use of Epoxy Resins**".

*The data and suggestions included in this material are based on own studies and considered reliable. However we cannot take responsibility for any actions or losses arising directly or indirectly from using our products. The user must check the quality, safety and features of the product before use.*

*NOTE: This information does not supersede the Safety Data Sheet and Technical Sheet being deemed superior and available upon customer's request.*

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Chemical resistance			
Food / Cleaning product	After 4h	After 12h	After 48h
Mineral water	+	+	+
Pepsi <sup>®</sup>	+	+	+
Coffee	+	+	+
Tea	+	+	+
Raspberry juice	+	+	+
Milk	+	+	+
Synthetic vinegar 10%	-	-	-
Tomato paste	+	+	+
Vegetable oil	+	+	+
Spirit 95%	+	+	+
Beer	+	+	+
Window cleaner	+	+	+
Domestos	-	-	-
Cif	-	-	-
Liquid soap	+	+	+
Pronto <sup>®</sup>	+	+	+
Dish washing liquid	+	+	+

Selected food and cleaning products were applied to the surface that had been hardened for 14 days at room temperature. They were removed with a wet cloth after 4, 12 and 48 hours, respectively. The impact of the above mentioned products on surface colour and glow was then assessed.

„+“ no impact

„-“ changed colour or faded surface