PRODUCT BULLETIN

October 2018

# ATPRIME® 2

## Secondary Bonding Agent

## DESCRIPTION

ATPRIME® 2 is a two-component urethane-based primer system developed to enhance adhesion to FRP in secondary laminating operations, including bonding to non-air-inhibited and fully cured surfaces. The material is applied with a brush or roller to prepared surfaces. Bonding is formed chemically through residual unsaturation or hydroxyl rich sites.

ATPRIME® 2 significantly improves interlaminar bond strength when used with Polynt unsaturated and vinyl ester resins, as well as with most, non-waxed competitive resins. It will also enhance bonding of FRP to concrete, non-rusted carbon steel, and some thermoplastics such as PVC and acrylics.

## BENEFITS & FEATURES

- Moisture-activated curing system is virtually unaffected by temperature fluctuations or substrate heat-sink effects, no catalyst required, and degree of cure unaffected by high humidity or moisture-containing (but not wet) substrates (i.e. concrete, bricks, etc.)
- Effective with FRP, steel, concrete, thermoplastics, SMC and other substrates, and bonds to most vinyl ester and polyester resins due to versatile bonding characteristics
- Excellent tack retention which improves bonding up to 24 hours after application
- Superior bond strength, environmentally friendly and improved storage stability due to reactive monomer system without the need for methylene chloride to soften the substrate.

## PROPERTIES – LIQUID

| Property(1) | Unit | ATPRIME® 2A | ATPRIME® 2B |
|---|---|---|---|
| Appearance | - | - | Pale Yellow |
| Viscosity(2) | cps | 180 | 250 |
| Vapor Pressure | mm Hg | $< 1 \times 10^{-4}$ | - |
| Isocyanate Equivalent Weight | - | 133 | - |
| NCO Content | % | 31.5 | - |
| Acidity (as HCL) | % | 0.02 | - |
| Specific Gravity | - | 1.23 | 1.01 |
| Flash Point | °C/°F | 218.3/425 | 25.5/78 |

1) All properties at 25°C/77°F unless otherwise noted
2) Brookfield Viscometer RVT, Spindle #2 at 50 RPM

**Special note**: both components of Atprime II need to be mixed prior to use at a ratio of 4 weight parts of Atprime 2B (unsaturated polyol) to one weight part Atprime 2A (MDI Isocyanate)

## APPLICATION

Each user must determine the suitability of this product to his/her particular mode of operation and intended end-use application. A Polynt representative will be available to assist in the proper selection of all Polynt-Reichhold products available for commercial use.

Prepare FRP surface to be bonded by lightly sanding, then cleaning with styrene monomer. Chemically degraded sections of FRP structures should be ground down to structurally sound laminate for subsequent repair procedure. Steel should be sandblasted to white metal and primed promptly to avoid formation of flash rust. Non-copper blast media must be used to avoid inhibition of ATPRIME® 2 curing. Smooth, troweled concrete surfaces should also be sandblasted. Concrete should be at least 10 days old before ATPRIME® 2 is applied. ATPRIME® 2 components must be mixed before using. Blend 1 part (by weight) ATPRIME® 2A with 4 parts (by weight) ATPRIME® 2B. No catalyst is necessary. Allow mixture to stand 30 minutes before applying to the substrate. The pot life of blended ATPRIME® 2 is approximately 6-12 hours at 80 °F and 50% relative humidity. Discard older material in accordance with applicable regulations. The ATPRIME® 2 system may be thixotroped to prevent drainage on vertical surfaces and to improve adhesion to very porous substrates. Blend 3% hydrophilic fumed silica into ATPRIME® 2B, followed by 0.2% Tween® 20 or Tween® 80 (®Croda International PLC). Apply the ATPRIME® 2 mixture using a paintbrush, or a paint roller for larger surfaces. For health and safety reasons, the mixture should never be sprayed. Allow primer to cure for a minimum of 2 hours at ambient temperature. Complete curing is evident when the primer surface cannot be indented by a fingernail. The cure is moisture initiated, so cure time will vary with temperature and humidity conditions. If primer is left more than 24 hours, re-application will be necessary to obtain full interlaminar bond strength. Apply polyester or vinyl ester resin over the cured, primed surface, and then complete fiberglass lamination according to accepted industry practice. To ensure maximum performance of the ATPRIME® 2 bonding system, conduct small-scale tests to determine the most suitable conditions. Specific substrates should also be evaluated before large-scale operations are conducted.

## COVERAGE

One pound of blended ATPRIME® 2 covers approximately 50-100 ft2 of surface area. One gallon of blended material covers approximately 420-800 $ft^2$. (2-4 mils to wet the surface for secondary bonding).

## SHELF LIFE & STORAGE

The shelf life of ATPRIME® 2 is 180 days from the date of manufacture from Polynt. To maximize usage life and maintain optimum properties, resins and gel coats should be stored in the original closed container at temperatures below 23°C/73°F and away from ignition sources and sunlight. Keep containers sealed to prevent moisture pick-up and monomer loss.

## SAFETY & WARRANTY

To receive a copy of our safety and warranty information, please email safetyandwarranty@polynt.com.