Epoxy resin or polyester resin
Differences - plus & minus - application

Epoxy resin

+ Better mechanical properties
+ Very good chemical resistance
+ Excellent adhesive properties on various substrates (wood, metal)
+ Very good fibre adhesion
+ Low odour nuisance (contains no solvents), more suitable for indoor use
+ Hardly any shrinkage during processing, therefore very suitable for molded components
+ Very good impregnation properties for glass filament fabric, aramid fabric and carbon fabric
+ excludes osmosis damage (boat building and renovation)

- the hardener addition must be very precisely adhered to during mixing
- more expensive than polyester resin

Application

Epoxy resin is a versatile adhesive that is used, for example, in boat building, in the household and in model making. In combination with glass fibre, carbon fibre and aramid fibre in the construction of modern gliders, but also increasingly in large passenger aircraft, it is used as a fibre composite plastic.
It is also used for the production of stone carpets, as a casting resin for the production of components in the casting process, for industrial flooring, concrete coatings and concrete repairs.
The production of fibre composite components, including for aerospace, motorsport and yacht building, often using the hand lamination process, is another area of application.
The epoxy resin is also used as corrosion protection (steel constructions), in the renovation of pipes (e.g. drinking water pipes, underfloor heating) and in the sealing of terrariums, it is non-toxic when cured.
It is also used in the casting of electrical components for insulation and corrosion protection, as well as as a printed circuit board material (carrier material) of electronic circuits. It is also used in art and plastination.

Polyester resin

+ easierto process
+ Hardener addition between 1.0 and 2.5%, reaction time control possible (note data sheets)
+ cheaper price

- strong odor formation during curing (contains styrene)
- Less mechanical properties
- Reduced adhesive properties on solid substrates

Application

Polyester resin is used in the production of tanks, boats, body and industrial components. It is used in the construction of pools and ponds and for waterproofing buildings.

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