Characteristics

- Very water and chemical resistant
- Perfect for swimming pools and marine projects
- All round laminating polyester
- Beautiful laminates with glass, carbon or aramide

Polyester Laminating Resin Premium ISO NPG

- Only the polyester, hardener is not included, please buy separately. For example Butanox
- This ISO-NPG polyester is ideal for projects that need to be water and chemically resistant.
- To be used in combination with various glass mats
- For a good and safe wetting of the fibers
- Resin does not sag from the fibers
- Air bubbles are easy to remove
- Very high temperature resistance
- Food safe in combination with the hardener "Catalyst O" even for alcohol up to 25%
- Certified Lloyd's Register

This Polyester Laminating Resin is based on isophthalic acid and neopentyl glycol (ISO-NPG) and is pre-accelerated. This polyester resin is used in combination with CSM glass mat (chopped strand mat / glass fiber mat). The Wet-Out is very good. The resin does not sag from the fiber. Air bubbles are easy to remove.
It is best to use this resin in the top layers with c veil or chopped glass fiber mat.
For the deeper layers you can use the woven glass fiber mats.
We indicate for each glass mat what approximately you need in terms of resin. This is a guideline, but of course this can differ greatly from project to project.
This Polyester is a perfect high-end laminating resin and also well suited for ponds and swimming pools and other projects that have to be able to withstand wind and weather and various chemicals.

Processing normal applications

Polyester cures by adding a peroxide as a hardener. At lower ambient temperatures, more hardener must be used than at higher ambient temperatures.
Below the amount of B component / catalyst for 100 grams of mixture. This strongly depends on the amount of polyester to be made at a time. Larger quantities generate a lot of heat by themselves and can therefore be mixed with less hardener.

- 12-18 ° C: 2.5% (2.5 ml.)
- 18-23 ° C: 2% (2 ml.)
- 23-30 ° C: 1.5% (1.5 ml.)
- > 30 ° C: 1% (1 ml.)

We recommend not to process the polyester resin below 12 ° C and preferably not above 35 ° C. Note: Make sure the polyester itself is stored between 18 and 22 ° C for best results. Always test which amount of hardener works best in your project.
If the temperature is too low, curing takes a very long time and can sometimes not be completely finished. If the temperature is too high (also due to the use of too much hardener) there is a lot of chance of shrinkage and tensions in the cured resin.
Curing of polyester resins goes well at room temperature. It is true that post-baking the resin at higher temperatures (3 hours at 85 ° C) often gives a stronger end result. However, in many cases this is impossible or very difficult to do.
Use a pipette for small amounts of B component / catalyst/ hardener. 1 ml is equals 1 gram.
Use a maximum of 5% dye. Too much colorant or adding other additives (such as polyester thinners) can change the properties of the cured polyester.

Processing in food applications or for frequent chemical contact

If this polyester is used for molds and objects that come into contact with food or chemicals, extra care must be taken:

- Let the resin heat to room temperature (18-20 ° C)
- Always work with 2% harder at room temperature.
- As a hardener, use the Catalyst O instead of Butanox M50
- Mix the hardener very well and ensure a perfect distribution
- Do not use additives (thinners etc)
- Use a maximum of 5% dye
- Cure for 24 hours at 20 ° C, then at least 3 hours at 85 ° C

Use and/or do:

- After curing and post-baking, clean the mold via wet steaming or leave it to stand for 2 hours with hot water 60-80 ° C and neutral dishwashing liquid and then rinse several times with clean water.

Technical specifications

Values of liquid product at 25 ° C

- Color: pink
- Viscosity: 500 mPa s
- Volatile share: 49%
- Density: 1.05 g / cm³
- Acid value: 13 mg KOH / g
- Gel time of 100 grams with 2% hardener: 60 minutes
- Mixing ratio A to B (hardener): 100 grams: 1-2 grams

Properties resin cured for 24 hours at 20°C and 5 hours at 80°C and 3 hours at 120°C without glass fiber reinforcement

- Barcol hardness: 44
- Deflection temperature under weight: 117 ° C
- Water absorption @ 23 ° C after 24 hours: 19 mg
- Color (UV resistant): Amber clear
- Density @ 25 ° C after curing: 1.16 grams / cm3
- Tensile force: 60 N / mm²
- Tensile modulus: 3300 N / mm²
- Elongation to break: 2.5%
- Volumetric shrinkage: 9.5%

Properties resin cured for 24 hours at 20°C and 16 hours at 40°C with 4 coats of 450g / m² CSM

- Glass share: 30%
- Tensile force: 95 N / mm²
- Tensile modulus: 7000 N / mm²
- Elongation at break: 1.7%
- Flexural strength: 170 N / mm²
- Flexural modulus: 6400 N / mm²

Shelf life

The liquid polyester has a shelf life of at least 3 months when packed in airtight packaging at a temperature of 15 to 25°C and out of direct sunlight.

Safety

Normal chemical safety requirements apply when using polyester resin and peroxide hardeners. Do not drink, eat and smoke during processing. Wash hands after use. Avoid contact with eyes and skin. Do not ingest. Work in a well-ventilated area. If this is not possible, use a mask with an organic vapor filter.
Keep out of reach of children and avoid contact with sparks and open flame.

Always work with the correct safety materials:
liquid-tight gloves, splash goggles and mouth mask with filter. Work even with liquid-tight coverall when working with big amounts of material and always in a ventilated environment.

Use and/or do: