



Hysol® EA 9895 Peel Ply

Composite Surfacing Media

Description

Hysol EA 9895 Peel Ply is a pre-impregnated polyester peel ply product supplied in film form. It is a specially designed resin system capable of curing at 177°C (350°F). It is compatible with state-of-the-art composite prepreg resin systems and provides minimal residual peel ply fibers at the bond surface after curing and removal. No further processing steps are required prior to secondary bond operations, thus eliminating the need for sand and solvent wipe operations. This product is not fully commercialized at this time. Minor product adjustments may be required before final commercial status is granted.

| Features | Benefits |
|---|---|
| Generates a bonding surface that provides a more durable bond than dry peel ply fabrics | <ul style="list-style-type: none"> • Greater durability over the life of the production article lowers repair costs • Widens design abilities |
| Minimal residual polyester fibers left on substrate after removal | <ul style="list-style-type: none"> • Eliminates contamination of bonding surface by residual fibers |
| Promotes cohesive failure mode | <ul style="list-style-type: none"> • Provides a consistent bonding surface |
| Compatible with third generation composites | <ul style="list-style-type: none"> • Performs well with tough state of the art composites • Broadens shop processing conditions |
| No sanding or solvent wiping required for bonding | <ul style="list-style-type: none"> • Minimizes surface preparation time and is ergonomically friendly • Reduces cost of use |
| Minimal force required to remove peel ply layer | <ul style="list-style-type: none"> • Reduces shop time for fabric removal • Fabric strips easily in one piece |
| Cures at 177°C (350°F) | <ul style="list-style-type: none"> • Consistent with current composite cure parameters |
| Long Out-time – 14 days minimum at 23°C | <ul style="list-style-type: none"> • Facilitates shop floor usage and repair applications • Lowers handling and storage costs |

Product Detail

| | |
|-----------------|--|
| Product Form | <ul style="list-style-type: none"> • One-part film |
| Product Color | <ul style="list-style-type: none"> • Neutral-off white |
| Areal Weight | <ul style="list-style-type: none"> • 161 g/m² (0.033 PSF) |
| Support Carrier | <ul style="list-style-type: none"> • Polyester peel ply |
| Roll Dimensions | <ul style="list-style-type: none"> • Nominal 1 m wide by 50.9 m long (3' wide by 167 lineal feet) |
| Resin Content | <ul style="list-style-type: none"> • 48% nominal |

Application

Storage Life - This product requires refrigerated storage. Store @ 0°F/-18°C or below for maximum storage life. Warranty life @ 0°F/-18°C is 12 months from date of shipment. Store only in sealed containers to prevent moisture contamination. Allow all moisture to evaporate before opening for use.

Open Assembly Time - This adhesive may be used within the following schedule after removing from cold storage:

@ 25°C /77°F at least 14 days (actual time TBD)

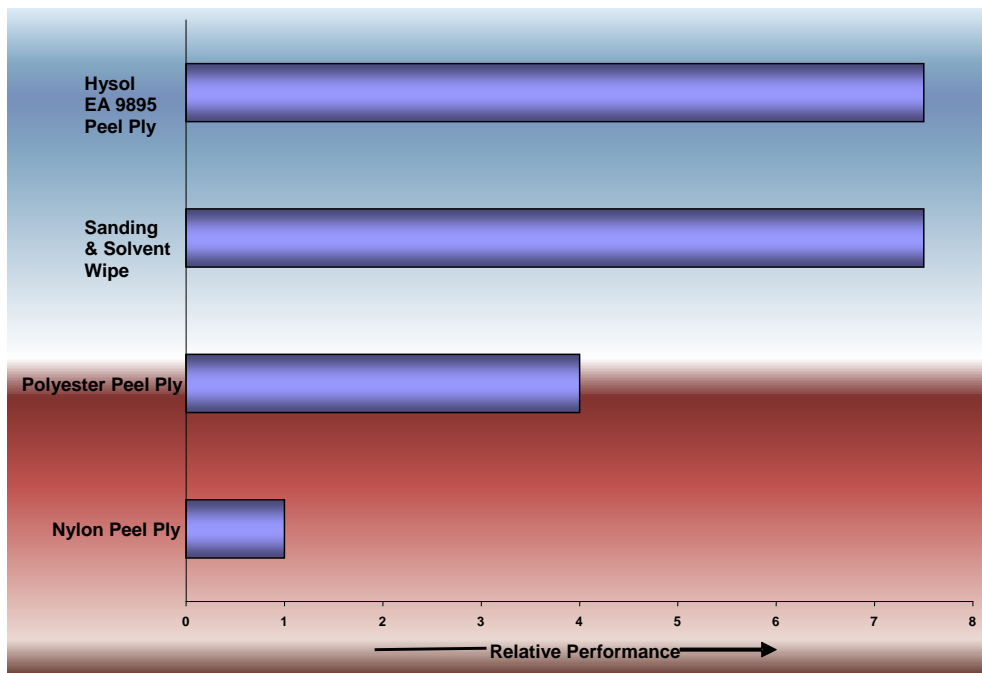
@ 32°C / 90°F at least 7 days (actual time TBD)

