ROYAL
ADHESIVES & SEALANTS

ADCOBOND® AT-1

Very High Bond Acrylic Tape



Description

ADCOBOND® AT-1 is a pressure sensitive, water-clear, solid acrylic tape system designed to provide a superior bond between a wide variety of substrates. Because of its transparent appearance, **AT-1** is often used in adhesive applications involving glass or other clear materials. The tape possesses a uniform, high-tack, acrylic adhesive on both surfaces and will bond to most clean, dry, oil-free substrates. The tape is formulated to withstand a wide range of weathering and temperature conditions without losing adhesion.

Features
Pressure sensitive bonding
Solid composition for easy cutting
Moisture resistant
Excellent weathering properties
Maintains adhesion at sub-zero temperatures
Hardening or brittle resistant with age
Flexible, conforms to intricate shapes

Basic Use

ADCOBOND® AT-1 can be used in a variety of applications including auto trim attachment, signs, graphics, skin to frame assembly, furniture, appliances, and many other manufacturing and construction applications to replace mechanical fasteners and welds. **AT-1** offers numerous advantages including a waterproof bond, ease of application, the ability to withstand thermal movement, and sound deadening properties.

Specifications

Meets requirements of:
Ford WSB-M3G-138-B

Packaging

Contact your Royal representative for specific sizes

- Thickness ranges from 0.25mm to 1.5mm (0.010” to 0.060”)
- Width ranges from 6mm to 457mm (0.25” to 18”)

Technical Data		
Property	**Typical Value**	**Test Method**
Color	Clear	Visual
Tensile Strength	1700 kPa (250 psi)	ASTM D412 Die C
Elongation	1000%	ASTM D412 Die C
Dynamic Shear	415 kPa (60 psi)	ASTM D3163
Static Shear	Passes @ 74°F Passes @158°F	WSB-M3G138-B 1000g, 1 in², 100hrs
90° Peel Adhesion	4.4 N/mm (25 pli)	ASTM D3330
Chemical Resistance - Cleavage Peel		FLTM BU 112-02 Method C
	12.3 N/mm (70 pli)	3 Days @ RT
	11.4 N/mm (65 pli)	Unleaded Gasoline - 1hr
	10.5 N/mm (60 pli)	Diesel Fuel - 1hr
	11.4 N/mm (65 pli)	Water Immersion - 240hrs
UV Resistance	Maintains minimum 90% of initial strength	2 weeks UV-A @ 140°F
Application Temperature Range	10°C to 38°C (50°F to 100°F)	
Service Temperature	-34°C to 93°C (-30°F to 200°F)	

NOTE: The foregoing information is published as general information only. The listed properties and performance characteristics are approximate values and are not to be interpreted as manufacturing specifications.

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Health & Safety

Prior to working with this or any product consult product label and Safety Data Sheet (SDS) for necessary health and safety precautions.

Storage and Shelf Life

Store material in original unopened packaging at temperatures between 4°C and 38°C (40°F and 100°F). Shelf life is 24 months when stored as recommended.

ACRYLIC TAPE AND ADHESION PROMOTER APPLICATION GUIDE

1. **Substrate Evaluation**

Acrylic adhesive is suitable for bonding a variety of substrates, including many plastic composites, sealed wood, and metals. Low surface energy materials such as polyethylene, polypropylene, silicones and PTFE can be difficult to bond to. Thorough evaluation is recommended when bonding to any questionable surface. An adhesion promoter (primer) for use with pressure sensitive acrylic adhesives may be necessary to facilitate proper bonding, and is available from Royal Adhesives and Sealants.

2. **Preparation of Substrate**

The substrate to be bonded should be cleaned with an appropriate solvent, preferably isopropanol (IPA). The acrylic adhesive backed part should be applied within 15 minutes of cleaning. To ensure removal of all contaminants without leaving any residue, use a clean, lint-free wiping cloth or disposable wipe. Never use recycled rags. Other solvents such as hexane, heptane, or methanol may be suitable for cleaning various substrates after thorough evaluation. The substrate must be completely dry through evaporation of the solvent with radiant heat, hot air dryers, or with time before bonding acrylic adhesive backed parts. The recommended application temperature is 10°C to 38°C (50°F to 100°F).

3. **Adhesive Promoter Application-If necessary**

Apply the AP-1 Adhesion Promoter to the substrate(s) either with a lint-free applicator or foam brush. Apply the Adhesion Promoter in a “wet” laydown thickness range of 1-8 mils. Allow the Adhesion Promoter to dry approximately 5 minutes. Don’t touch the Adhesion Promoter.

4. **Application of Adhesive Backed Part to the Substrate**

Remove the protective release liner from the acrylic tape immediately prior to applying the part to be bonded, being careful not to contaminate the acrylic adhesive. Apply within 15 minutes after surface preparation. Apply the part to be bonded without entrapping air between the tape and the substrate with a recommended minimum application pressure of 15 pounds per inch of tape width to achieve adhesive to substrate contact and maximum bond strength.

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4401 Page Avenue Michigan Center, MI 49254 Phone: (800) 248-4010 Fax: (517) 764-6697 www.royaladhesives.com