



# TECHNICAL DATA SHEET

## AMERIN® HK-31 Hobby-resin

**Field of application:** A resin system used for small castings e.g. souvenirs, dried plants, insects etc. and for making spectacular 3D design floorings

### Characteristics:

- Easy application
- Long processing time
- Transparent, looks like glass
- Can be coloured
- Excellent adhesiveness to most structures (metal, glass, wood, many plastics etc.) Does not adhere to polyethylene, polypropylene, non-stick materials and silicone.
- Suitable for casting of air-dried objects only.
- Excellent mechanical properties, hardness, shock-resistance, toughness.
- Excellent chemical resistance and electrical insulating capability
- Free of solvents
- The hardened material is physiologically harmless.

### Technical data of the components:

	Amerin® HK-31 „A”	Amerin® HK-31 „B”
<b>Characteristics</b>	Modified, solventfree epoxy resin	A low viscosity, polyamine based, solvent-free liquid
<b>Appearance</b>	clear, transparent, thick liquid	colourless, thin, transparent liquid
<b>Density at 25 °C, g/cm<sup>3</sup></b>	1,13 - 1,19	0,94-0,98
<b>Viscosity at 25°C, mPas</b>	11000- 14500	5-25
<b>Flashpoint, °C</b>	> 160	200
<b>Non-volatile matter, %</b>	99,8	99,8
<b>Total chlorine content, %</b>	max. 0,4	-
<b>Outflow time at 25°C, Cup8, s</b>	200-400	40-80
<b>Colour-no. by Gardner</b>	-	max. 3
<b>Shelf-life</b>	min. 12 months *	min. 12 months
<b>Storage</b>	in a dry place, far away from heating in original airtight containers at +5-+20 °C*	
<b>Flammability</b>	III.	III.

\* In case of storing in a cool place for a long time, the material may crystallize, that is it may partly or fully harden. In this case the open can should be placed in a water of 40-50 °C and the material has to be stirred up from time to time. After full resolution and cooling to room temperature the material may be used. The quality of the material does not change during this process.



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## Technical characteristics of the system

**Mixing ratio:** Amerin HK-31 component „A” 100 parts by mass (kg)  
Amerin HK-31 component „B” 33 parts by mass (kg)

	Properties of the mixture
Initial outflow time at 25°C, cup 4, sec	90-130
Potlife at 25°C, hours	appr. 5
Geltime at 25°C, 100 g, hours *	appr. 9
Hardening time at 25°C, hours	appr. 24

\*On request shorter gel-time (e.g. 40 min, 80 min.) is also available, but it changes the mixing ratio as follows:

AMERIN HK-31 (g40) component „A” 100 parts by mass (kg)  
AMERIN HK-31 (g40) component „B” 37 parts by mass (kg)

AMERIN HK-31 (g80) component „A” 100 parts by mass (kg)  
AMERIN HK-31 (g80) component „B” 35 parts by mass (kg)

	Properties of the hardened material *
Density at 25 °C, g/cm <sup>3</sup>	1,05-1,13
Bending strength, N/mm <sup>2</sup>	min. 60
Compression strength, N/mm <sup>2</sup> 2	min. 90
Tensile strength, N/mm <sup>2</sup>	min. 40
Martens value*, °C	min. 65

\* The hardened material softens gradually when raising the temperature above the Martens value. In case of decreasing the temperature under the Martens value the material hardens again.

## Safety Precautions

### Labour safety information

**During work:** Closed working-clothes, safety glasses and gloves have to be worn.

**Skinprotection:** A skin-protective cream has to be applied on hands before starting work.

**Removing the material from the skin:** The material has to be absorbed with a dry clothes or paper and the skin has to be washed with soapy warm water and dried. Afterward it has a protective cream has to be used. The dirty paper or clothes used for absorption should be disposed to a plastic container or sack.

**Ventilation:** The working place has to be ventilated 3-5 times an hour. Workers should avoid breathing in the vapours.

**First-aid:** In case the material gets into the eyes, they should be rinsed thoroughly with water for 15 minutes and the worker should see a doctor as soon as possible. From skin the material should be removed as above. Contaminated clothes should be taken of immediately.

In case somebody feels unwell after breathing in vapours he has to be taken on open air and see a doctor as soon as possible.

Labour safety and environmental information is detailed in the „Safety data sheets” of the product.



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## Information on application

- **Amerin HK-31** can be used for casting **air-dried objects only**. Otherwise the water stayed in the casting may cause bubbles, opalescence or mouldiness.
- During mixing the temperature of the components should be between **15-25 °C**. At higher temperature the gel time shortens and the warming during bonding increases, that makes work more difficult. At lower temperature the gel time is longer and viscosity is higher, warming during bonding decreases.
- Casting process should be begun by preparing the workpieces in a quantity, that can be casted by one mixing during potlife, that is max. 5 hours.
- Prescribed mixing ratio has to be respected at every mixing.
- After pouring together, the two components have to be mixed accurately till receiving absolute homogeneity.
- During hardening of the resin heat-evolution takes place, therefore only max. 2 kg can be mixed at a time.
- The mixed material should be applied within potlife. Material of increased viscosity or under the gelling process must not be used.
- For cleaning the tools and brushes Vilepox H-1 should be used.

The information contained in this data sheet has been collected on the basis of our best engineering knowledge, however, it is not intended to provide any legal commitment.

January 2017.

Amerin HK-31 ENG 3



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