UPS-PJPC 196 AS AQUA STICK
WRAS-APPROVED RAPID-SET EPOXY PUTTY FOR WET & UNDERWATER REPAIR APPLICATIONS

UNIQUE POLYMER SYSTEMS
INNOVATE | REBUILD | ENHANCE

Parker James

In Partnership with Parker James, Unique Polymer Systems delivers mission-ready, defence-grade repair & protection systems.

UPS-PJPC 196 AS AQUA STICK is a high-performance, hand-kneadable repair compound designed specifically for rapid, durable repairs to substrates exposed to wet, damp, or submerged conditions—including both fresh and saltwater environments. Its advanced formulation ensures superior adhesion to a wide variety of materials such as metals, concrete, wood, fibreglass, many rigid plastics, and glass, even in challenging underwater or high-moisture conditions.

Certified with WRAS (Water Regulations Advisory Scheme) approval, UPS-PJPC 196 AS is fully compliant for contact with potable (drinking) water. This makes it ideal for emergency or scheduled maintenance repairs on pipework, tanks, fittings, and components within water distribution systems.

Each putty stick contains pre-proportioned segments of epoxy resin (base) and hardener (activator), embedded uniformly throughout the stick. This eliminates the need for measuring tools or mixing containers. As the two components are kneaded together, they change from two distinct colours into a uniform shade, clearly indicating thorough mixing.

The material's firm, non-slumping consistency prevents sagging or dripping, even when applied to vertical or overhead surfaces. This facilitates excellent wet-out of the substrate and allows for shaping, moulding, or sculpting as required prior to setting. Once cured, UPS-PJPC 196 AS becomes a tough, white polymer with excellent mechanical properties. It can be drilled, tapped, machined, sanded, filed, or painted to match surrounding surfaces.

UPS-PJPC 196 AS is suitable for use in both interior and exterior environments. It offers outstanding resistance to water, a wide range of chemicals, and thermal extremes. It contains no solvents or volatile organic compounds (VOCs), is non-flammable, and does not release hazardous fumes during application.

The product is dimensionally stable and will not shrink, crack, or delaminate after curing. When stored properly in its original packaging, unused material remains fresh for future applications.

PRODUCT FEATURES

- **WRAS Approved** - Certified for contact with potable (drinking) water – safe for use on systems supplying domestic or commercial water.
- **Exceptional Wet & Underwater Adhesion** - Bonds effectively to substrates in damp, wet, or fully submerged conditions – including fresh and saltwater environments.
- **No Measuring or Mixing Tools Required** - Pre-measured resin and hardener in a single stick format – simply knead by hand until fully mixed.
- **Rapid Curing System** - Sets in 15–20 minutes and develops handling strength within 1 hour – ideal for emergency or time-critical repairs.
- **Multi-Surface Compatibility** - Adheres to a wide range of materials including metal, concrete, wood, glass, rigid plastics, and fibreglass.
- **Non-Sag, No-Drip Consistency** - Easily applied to vertical and overhead surfaces without slumping – perfect for on-site repairs in difficult orientations.
- **Machinable & Paintable** - Once cured, can be drilled, tapped, sanded, filed, machined, or painted for aesthetic and functional restoration.
- **Solvent-Free & VOC-Free** - Safe for confined or poorly ventilated areas – no noxious odours, non-flammable, and environmentally compliant.
- **Long Shelf Life & Reusable** - Unused portions remain fresh when stored in original packaging – cost-effective and ready when needed.
- **White Finish** - Cures to a clean, neutral white colour – visually suitable for potable water systems and general structural repairs.

TYPICAL APPLICATIONS

- **Emergency Leak Sealing on Potable Water Pipes** - Provides immediate containment and repair of cracks, pinholes, and fractures in pipes carrying drinking water.
- **Underwater Repairs to Marine Equipment and Fixtures** - Ideal for submerged repairs to hulls, sea chests, strainers, valves, intakes, and ballast tanks.
- **Wet Surface Bonding in Water Treatment Facilities** - Applied directly to wet or sweating pipework, tanks, and concrete structures within water and wastewater treatment plants.
- **Structural Repairs to Tanks, Pipes, and Valves** - Rebuilds and seals metal or composite components suffering from wear, corrosion, or impact damage.
- **Fixing and Anchoring Hardware in Wet Environments** - Used to secure bolts, brackets, or mounts in damp locations where conventional adhesives fail.
- **Sealing and Rebuilding Pump Casings and Flanges** - Prevents leaks and reinforces structural integrity in pump bodies and mating surfaces.
- **Plumbing and HVAC Maintenance** - Quick and reliable solution for maintenance teams dealing with live leaks or difficult-to-isolate systems.
- **Boat and Dockside Maintenance** - Effective for emergency or routine maintenance on boats, pontoons, docks, and submerged infrastructure.

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APPLICATION GUIDE
Phase 1: Surface Preparation

For optimal adhesion and performance, it is recommended that the substrate be properly prepared prior to application:

- **Clean the Surface:**
  Remove all loose or flaking material, rust, scale, grease, oil, algae, marine growth, or other contaminants. This can be done using a wire brush, emery cloth, or other suitable abrasive method.
- **Roughen the Surface:**
  Abrade the area if possible, especially on smooth substrates such as metal, plastic, or glass, to improve mechanical key and adhesion.
- **Remove Moisture (If Practical):**
  While UPS 196 AS is formulated to bond to damp or submerged surfaces, removing excess water from the immediate application area with a cloth or sponge will enhance adhesion where conditions allow.
- **Underwater Application:**
  For submerged repairs, ensure that marine fouling is removed and the surface is as clean as practical under the conditions. Apply firm hand pressure to displace water and establish contact with the substrate.

