

1 CHARACTERISTICS

The resin **NORESTER® 976 PA WHITE** is a fire retardant resin formulated from polyester orthophthalic resin. It is thixotropic, filled, pre-accelerated, halogen free and antimony oxide free.

- Application hand lay-up and spray-up
- Polymerise at room temperature with addition of MEKP.
- Good wetting out of reinforcements.
- Low styrene emission in application.

NORESTER® 976 is an opaque resin and gives laminates, which answer to this following classification:

- **Class 2 according to the norm BS476 part 7.**

2 PROPERTIES OF THE LIQUID RESIN

Aspect	White liquid
Brookfield viscosity (ISO 2555 - 23°C - sp3)	50 rpm : 1000 - 1200 cP
Specific gravity (ICON 012)	1.33 - 1.37 g/cm ³
Gel time (ICON 002) (23°C - 2% MEKP on 100 g)	7 - 11 minutes
Non volatile content (ICON 003)	65 - 69%

3 MECHANICAL PROPERTIES OF THE CURED RESIN ON LAMINATE

Flexural strength * (ISO 178)	187.2 MPa
Flexural modulus * (ISO 178)	8.025 GPa
Tensile strength * (ISO 527)	113.7 MPa
Tensile modulus * (ISO 527)	2.127 GPa
Glass content	33.88%
Barcol hardness * (ASTM 2583)	50

* Mechanical tests realised on a laminate made with 4 layers 450 g/m², pre accelerated resin with 0.1% Co6% and catalyzed at 2% of MEKP.

Post cure: > 24 hours at room temperature and 3 hours at 80°C.

4 MECHANICALS PROPERTIES OF CURED CAST RESIN


Flexural strength * (ISO 178)	49.54 MPa
Flexural modulus * (ISO 178)	4.835 GPa
Tensile strength * (ISO 527)	27.06 MPa
Tensile Modulus* (ISO 527)	3.024 GPa

IMPORTANT

All of the results have been obtained during the tests in our laboratory. However, we can't be held responsible of manufactured parts with the resin **NORESTER® 976 PA WHITE**, if the specified application conditions are not properly followed.

It is imperative that the user also ensures that his application and his process are appropriate for this product to be used.

We guaranty the conformity of our products with the above specifications. We cannot be held responsible for any damage caused by misuse of this product or use of the product for an application not occurred in this data sheet.

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Elongation at break * (ISO 527)	1.50%
Temperature of deflection under load * (HDT) (ISO 75-3)	57.4°C
Barcol hardness * (ASTM 2583)	45 - 50

* Mechanicals tests realized on cast resin pre accelerated with 0.1% Co6% and catalyzed at 2% of MEKP
Post-cure: > 24 hours at room temperature and 3 hours at 80°C.

5 VERSION

Version with different characteristics:

	R976PALGT*
Description	Long gel time
Viscosité Brookfield (ISO 2555 - 23°C)	50 rpm : 1000 - 1200 cP
Temps de gel (ICON 002) (23°C - 2% MEKP M50 on 100 g)	38 - 42 minutes

*Version produced by Nord Composites UK.

6 RECOMMENDATIONS BEFORE USE

- During storage, a settling low of the charge may appear. Mix the product thoroughly before use so as to have a homogeneous mixture.
- Before use, check that the temperature of the product, the mould and the room is between 18°C and 25°C.
- Mix the peroxide well, never put under 1% or over 2%
- We recommend to add 2% of MEKP peroxide in the resin.
- We retain the attention on the fact that the **NORESTER® 976 PA WHITE** is classified according to the certificates named above and tested on applications produced in our laboratory. It is the responsibility of the customer to assure that the parts he produces are well classified.

7 POST CURING

To obtain optimum resistance properties, the laminate with the **NORESTER® 976 PA WHITE** must be post-curing. In order to accelerate the hardening, the laminate stays at ambient temperature (16 to 20 °C) during 24 hours followed a post-curing of 16 hours at 40°C. We advise to do a post-curing immediately after ripening period to obtain optimum results.

8 PACKAGING

Available in kegs of 25 kg and in drums of 250 kg.

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9 STORAGE CONDITIONS AND HANDLING

Shelf life: **NORESTER® 976 PA WHITE** resin is stable for 3 months from date of production. The product must be stored in its original closed packaging at a temperature between 15°C and 25°C, away from direct sunlight.

It is the responsibility of the customer to ensure that the product is used in good conditions before the use-by date mentioned on the keg.

This resin is subject to the Highly Flammable Liquids Regulations.

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