



# SynSkin® HC 9837.1

## Composite Surfacing Film

Henkel Corporation  
Aerospace Group  
2850 Willow Pass Road  
P.O. Box 312  
Bay Point, CA 94565 USA  
**925.458.8000**  
Fax: 925.458.8030  
www.aerospace.henkel.com

### Description

SynSkin HC 9837.1 is a 250°F/121°C or 350°F/177°C curing epoxy-based composite surfacing film designed to improve the surface quality of honeycomb stiffened composite parts. The product is manufactured with a non-woven fabric for support. It is offered in a nominal weight of 0.035 psf (170 g/sq m), and 0.030 psf (150 g/sq m).

### Features

- Good Tack
- Co-curable
- Provides High Quality Paintable Surface
- Minimizes Core Crush and Porosity
- Maximum Leveling Properties
- Resistant to Microcracking
- Compatible with Lightning Strike Screens and Foils

### Uncured Properties / Suggested Acceptance Tests for certification

Color <sup>1</sup>	Opaque Gray
Available Weights	0.035 lb/ft <sup>2</sup> (170 g/m <sup>2</sup> ) or 0.030 lb/ft <sup>2</sup> (150 g/m <sup>2</sup> )
Gel time @ 250°F/121°C, minutes <sup>2</sup>	20 - 35
Gel time @ 350°F/177°C, minutes	0.5 - 2
Volatiles, % - max <sup>3</sup>	1.5

<sup>1</sup>Color - Visual examination and comparison to ISCC-NBS Centroid Color Charts.

<sup>2</sup>Gel time - Fisher John melting point apparatus.

<sup>3</sup>Volatiles - Volatile content by oven drying @ 350°F/177°C for 60 minutes.

### Handling

This product is supplied in roll form and is ready to use as received. The film should be removed from cold storage and allowed to warm to room temperature prior to opening sealed bag. The indicator on the desiccant should be blue. The fabric side of the film should be positioned and co-cured on the prepreg side of the part. This will allow easy repositioning of prepreg if necessary.

### Henkel QC Acceptance Testing

This data sheet provides users with typical properties obtained from this adhesive. These values are not meant to be used to develop aerospace QC acceptance testing. Users interested in establishing values and tests for routine QC acceptance should request the our internal specification (DAS) which provides detail test methods and values used to certify this adhesive.

## **Application**

**Storage** - SynSkin HC 9837.1 should be stored @ 40°F/4°C or below for maximum storage life. Warranty life @ 10°F/-12°C or below is 12 months. Store only in sealed desiccated polyethylene bag provided. Allow adequate time for the container to warm to room temperature before opening for use.

**Open Assembly Time** - This surfacing film may be used within the following schedule after removing from above recommended cold storage:

@ 77°F/25°C at least 21 days.

**Lay-up** - Application of the surfacing film should be with the resin side facing the tool. Tools pre-treated with Frekote® Sealer B-15 and Frekote 700 NC Release Agent are recommended.

**Curing** - This surfacing film may be cured at either 250°F/121°C or 350°F/177°C for 1.5 hours with 45 psi/0.31MPa pressure (1°F to 10°F/0.5°C to 5°C per minute heat up rate).

**Surface Preparation for Painting** - Light sanding (150 grit) followed by solvent wipe to remove release chemicals and some imperfections. 28C1 Static Conditioner<sup>1</sup> or other suitable pinhole filler should be applied to fill minor surface imperfections.

**Cleanup** - It is important to remove excess adhesive from the work area and application equipment before it hardens. Denatured alcohol and many common industrial solvents are suitable for removing uncured adhesive. Consult your supplier's information pertaining to the safe and proper use of solvents.

<sup>1</sup>Static Conditioner available from Akzo Nobel Aerospace Coatings, East Water Street, Waukegan, IL, USA. Tel: (847) 623-4200, Fax: (847) 625-3332.

## **Product Performance**

### ***Cross Hatch Paint Adhesion***

Cross Hatch Paint Adhesion tested per BMS 8-341 using BMS 8-212 composite test panels surfaced with SynSkin HC 9837.1.

#### **Condition**

Initial - No Exposure

7 Days - Deionized Water @ 77°F/25°C

Static Conditioner: Henkel 28C1

Primer: BMS 10-103

Topcoat: BMS 10-60H, Type 2, Class B

#### **Typical Results**

>95% primer adhesion to SynSkin

>95% primer adhesion to SynSkin

## **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

SynSkin® is a registered trademark of Henkel Corporation.

Rev. 1/01

---

**DISCLAIMER:** The information supplied in this document is for guidance only and should not be construed as a warranty. All implied warranties are expressly disclaimed, including without limitation any warranty of merchantability and fitness for use. All users of the materials are responsible for assuring that it is suitable for their needs, environmental and use. All data is subject to change as Henkel deems appropriate.

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.

---



Henkel Corporation  
Aerospace Group  
2850 Willow Pass Road  
P.O. Box 312  
Bay Point, CA 94565 USA  
925.458.8000  
[www.aerospace.henkel.com](http://www.aerospace.henkel.com)