Note: Bond strength is dependent on the thoroughness of surface preparation. Better results are achieved with cleaner, rougher substrates.

Phase 2: Mixing Instructions

UPS-PJPC 196 AS is a hand-kneadable, pre-measured epoxy stick containing both resin and hardener in a single solid bar. No additional tools are required for mixing.

1. **Cut the Required Amount:**
   Slice or twist off the desired amount of material from the stick.
2. **Remove Protective Film:**
   Peel away and discard the clear plastic wrapping from the cut segment.
3. **Knead Thoroughly:**
   Using gloved hands, knead the material vigorously for approximately 1–2 minutes, or until a uniform white colour is achieved, indicating complete mixing of the resin and hardener.

Tip: In colder conditions, warming the product slightly in your hands or near a heat source will improve malleability.

Phase 2: Application

1. **Apply Immediately After Mixing:**
   Once fully mixed, the epoxy putty should be applied within 5 minutes before the material begins to harden.
2. **Mould and Press Firmly:**
   Press the mixed putty firmly into or onto the prepared substrate. Ensure full contact and press out any trapped air or water. The non-sag formulation allows for application to vertical and overhead surfaces.
3. **Shape as Required:**
   The putty can be shaped, contoured, or smoothed with gloved fingers or a moistened tool during the working time.
4. **Allow to Cure:**
   a. Initial hardening occurs in 15–20 minutes.
   b. Light duty use can resume after 1 hour.
   c. Full mechanical and chemical resistance is achieved after 24 hours.

Important: For live leak sealing or high-pressure applications, allow the full 24-hour cure time before reintroducing system pressure to ensure complete strength development.

TECHNICAL DATA & PERFORMANCE

Minimum Shelf Life (Months @ 24°C)	24
Shore D Hardness (Full Cure, 24 hours)	**96**
Lap Shear Tensile Strength (MPa) on Steel	**6.2**
Compressive Strength (MPa)	**83**
Density (gm/cm³)	**2.0**
Shrinkage (%)	**<1**
Non-Volatile Content (%)	**100**
Electrical Resistance (Megohms)	**30,000**
Dielectric Strength (volts / mil)	**300**
Upper Temperature Limit	**Continues (°C) – 120 Intermittent (°C) – 150**
Chemical Resistance	**Resistant to hydrocarbons, ketones, alcohols, esters, halocarbons, aqueous salt solutions and dilute acids and bases**

Shelf Life

2 years if unopened and stored in normal dry conditions (15-30°C / 60-86°F)

Cure Times

Working Life @ 20°C	5 mins
Initial Set @ 20°C	15 – 20 mins
Light Loading @ 20°C	After Approx. 1 hour

Pack Sizes

This product is available in the following pack sizes:

175mm in length – 22mm diameter – 114gm

Approvals

WRAS Approved for Potable Water Applications

Global Availability

UPS-PJPC 196 AS AQUA STICK is available from a network of Global Distributors for prompt delivery. For further details and the location of your local distributor, please contact Unique Polymer Systems on:
+44(0) 1531 636300 I sales@uniquepolymersystems.com

Technical Service

Complete technical assistance is available. Please contact Unique Polymer Systems with your requirements:
+44(0) 1531 636300 I sales@uniquepolymersystems.com

The products that we supply are for professional use only, it is your responsibility to read the technical data sheets before you place an order and prior to application of the product

Quality

All Unique Polymer Systems products are manufactured and supplied in accordance with an ISO 9001 registered Quality Management System.

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Warranty
Unique Polymer Systems warrants that the performance of the supplied product will conform to the typical descriptions provided in this specification, provided the material is stored correctly and used in accordance with the procedures outlined in the Technical Data Sheet.

Health & Safety
Please ensure good practices are followed at all times during the mixing and application of this product. Protective gloves and other recommended personal protective equipment must be worn. Before mixing and applying the material, please ensure you have read and fully understood all relevant information.

Legal Notice
The data provided in this Product Technical Data Sheet is for informational purposes only and is believed to be accurate at the time of issuance. However, we cannot assume responsibility for results obtained by others whose methods are beyond our control. It is the customer's responsibility to assess the suitability of the product for their intended use. Unique Polymer Systems accepts no liability arising from the use of this information or the product described herein.

About Use
Unique Polymer Systems is a global leader in advanced polymer composites and protective coatings, offering solutions for erosion, corrosion, and wear. With over 30 years of experience, we serve industries including Oil & Gas, Petrochemical, Marine, Paper & Pulp, Water, Power Generation, and Chemicals. Our focus is on providing reliable products and technical support through a global network of distributors.

About the UPS-PJPC Partnership
The UPS-PJPC product range represents a trusted collaboration between Unique Polymer Systems and Parker James Protective Coatings LTD. These high-performance repair and protection solutions are developed and manufactured by Unique Polymer Systems, with technical support and distribution through Parker James to deliver enhanced value and service to end-users.