

Permabond®

NEW! Structural Acrylic Adhesives



Ideal for bonding:

ABS

Acrylic

Alucobond

Aluminium

Carbon Fibre

Ceramic & Stone

Composite

Ferrite

FRP & GRP

Glass

Magnets

Nylon

Phenolic

Polycarbonate

Polyethylene*

Polypropylene*

Polystyrene

PVC (rigid)

Steel

Wood

Zinc

Permabond® Structural Acrylic Adhesive Features & Benefits

- High strength structural bonding with excellent resistance to harsh environments.
- Permabond TA4605 and TA4610 bond to Polypropylene and Polyethylene - with no need to prime or modify the surface of these notoriously hard-to-bond materials.
- Ever popular pink/green structural acrylic - now with higher peel strength and non-stringing rheology. Can be used with mixing nozzles or bead-on-bead for additional cost savings.
- Crystal-clear structural acrylics - ideal for bonding Perspex®, acrylic and polycarbonate for items such as point of sale and exhibition stands.
- Low odour structural acrylics - ideal for working environments with poor ventilation
- Contain NO solvents
- Less sensitive to mixing = short nozzle or able to be used bead on bead - less wastage
- Easy 1:1 mix ratio, can be used with manual dispensing guns or on automatic dispensing equipment.
- High peel strength, elongation and flexibility allows bonding of thin, flexible panels or dissimilar materials (such as metal to glass) with enhanced resistance to thermal cycling.
- Low shrinkage and low exotherm for minimising show-through or distortion of fragile component parts.

+Many more materials
*Permabond TA46XX Range

Permabond Structural Acrylic Adhesives

Permabond's new range of structural acrylic adhesives is now available!

Exciting developments include:

- Low odour structural acrylic adhesives for workplaces where ventilation is an issue
- Adhesive products for bonding untreated polyolefin materials (such as polypropylene and polyethylene).

The range also includes a number of new Methyl Methacrylate (MMA)-based products which offer impressive shear and peel strength performance for structural bonding applications. They also combine rapid cure speed and strength development making them a popular choice for high speed production items.

Structural Acrylic Product Data

Technical Information	TA4605	TA4610	TA452	TA4522
Description	Structural acrylic adhesives for bonding untreated polyolefins such as polypropylene and polyethylene to themselves and other materials such as composites or metals. <i>Use with mixing nozzles.</i>		Low odour structural acrylic adhesive. Ideal for bonding metals. <i>Use with mixing nozzles.</i>	Low odour structural acrylic adhesive. Ideal for bonding plastics. <i>Use with mixing nozzles.</i>
Appearance	A: Off-white B: Almost colourless Mixed: Off-white	A: Off-white B: Almost colourless Mixed: Off-white	A: Red B: Green Mixed: Browish/purple	A: White B: Green Mixed: Green
Mixed viscosity (mPa.s)	125,000	210,000	4500	4500
Maximum gap fill (mm)	1.0	1.0	0.5	0.5
Fixture time (mins)	5-10	12-15	Nozzle life: 2-3 mins	Nozzle life: 4-7 mins
Handling time (mins)	20-25	40-50	6-9	10-15
Working Strength (hrs)	2-4	6-8	Full cure: 24 hours	Full cure: 24-48 hours
Shear strength (N/mm ²)	Polypropylene: 5-8 Polyethylene: 3-6	Polypropylene: 5-8 Polyethylene: 3-6	Steel: 20-24	Steel: 21-23
Temperature range (°C)	-55 to +100	-55 to +100	-55 to +130 (150 peak)	-55 to +130 (150 peak)
Packaging available	10 x 50ml 6 x 400ml Bulk 5kg or 25kg	10 x 50ml 6 x 400ml Bulk 5kg or 25kg	10 x 50ml 6 x 400ml Bulk 5kg or 25kg	10 x 50ml 6 x 400ml Bulk 5kg or 25kg



Polypropylene lapshears bonded with TA4610 - the adhesive bond is so strong the plastic stretches and deforms and suffers failure before the joint.



MMA Structural Acrylic Product Data

Technical Information	TA4200	TA4210	TA4202	TA4204
Description	Gap filling MMA adhesives that are ideal for bonding aluminium panels, composite materials and other materials. <i>Use with mixing nozzles.</i>		Popular multipurpose, rapid curing MMA adhesive. High peel strength and non-stringing formulation. <i>Use with or without mixing nozzles*</i>	Depending on the joint, this product will cure to give a crystal clear appearance as well as excellent strength properties and resistance to harsh environmental conditions. <i>Use with or without mixing nozzles*</i>
Appearance	A: Cream B: Cream Mixed: Cream		A: Pink B: Green Mixed: Grey	A: Clear/colourless B: Clear/colourless Mixed: Clear/colourless
Mixed viscosity (mPa.s)	45,000		4,000	100,000 thixotropic gel
Maximum gap fill (mm)	4.0		0.5	3.0
Fixture time (mins)	7-10	20-25	2-3	1:30-2:30
Handling time (mins)	15-20	30-35	5-10	5-10
Working strength (mins)	25-35	50-60	20-25	20-25
Shear strength (N/mm ²) on steel	23-25		24-25	19-21
Peel strength (N/25mm)	100-200	200-300	250-300	150-250
Temperature range (°C)	-40 to +120		-40 to +120	-40 to +120
Packaging available	10 x 50ml 6 x 400ml Bulk 5kg or 25kg		15 x 25ml 10 x 50ml 6 x 400ml Bulk 5kg or 25kg	10 x 50ml 6 x 400ml Bulk 5kg or 25kg

For full, up-to-date technical information, please refer to the TDS (Technical Data Sheet)

*Please note, when not using a mixing nozzle, product should be applied bead-on-bead one on top of the other (not side by side). Gap fill will be more limited and cure speed may be slightly longer.



Pink/green structural acrylic can be applied with or without mixing nozzles.



Crystal clear TA4204



Adhesives for • Design • Manufacturing • Assembly • Maintenance • Repair & Overhaul

Permabond's history of developing and manufacturing engineering adhesives spans **four decades** and three continents. Today, Permabond Engineering Adhesives Ltd (Europe & Asia) and Permabond LLC (Americas) provide technological solutions to engineers all over the world. Permabond's offices and state-of-the-art manufacturing facilities are ISO 9001:2008 accredited.



- **Technical** – Our chemists and technicians are available to provide application assistance, custom formulation, in-house prototype testing, joint product development programs and much more.

- **Training** – Permabond's knowledgeable sales group will provide your staff with the information they need to maximize the efficiencies, cost savings, and safety benefits Permabond products generate.

- **Sales** – From preliminary project appraisals and product needs assessments through to process reliability analysis, sales team will support you from product concept through to production.

This brochure contains information on our most popular products, if you don't see exactly what you need, or would like assistance in selecting the best product for your application, please contact us:

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