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## TECHNICAL DATA SHEET

# PUROK VX61-90

## TECHNICAL CHARACTERISTICS

Base		Hybrid methacrylate
Appearance		White (adhesive) Blue (activator)
Viscosity		70,000 – 100,000
Mix Ratio:	by volume	10:1
	by weight	9:1
Density		0.95 g/cm <sup>3</sup>
Working Time		30 - 35 minutes
Fixture Time		80 - 90 minutes
Full Cure		24 hours
Gap Fill		1mm - 10mm
Hardness (Shore D)		73
Elongation		115 - 130%
Tensile Shear Strength		21 - 23 MPa
Service Temperature		-40°C to 120°C

## PRODUCT

Purok VX61-90 is a two component hybrid toughened structural methacrylate adhesive for bonding a wide range of plastics, metals and composites. It has over 100% flexibility and so is suitable for bonding dissimilar materials in varying environments.

## APPLICATIONS

- Effective for bonding dissimilar materials e.g. bare metal, painted metal, plastics, glass and ceramics
- In aerospace for the bonding of aluminium brackets to composite panels, and the structural bonding of composite components
- With GRP bonding of bracketry, and bonding to metallic structures
- In the automotive industry for the bonding of composite components to metallic structure or to composite structures



FORGEWAY

## CHARACTERISTICS

- Easy to extrude and flow controlled when mixed
- Gap fill up to 10mm
- High durability
- High impact resistance
- High bond strength with flexibility
- Can withstand powder coating

## PACKAGING

*Colour:* Blue (Cream & Black for special order)

*Packaging:* 380ml, 18kg drum or 180kg drum

## SHELF LIFE

9 months in unopened packaging from date of manufacture, in a cool and dry storage place at temperatures between +10°C and +25°C

## ENVIRONMENTAL AGEING

Condition	Lap Shear Strength & Mode of Failure
Initial	21.7 MPa
Environmental Cycle - 30 days	21.0 MPa

Lap shear strength ASTM D 1002 - inox / inox

Environmental cycle = 8 hours at -30°C, 8 hours at +85°C, 8 hours at +30°C at 100% relative humidity

## CHEMICAL RESISTANCE

Lap shear samples manufactured using aluminium (6082), cured for 7 days ambient and then immersed in substrate for 28 days

Water at 23°C	21.7 MPa
Water at 90°C	20.7 MPa
Petrol	21.0 MPa
Acetic Acid (10% concentrate)	19.6 MPa
Xylene	20.3 MPa
Lubricating oil-HD30	21.7 MPa
Paraffin	21.2 MPa
Glycol	20.5 MPa



## LAP SHEAR STRENGTH

### Substrate

Inox / Inox

Aluminium / Aluminium (6082)

ABS / ABS

GRP / GRP

Aluminium / ABS

### Average Shear Strength & Failure Mode

22.4 MPa - cohesive failure

21.4 MPa - cohesive failure

11.7 MPa - substrate failure

9.9 MPa - fibre tear

14.5 MPa - substrate failure

## SUBSTRATE

Ideal for bonding all types of PVC, polycarbonate, acrylic, fiberglass, PBT, PPO, ABS, FRT, polyurethane, epoxy, wood, RIM, nylon, GRP, Polyesters, gelcoats, styrene, inox, cold rolled steel, aluminium etc.

## APPLICATION

### Method:

Manual or pneumatic caulking gun, remove resealable cap and pull trigger until both components are extruded, screw on static mixer nozzle. Dispose of first 2cm of mixed adhesive. After application remove nozzle and replace cap. To restart repeat these instructions.

### Application temperature:

+5°C to +35°C

### Repair with:

Purok VX61-90

## HEALTH AND SAFETY

Always use in well ventilated areas.

The mixing of the adhesive and hardner starts a chemical reaction which is exothermic. (15mm thickness and greater can generate temperatures of over 120°C)

The variability of materials, substrates and conditions of use is such that no warranty of their functionality for a specific application can be deducted from this information, written recommendation or any other type of suggestion offered.

Each user has the responsibility to complete adequate evaluations on the efficacy of the materials offered by Forgateway, of its products, services, recommendations and suggestions for the specific application need, and must accomplish sufficient testing to ascertain that the final product will be safe and sound for the final intent of the end-user.

