

## Technical Datasheet



### MODAR™ NX 870 TFE Fire Retardant Resin, Halogen Free

MODAR NX 870 TFE is a new generation of low styrene content hybrid unsaturated polyester resin, containing mineral fillers.

MODAR NX 870 TFE is halogen and antimony free.

This ready-to-use resin offers high fire retardancy properties and low smoke/low toxicity.

Modar NX 870 TFE TFE is recommended when low flame spread, low smoke and low toxicity are required, to manufacture parts compliant with the highest Fire Safety standards such as EN 13501 for construction materials; EN 45545-2 for Railways, IMO for Cruise ship, etc.

MODAR NX 870 TFE is pre accelerated and its specific formulation allows good application properties with good glass fiber wetting.

#### Typical liquid resin properties

| Property at 23 °C                 | Value | Unit | Method |
|-----------------------------------|-------|------|--------|
| Viscosity, Brookfield RV2, 20 rpm | 1800  | mPas | D 005  |
| Density                           | 1,6   |      | QC 16  |
| Geltime                           | 30    | min  | D 006  |
| 1 % MEKP-50                       |       |      |        |

#### Typical cured resin properties (provisional)

| Property                    | Value | Unit   | Method     |
|-----------------------------|-------|--------|------------|
| Tensile strength            | 42    | MPa    | ISO 572    |
| Elongation at break         | 0.5   | %      | ISO 527    |
| Flexural strength           | 44    | Mpa    | ISO 178    |
| Heat deflection temperature | 90    | °C     | ISO 75 (A) |
| Hardness                    | 47    | Barcol | ASTM D2583 |

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Fire retardant  
properties (1)

IMO 2010 FTP Code Part 5

Pass

(1) Fire retardancy ratings mentioned above are indicative values, based on material tested in third party laboratories. These values should not be construed as guaranteed results.  
A large number of parameters relating to user's laminate design and manufacturing process will impact fire retardancy (amongst others: part thickness, part homogeneity, glass ratio, filler ratio, gel coat, paint, etc.). Optimum fire retardancy can only be obtained on fully cured resins and laminates. The final part in which the resin will be used shall imperatively be tested according to relevant norms prior to full industrialization, in compliance with laws and regulations in force.  
It shall be the sole responsibility of the user to determine the suitability of the product for the user's specific application.

Application and use

MODAR NX 870 TFE resin can be used in hand lay-up and spray applications. This resin is particularly recommended for finished fiber reinforced parts which need very good fire retardancy and low smoke toxicity.

Certificates and  
approvals

The manufacturing, quality control and distribution of products, by INEOS Composites, are complying with one or more of the following programs or standards: ISO 9001, ISO 14001 and OHSAS 18001.

Handling and storage

MODAR NX 870 TFE resin is delivered in 250 kg open top drums. The resin must be stirred very well before use.

It is highly recommended that all material is stored at stable temperatures under 25°C preferably indoors, and away from direct sunlight. Prolonged storage or storage outside of recommended conditions can influence liquid resin properties like viscosity and geltime.  
The maximum shelf life of MODAR NX 870 TFE resin is two (2) months.

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#### Notice

All information presented herein is believed to be accurate and reliable, and is solely for the user's consideration, investigation and verification. The information is not to be taken as an express or implied representation or warranty for which INEOS Composites assumes legal responsibility. Any warranties, including warranties of merchantability, fitness for use or non-infringement of intellectual property rights of third parties, are herewith expressly excluded.

Since the user's product formulations, specific use applications and conditions of use are beyond the control of INEOS Composites, INEOS Composites makes no warranty or representation regarding the results which may be obtained by the user. It shall be the sole responsibility of the user to determine the suitability of any of the products mentioned for the user's specific application.

INEOS Composites requests that the user reads, understands and complies with the information contained herein and the current Material Safety Data Sheet.