

Purok VX 60

Rigid, structural adhesive.

Product description

Purok[®] VX 60 is a rigid acrylic structural adhesive. It is designed for applications that require a very high-strength adhesive that doesn't flex and forms a rigid bond.

Applications

- Effective for bonding dissimilar substrates with minimal surface preparation e.g. metals, plastics, and composites.
- Perfect for bonding joints that need a rigid adhesive to hold substrates in place without much movement or dynamic load.

Cure times available

- VX 60-05 (fixture time in -05 minutes)
- VX 60-15 (fixture time in -15 minutes)
- VX 60-35 (fixture time in -35 minutes)

Available sizes

- 50ml
- 200ml
- 400ml
- Bulk



Key features

- Very high lap shear strength
- Rigid once cured
- Bonds well to galvanised steel and oily metals
- Requires minimal surface preparation
- Non-sag formulation
- Variable cure speeds



Typical physical properties

Uncured

Properties	Part A	Part B
Chemistry	Acrylic	Peroxide
Colour	White/cream	Yellow
Viscosity @ 10 s ⁻¹	140,000	120,000
Density [g/ml]	1	1
Mix ratio by volume	1	1
Mix ratio by weight	1	1

Cured

Properties	VX60-05	VX60-15	VX60-35
Colour	Yellow	Yellow	Yellow
Working time	5 mins	<10 mins	20 mins
Handling time (minimum time to achieve >0.3 MPA overlap shear strength)	15 mins	20 mins	40 mins
Time to reach peak exothermic reaction temperature (10g mass)*	10-15 mins	15 mins	30 mins

Typical performance properties characteristics

Overlap shear strength

In accordance with ISO4587.

We bonded overlap shear specimens with overlap dimensions of 12.5 (length) x 25 (width) x 0.5 (thickness) mm. We allowed each specimen to cure for 3 days at 20°C and 50% relative humidity. We then pulled the test pieces apart at a rate of 6mm/ min for metals and 50mm/min for composites and plastics.

Substrate	Surface prep	Overlap shear strength	Failure mode
Aluminium	IPA wiped/abraded (120g)*	25/26	CF/CF
Anodised aluminium	IPA wiped/abraded (120g)*	21/21	CF/CF
Stainless steel	IPA wiped/abraded (120g)*	25/25	CF/CF
Mild steel	IPA wiped/abraded (120g)*	26/26	CF/CF
E-galvanised steel	IPA wiped	25	CF
Hot-dip galvanised steel	IPA wiped	22	CF
GRP - Epoxy	IPA wiped	14	SF
GRP - Polyester	IPA wiped	11	SF
PMMA	IPA wiped	6	SF
ABS	IPA wiped	6	SF
Polycarbonate	IPA wiped	10	SF
PVC	IPA wiped	8	SF

IPA: Isopropyl alcohol
CF: Cohesive failure
AF: Adhesive failure
SF: Substrate failure

Abraded (120g) = abrade with 120 grit pad then clean with IPA.

All substrates used to create a lap shear specimen were 2mm in thickness





Tensile properties

In accordance with ASTM D638.

Tensile properties measured on 3mm thick dumbbell specimens at a rate of 5mm/min.

Properties	Value
Tensile Strength at Break [MPa]	20
Percentage Elongation at Break [%]	10-15

Hardness

Tested in accordance with ASTM D2240.

Shore D hardness measured on a 7mm thick sample of cured adhesive.

Properties	Value
Shore D Hardness	80

Typical performance properties characteristics

Overlap shear strength

In accordance with ISO4587.

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Short term exposure at temperature

Test specimens exposed to the test temperature for 5 minutes and pulled apart at the test temperature. Pull rate 6mm/min.

Substrates - aluminium Surface prep - abraded (120g)*

Test temp(°C)	Shear strength	Failure mode	% strength retention
-21	28	CF	100
25	28	CF	100
50	25	CF	89
75	16	CF	58
100	13	CF	45
120	9	CF	34
150	3	CF	10
200	1	CF	3

Long term exposure - 7 days

Test specimens exposed to the test temperature for 7 days, allowed to condition back to (20°C 50% RH) and pulled apart at a rate of 6mm/min.

Substrates - aluminium Surface prep - abraded (120g)*

Test temp(°C)	Shear strength	Failure mode	% strength retention
-16	26	CF	93
50	26	CF	93
100	23	CF	82





Adhesive performance

Chemical and environmental testing

In accordance with ISO4587.

Lap shears of stainless steel were made in accordance with ISO4587 with the following dimensions 25 x 125 x 1mm and allowed to cure for 14 days under ambient conditions (20°C 50% RH) Lap shear specimens were fully immersed in chemical solution for 24 hours and 14 days, before being tested for strength retention.

Chemical	Surface prep	Days immersed	Strength retention %
Water	IPA	1/14	91/50
5% salt solution	IPA	1/14	60/50
1.5m hydrochloric acid	IPA	1/14	65/60
Conc. bleach solution	IPA	1/14	86/60
Polar protic solvent - IPA	IPA	1/14	98/62
Polar aprotic solvent - acetone	IPA	1/14	37/0
Non-polar solvent - diesel/hydrocarbons	IPA	1/14	100/100

Floating roller peel

In accordance with BS EN 2243-22005.

Floating roller peel specimens configured using abraded 3mm and 1.2mm aluminium with a bond line thickness of 0.3mm test specimens left to cure for 3 days@ 20°C 50% RH. Pull rate 152mm/min.

Substrate	Surface prep	Test temp (°C)	Avg peel force (N/cm)	Failure mode
Aluminium	Abraded (120g)*	20	74	CF

Remarks, Disclaimer & Health and Safety

Disclaimer - 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 Forgeway, 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.

Health and safety - Refer to Safety Data Sheet (SDS) for further information. Apply the usual industrial hygiene.

Reviewed October 2025.