Applying - Tool surface should be clean, dry and properly prepared. Hysol EA 9895 Peel Ply, with one liner left on it, may be tacked to the tool. The liner should remain with the product until just before assembly of the composite prepreg. This will minimize contamination of the bond joint.

Curing - This product may be cured for 90 to 120 minutes at 177°C (350°F). Heat-up rate to the cure temperature is not critical, but should be between 0.6° and 5.6°C (1° and 10°F) per minute. Pressure should be applied before heating the parts to be bonded and maintained until cool down of the assembly.

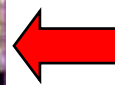
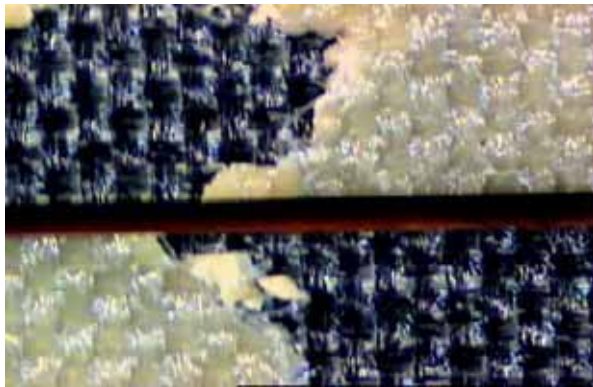
Removal - Remove Hysol EA 9895 Peel Ply just prior to secondary bond operation of composite detail. Starting at one corner, slowly and consistently, peel the Hysol EA 9895 Peel Ply away from the part. Peeling in a diagonal (to peel ply yarn) direction seems to facilitate Peel Ply removal. After the Peel Ply is completely removed, continue immediately with secondary bond operations.

Bond Strength Performance - Relative bond strength is indicated below for the various surface preparations methods. Hysol EA 9895 Peel Ply prepared surfaces produce equivalent bond strengths to sanding and solvent surfaces without their additional processing steps.



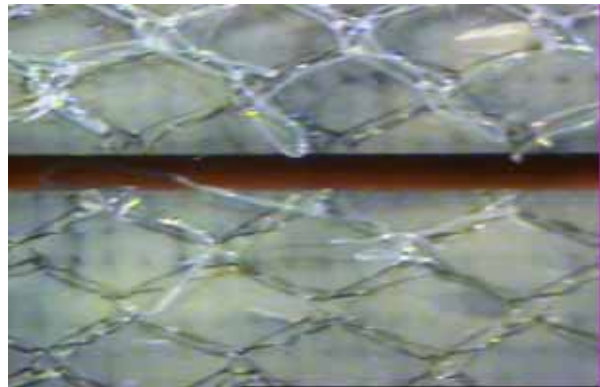
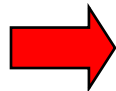
Failure Mode Examination - Failure modes are improved (from adhesive to cohesive) by the use of Hysol EA 9895 Peel Ply over a model system containing a “dry” peel ply fabric

Hysol EA 9895 Peel Ply vs. Dry Peel Ply



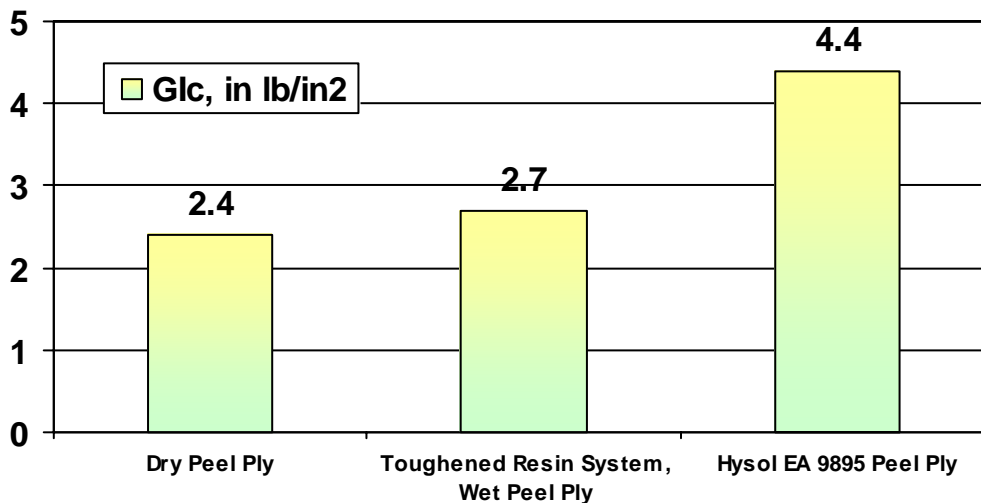
Polyester Dry Peel Ply,
Toughened Film Adhesive

