

Technical Datasheet

INEOS Composites

ENGUARD™ FR Series Fire Retardant Gelcoat

Enguard FR Series is a flame retardant gelcoat, for spray application, based on a special formula of resin and mineral fillers. The gelcoat has good resistance to flame formation with low smoke emission.

Typical liquid gelcoat properties

Typical Properties at 23°C ¹	Value	Unit
Viscosity, Brookfield RV 4, 20 rpm	6000	cps
Thix Index, Brookfield RV 4, 2/20 rpm	6	
Film cure time, 1.8% MEKP	60	min
Hide, complete	12	mils

(1) Properties are typical values based on material tested in our laboratories. Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

Application and use

Enguard FR series gelcoats contain mineral fillers and halogenated compounds that help to suppress both smoke and flame when used in conjunction with a fire retardant laminating system. Proper protective equipment is required for any surface disruption.

Laminates made with the Enguard FR series gelcoats have met a V-0 self extinguishing UL-94 rating within 10 seconds with no dripping. Laminates made with the Enguard FR Series Gelcoats have also met the ASTM E162-98 (Flame Spread) and ASTM E662-97 (Smoke Density) criteria for Mass Transit applications and ASTM E84-01 (Flame Spread) Class I for Enguard FR series colors, Class II for Enguard FR series whites. This product also provides the end user with good initial gloss as well as acceptable outdoor weatherability.

It is recommended that the gelcoat be catalyzed at a level of 1.5% to 2.0% MEKP and applied at a thickness of no less than 12 mils. Optimum results are obtained at a uniform thickness of 15-18 mils.

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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.

Note: The values given for fire resistance are purely indicative. The finished parts manufactured by our customers must be tested according to the laws in force or to specific technical specifications. Optimum fire resistance is obtained on completely hardened resins and laminated parts.

Handling and use

For good handling and working practices, see INEOS Composites "Gelcoat Handling Guide". It is highly recommended that all materials are stored at stable temperature under 25 °C preferably indoors, and away from direct sunlight. A high quality methyl ethyl ketone peroxide (MEKP) catalyst should be used between 1.5 - 2.5%. The gelcoat with the catalyst must be gently stirred before taken in use.

DOT label: flammable. It is highly recommended that all materials are stored at 25 °C, preferably indoors and away from direct sunlight or heat sources. The commercial warranty period for this product is 30 days from shipment.

All other conditions being equal, higher storage temperatures will reduce product stability and lower storage temperature will extend product stability.

Please be informed that flame retardant components in this polymer gelcoat product are subject to TSCA Significant New Use Rules codified at 40 CFR 721.11068 and 721.11075. These rules also include TSCA 12b requirements.

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

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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.