



Hysol® EA 9210H 10%

Adhesive Bonding Primer

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

Hysol EA 9210H 10% is a corrosion inhibiting adhesive bonding primer that maintains surface bondability after multiple pre-bonding cure cycles. Its unique chemistry allows for a distinct color change during cure. The data contained herein were obtained with Hysol EA 9601 adhesive film (0.045 psf/220 g/m²).

Features

Corrosion Inhibiting
Compatible with Different Adhesives
Color Change During Cure
Bondable After Multiple Cure Cycles

Uncured Adhesive Properties

	One Part
Color	*Reddish Pink
Solids	10%
Density, lb/gal	7.5
Shelf life	
@ <40°F/4°C	6 months
@ <77°F/25°C	3 months

**Changes to a mustard yellow when cured*

Handling

This product is a one-component primer which is used as received after warming to room temperature (77°F/25°C) and mixing well. Since the primer contains insoluble pigments, COMPLETE MIXING AND CONTINUOUS AGITATION IS REQUIRED! This product contains solvents which are flammable. Observe all necessary precautions for the proper and safe use of solvents.

Application

Applying - Bonding surfaces should be clean, dry and properly prepared. For optimum surface preparation consult the Hysol Surface Preparation Guide. The primer should be sprayed after mixing well (15 to 30 minutes) using the following procedure:

1. Spray to a dry primer film thickness of 0.2 to 0.4 mils (0.005 to 0.010 mm).
2. Air dry the primed surfaces for at least 30 minutes before cure.

Curing - This product may be cured 60 minutes @ 300°F/149°C.

Open Assembly Time - Parts, which have been primed and cured, may be stored for up to 6 months. They should be protected from gross contamination during storage. Just prior to the adhesive application, the surfaces to be bonded should be wiped with a ketone solvent.

Cleanup - Overspray must be removed prior to curing the primer. Uncured primer may be removed with a ketone solvent in a well ventilated area. Saturate a clean cloth or industrial wiper with solvent and apply just enough to do the job. Consult your solvent supplier's information pertaining to the safe and proper use of flammable solvents.

Bond Strength Performance

Hysol EA 9210H 10% primer is compatible with adhesives curing from 77°F to 350°F/25°C to 177°C. The following properties were obtained with Hysol EA 9601 film adhesive 0.045 psf/220 g/m² and Hysol EA 9210H 10% primer. Bonds were cured 1 hour @ 250°F/121°C, 25 psi/172 kPa.

Adherends are sodium dichromate - sulfuric acid etched 2024-T3 Alclad aluminum per ASTM D2651-90.

Tensile Lap Shear Strength

Tensile lap shear strength tested per ASTM D1002 after curing as shown above.

<u>Test Temperature, °F/°C</u>	Typical Results	
	<u>psi</u>	<u>MPa</u>
-67/-55	4,500	31.0
77/25	5,000	34.5
180/82	3,500	24.1
250/121	1,750	12.1

After Exposure to*:	Typical Results	
	<u>psi</u>	<u>MPa</u>
77°F/25°C Water - 30 days	4,500	31.0
120°F/49°C - 100% RH - 30 days	4,350	30.0
Fr Hyd Fl - 7 days	4,400	30.3
Hydraulic Oil - 7 days	4,400	30.3
JP -4 Fuel - 7 days	4,450	30.7
Salt Spray - 105°F/41°C - 30 days	4,675	32.2

*Test temperature for all exposures is 77°F/25°C

Peel Strength

T-Peel Strength tested per ASTM D1876 after curing as shown above.

<u>Test Temperature, °F/°C</u>	Typical Results	
	<u>lbs/in</u>	<u>N/25mm</u>
-67/-55	18	80
77/25	23	102
180/82	22	98

Bell Peel strength tested per ASTM D3167 after curing as shown above.

<u>Test Temperature, °F/°C</u>	Typical Results	
	<u>lbs/in</u>	<u>N/25mm</u>
-67/-55	16	71
77/25	40	178
160/71	35	156

Honeycomb Sandwich Performance

Honeycomb sandwich strength tested after curing as shown above. Adherends are 2024-T3 Alclad aluminum with 1/4 inch/6.35 mm cell 5052 non-perforated aluminum core.

<u>Test Temperature, °F/°C</u>	<u>Typical Results</u>	
	<u>in•lb/3in</u>	<u>M•n/m</u>
-67/-55	39	58
77/25	30	44
160/71	27	40

Service Temperature

Service temperature is defined as that temperature at which this primer still retains 1000 psi/6.9 MPa using test method ASTM D1002 and is 275°F/135°C.

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

WARNING! FLAMMABLE! This material contains a cancer agent. Overexposure may cause cancer risk. Keep away from heat, sparks or flame. May be harmful if inhaled or absorbed through skin. It may also cause eye and skin irritation such as allergic dermatitis.

Hysol® 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.