Hysol EA 9895 Peel Ply,
Toughened Film Adhesive



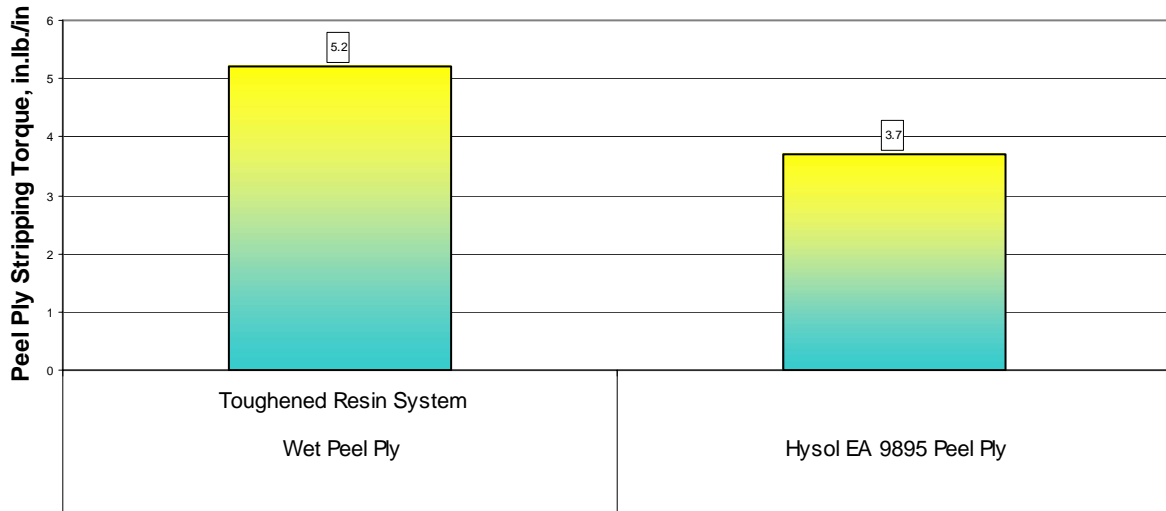
Bond Strength Performance - Hysol EA 9895 Peel Ply improves bonded joint durability of composite structures over model systems containing either a dry peel ply fabric or a peel ply fabric pre-impregnated with a “toughened” resin system. Hysol EA 9695 0.05K is the composite film adhesive used in the secondary bond operation.

Surface Characterization



Stripping Force - Hysol EA 9895 Peel Ply has been formulated to require less stripping force for removal of the peel ply fabric over a model system containing a peel ply fabric pre-impregnated with a “toughened” resin system.

Cured Peel Ply Stripping Force



Cleanup - It is important to remove excess material from the part and bonding tools prior to curing. Uncured product may be trimmed and removed with a sharp object. Residual resin may be removed with denatured alcohol or many common industrial solvents. Be careful to prevent any solvent from entering the uncured bondline, as solvent will degrade the final performance. Consult with your supplier's information pertaining to the safe and proper use of solvents.

Handling Precautions

Do not handle or use until the Material Safety Data Sheet has been read and understood.
For industrial use only.

General:

As with most epoxy based systems, use this product with adequate ventilation. Do not get in eyes or on skin. Avoid breathing the vapors. Wash thoroughly with soap and water after handling. Empty containers retain product residue and vapors so obey all precautions when handling empty containers.

ONE PART

CAUTION! This material may cause eye and skin irritation or allergic dermatitis. It contains epoxy resins.

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Users should review the Materials Safety Data Sheet (MSDS) and product label for the material to determine possible health hazards, appropriate engineering controls and precautions to be observed in using the material. Copies of the MSDS and label are available upon request.

