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TECHNICAL DATA

CONAP® AD-1147 – CONAP® AD-1147-C

CONAP® AD-1147 are high strength adhesives for bonding liquid urethanes to various substrates during the curing process. These systems are a stable solution of polymers in a solvent blend which requires heat to effect cure. An extensive evaluation program has shown **AD-1147** to be capable of bonding an exceptional variety of inorganic and organic materials together. Bonds to aluminum alloys, magnesium, iron, steel, glass, glass-fiber laminates, wood, and leather have high strength and excellent resistance to hydrolysis and environmental extremes. **CONAP® AD-1147-C** require two coats for optimum strength.

	CONAP®AD-1147	CONAP®AD-1147-C
Viscosity (cps)	2000	160
Color	Amber	Amber
Solids Content, %	24	14
Specific Gravity @ 25°C (77°F)	0.90	0.86
Weight per Gallon (lb/gal)	7.50	7.22
Shelf Stability (months)	12	12

SURFACE PREPARATION

High strength bonds can only be obtained if all surfaces to be bonded are free of dirt, rust, chemicals, and mold releases. In addition, surfaces to be bonded should be sandblasted, etched, or degreased. For complete details of surface preparation for various substrates, request Bulletin AC-107 (Surface Preparation Guide).

ADHESION DATA

CONATHANE® RN-1501 / CONACURE® AH-5*	CONAP® AD-1147** (One coat)
Original (pli)	120
3 days RT Water (pli)	148
7 days RT Water (pli)	152
14 days RT Water (pli)	95
3 days 70°C Water (pli)	112
7 days 70°C Water (pli)	107
14 days 70°C Water (pli)	106
4 hours 100°C Water (pli)	87
24 hours 100°C Water (pli)	100
7 days 80°C, Oven (pli)	138

This information is of general nature and is supplied without recommendation of guarantee. It does not make claim to be free from patent infringement. Properties shown are typical and do not imply specification tolerances. Era Polymers cannot accept liability for loss or damage through use. Whilst these technical details are based on expert knowledge, practical experience and laboratory testing, successful application depends upon the nature and conditions in which the products are supplied. Users must, by comprehensive testing, evaluate this product in their own application.



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*RN-1501/AH-5 is a 90 shore A elastomer having a tensile strength of 4500 psi, an elongation of 450% and a tear strength of 500 pli.

** In all instances, failure occurred in the elastomer rather than in the primer.

RECOMMENDED PROCESSING PROCEDURES

Apply one or two coats of **AD-1147** (two coats are required for **AD-1147-C**) with a soft brush, allowing the adhesive to flow on the surface. Application may also be accomplished by spraying, roller coating, or by doctor-blade. Air-dry ½ hour between coats and one-hour or longer after the final coat.

For spray applications, dilute 1-part of AD-1146 or AD-1147 with ½ to 2 parts of CONAP® S-1 solvent. Dilute **and AD-1147-C** 30-40% with **CONAP® S-1** solvent. To double spray, coats should be applied with ½ hour air dry between coats.

NOTE: For optimum results, primer film thickness should be 0.0005 inches to 0.0015 inches. Under no circumstances should film thickness be less than 0.0005 inches.

Since these coatings contain a solvent, it is important that all residual solvent in the film be removed to obtain high bond strengths. A drying period of ½ hour at 70°C (158°F) is sufficient to accomplish solvent evaporation.

When bonding urethanes to metals, the drying period can be part of the preheat cycle used to bring the mold and part to the desired curing temperature. Preheat temperatures of 90-100°C (194-212°F) for 2 to 3 hours are not detrimental. The adhesion of the urethane to the primer film is excellent, and the adhesion of the primer to the metal is improved.

HANDLING INSTRUCTIONS

CONAP® AD-1147 are stable solutions of polymers in a solvent blend. They do not require agitation prior to use. The applied adhesive film should not be exposed to temperatures above 150°C (203°F) for excessive periods of time. If this occurs, the film will be converted to the insoluble state and the adhesion of the polyurethane will be reduced. **CONAP® AD-1147** remain active when normal preheat temperatures for molds or components are used.

CAUTION: FOR INDUSTRIAL USE ONLY!

THESE PRODUCTS ARE FLAMMABLE AND SHOULD NOT BE USED IN AREAS WHERE OPEN FLAMES ARE PRESENT. USE ONLY IN WELL-VENTILATED AREAS. AVOID BREATHING OF VAPORS AND PROTECT SKIN AND EYES FROM CONTACT WITH MATERIAL.

SHOULD SKIN CONTACT OCCUR, WASH IMMEDIATELY WITH SOAP AND WATER. IN CASE OF EYE CONTACT, IMMEDIATELY FLUSH WITH PLENTY OF WATER AND OBTAIN MEDICAL ATTENTION.

AVAILABILITY

CONAP® AD-1147, AD-1147-C, and CONAP® S-1 solvents are packaged in quart, gallon, 5-gallon, and 55-gallon drum containers.

Evaluation samples are available for nominal fee.

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