

COMPOSITE TECHNOLOGIES

TECHNICAL DATA SHEET

KY01SF

Composite Surface Film /
Sandable / Flexible Cure Epoxy

Product

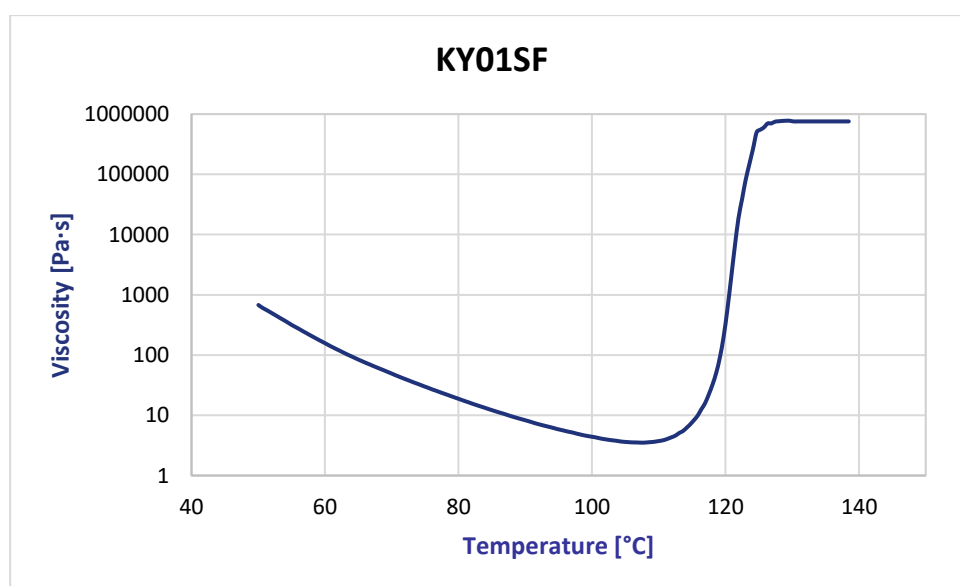
KY01SF is a new epoxy surface film providing high-quality surface finishes with reduced preparation times and evolving to meet challenging demands for lightweight solutions to protect composite structures.

KY01SF is co-curable with a range of Kordsa's prepregs that can cure at different temperatures. It is available in 300 gsm in total.

- » Easy to sand and lay-up
- » Good tack and drapability
- » Excellent resistance to aging tests
- » Protects underlying laminate

Resin Matrix Properties

Color	Black
Weight of resin	278 g/m ²
Weight of carrier	22 g/m ²
Glass Transition Temperature (T _g) (DSC)	168°C
Density	1.38 g/cc



***Our products are flexible by design:
Additional weights, roll sizes, and reinforcements are available.***

Environmental Test Results

Test	Cycle	Results and Evaluation
Heat Aging	240 hours at 90°C	No visual change
Condensed Water Test	240 hours at 40°C and RH 100%	No blistering No visual change

* Layup: 1 layer KY01SF on the surface + 4 layers prepreg. No primer or coating was applied.

Product Reinforcements

Kordsa Composite Europe, Istanbul (Typical, *Additional weights, roll sizes, and reinforcements are available*)

Reinforcement Description	Areal Weight (g/m ²)	Weaving Style
Nonwoven E glass fiber veil	22	nonwoven
Nonwoven carbon fiber veil	20	nonwoven

Recommended Cure Cycles

Optimum properties are achieved under vacuum and 3.5 bar or higher external pressure, and cured according to one of the following:

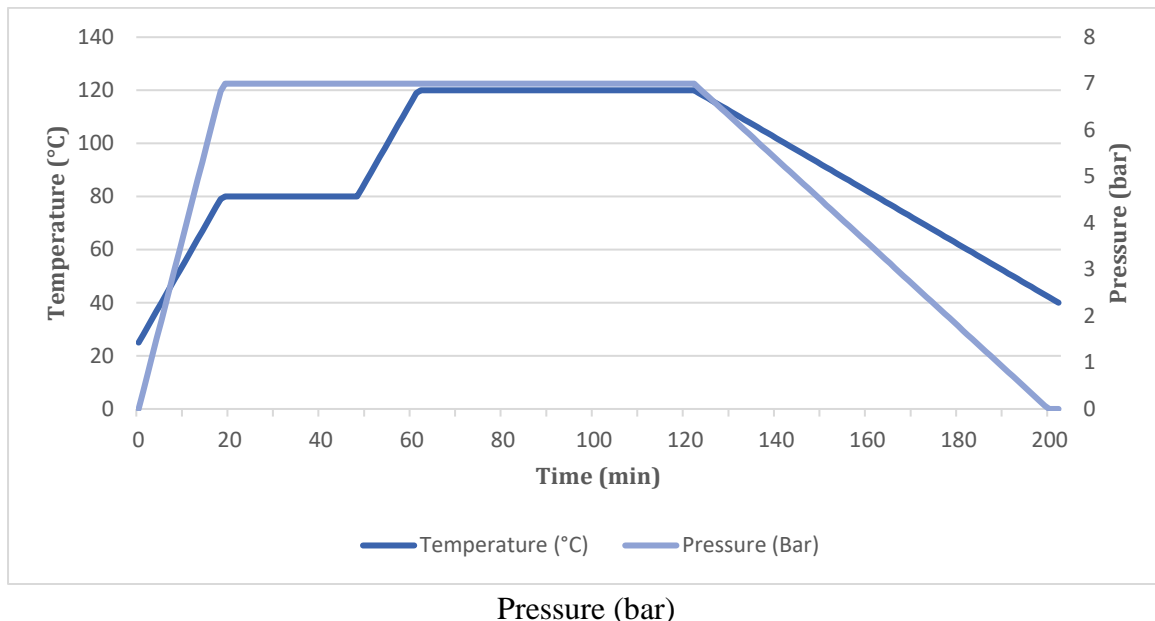
Cure Temperature °C (°F)	KY01SF
121 (250)	60 minutes

Autoclave Molding

Recommended Curing Cycle at 120 °C

- 1) Apply full vacuum (1 bar).
- 2) Apply 7 bar gauge autoclave pressure.
- 3) Reduce the vacuum to a safety value of 0.2 bar when the autoclave pressure reaches approximately 1 bar gauge.
- 4) Heat-up at 3 °C/minute to 80°C.
- 5) Hold at 80°C for 30 minutes.
- 6) Heat-up at 4 °C/minute to 120°C.
- 7) Hold at 120°C for 60 minutes ± 5 minutes.
- 8) Cool at 3 °C per minute.
- 9) Vent autoclave pressure when the component reaches 60°C or below.

* A typical autoclave cure cycle for a thin laminate is 60 minutes at 120°C, but for a thick laminate the cure time may be extended to 2 hours at 120 °C.



KY01SF Surface film application procedure:

Applying surface film in accordance with the mold is important to obtain a good surface. For this, you can follow the steps below:

- The surface film is removed from the freezer to ambient room temperature.
- Do not open the package until it reaches room temperature. It prevents water condensation on the surface.
- Cut and use the surface film that reaches room temperature in desired dimensions.

The surface film is designed to be on top in prepreg lay-ups. For this reason, make sure that the composite plate forms the surface part of the mold by using surface film first. Moreover, void-content will be minimal with the surface film applied correctly.

- After the surface film is conditioned at room temperature, separate it from the paper and apply it to the mold to be laid in a short time.
- Take a single layer of KY01SF cut in desired dimensions and place it to the mold.
- Using push stick or roller while applying the surface film to the mold surface will prevent air from remaining between the surface. Use roller from the center of the surface film toward the outside. It would help to the air out.
- After the layup process is completed, the paper is separated slowly without damaging the surface film.



Figure 1 Correct way of laying tooling prepreg on mold surface.

- Apply debulking to the entire layup part before initiating the cure cycle.
- Cure the composite part according to the procedure in technical data sheet.
- Demold the composite part after the curing cycle complete.

Storage Requirements

Shelf life is from date of manufacturing according to storage temperature below. Working life is the cumulation of time outside of storage temperature.

Storage Condition	KY01SF
Shelf Life at -18°C (0°F)	12 months
Shelf Life at 4°C (40°F)	6 months
Working Life at 24°C (75°F)	14 days

Handling & Safety Instructions

- » Store prepreg suspended horizontally to avoid flat spots and thinning under the weight of the roll.
- » Allow product sufficient time (at least 24 hours) to reach ambient temperatures after removal from cold storage to prevent condensation on the adhesive surface.
- » Use the appropriate safety equipment for this product.
- » Refer to the KY01SF Material Safety Data Sheet for specific safety instructions.

Technical Assistance

In a bind? Call us anytime. We provide fast and knowledgeable technical support:

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