

Technical Datasheet

INEOS Composites

MODAR™ NX 860 TF/TFE Fire Retardant Resin, Halogen Free

MODAR NX 860 TFE is a new generation of hybrid UP resin, compliant with the highest Fire Safety standard such as EN 45545-2 standard for Railways, and EN 13501 for Construction Materials (1). MODAR NX 860 TF/TFE is halogen free and antimony free.

This ready to use resin offers high fire retardancy properties and low smoke/low toxicity. Euroclass Bs2d0 or EN 45545 HL3/R1 can be achieved (1).

Non-accelerated version (TF) and pre-accelerated version (TFE) are available.

MODAR NX 860 TF/TFE is recommended for flat parts with thickness lower or equal to 3 mm.

For thick, large and complex parts, it is recommended to use Modar NX 860 TFE-LS variant, which has been designed to prevent shrinkage and bending, and to combine it if needed with a low profile additive such as Neulon LP 85 D-44.

Typical liquid resin properties

Property at 23 °C	Value	Unit	Method
Viscosity, Brookfield RV2, 20 rpm	1800	mPas	D 005
Density	1,7		QC 16
Geltime	30	min	D 006
0.25% Co-oct 6% (TF version only)			
1 % MEKP-50			

Typical cured resin properties

Property	Value	Unit	Method
Tensile strength	40	MPa	ISO 572
Elongation at break	0.5	%	ISO 527
Flexural strength	45	Mpa	ISO 178
Heat deflection temperature	99	°C	ISO 75 (A)
Hardness	50	Barcol	ASTM D2583

Technical Datasheet



MODAR™ NX 860 TF/TFE Fire Retardant Resin, Halogen Free

Fire retardant properties (1)

Test	Value
NF EN 45545-2 (CREPIM 01/2016)	HL3/R1
UNE EN 13501-1: 2007 (TECNALIA 01/2017)	B s2 d0
NF EN 45545-2 (CREPIM 02/2016) with Maxguard FRX gelcoat	HL3/R1
BS EN 45545-2 (EXOVA UK 05/2017) with Maxguard FRX gelcoat with Finnester HybridREDc paint	HL2/R1

(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 860 TF/TFE resin can be used mainly 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 860 TF/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

Technical Datasheet



MODAR™ NX 860 TF/TFE Fire Retardant Resin, Halogen Free

MODAR NX 860 TF/TFE resin is two (2) months

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.