

STRUCTURAL ACRYLICS

Permabond structural acrylic adhesives are suitable for bonding a wide variety of materials. The rapid, room-temperature cure coupled with high strength and durability make these adhesives ideal for demanding applications where speed and ease of application of the adhesive is important.

Benefit

- Extremely high strength bonds increase design possibilities.
- Excellent durability to impact, peel, shear, and thermal expansion increases part life.
- Room temperature cure eliminates ovens and other equipment.
- Rapid cure increases daily output to reduce production costs.
- Bond a wide variety of substrates to increase design freedom.
- Many non-flammable grades available.
- Technical support- application specialists available for assistance with joint design, adhesive selection and production process.



Grade	Description	Colour	Viscosity mPa.s =cP	Max. Gap Fill (mm) in	Fixture time	Working Strength (mins)	Shear Strength (MPa) psi	Service Temperature (°C) °F
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No-Mix Adhesive & Initiator - (also known as Surface Activated)

TA430 & Initiator 41	Very high strength bonding of metals, plastics, ceramics and wood. Fast cure on close fitting parts.	Resin: Amber Initiator: Brown Mixed: Amber	20rpm: 20,000 2.5rpm: 50,000	(0.5) 0.02	1-2 mins	40-60 mins	(15-25) 2,200 - 3,600	(-55 to 120) -65 to 250
TA435 & Initiator 41	Very high strength bonding of metals, ferrites and thermoplastics. High impact applications.	Resin: Amber Initiator: Brown Mixed: Amber	20rpm: 30,000 2.5rpm: 70,000	(0.5) 0.02	1-2 mins	30-60 mins	(15-25) 2,200 - 3,600	(-55 to 120) -65 to 250
TA436 & Initiator 43	Very high strength bonding of metals, ferrites and hard plastics. High impact and high temperature applications.	Resin: Amber Initiator: Green Mixed: Green	20rpm: 25,000 2.5rpm: 60,000	(0.5) 0.02	20-30 secs	30-60 mins	(15-25) 2,200 - 3,600	(-55 to 150) -65 to 300
TA437 & Initiator 41	For high temperature ferrites to metals applications. Note this product will cure without Initiator - see below.	Orange	20rpm: 40,000 2.5rpm: 130,000	(0.5) 0.02	20-30 secs	30-60 mins	(14-20) 2,000 - 3,000	(-55 to 200) -65 to 390
TA439 & Initiator 43	Methacrylic acid free structural adhesive for magnet bonding. Non-corrosive, ideal for sealed electric motors. High temperature resistance.	Resin: Amber Initiator: Green Mixed: Amber	20rpm: 1,000	(0.15) 0.006	20-40 secs	3-5 mins	(20-25) 2,900-3,600	(-55 to 165) -65 to 330
TA459 & Initiator 43	Methacrylic acid free structural adhesive for magnet bonding. Non-corrosive, ideal for sealed electric motors. Maximum gap fill.	Resin: Blue Initiator: Green Mixed: Green	20rpm: 20,000 2.5rpm: 80,000	(0.5) 0.02	20-40 secs	3-5 mins	(20-25) 2,900 - 3,600	(-55 to 165) -65 to 330
TA4246 & Initiator 46	No-mix MMA with initiator for highest strength bonding of metal, glass, composites and plastics.	Resin: Amber Initiator: Brown Mixed: Amber	20rpm: 23,000	(0.5) 0.02	1-2 mins	15-30 mins	(33-35) 4,800 - 5,000	(-40 to 120) -40 to 250

Bead on Bead

TA440	Bead on bead for rapid very high strength bonding of metal, glass, wood and rigid plastics.	Resin: Amber Initiator: Green Mixed: Green	20rpm: 10,000 (mixed)	(0.5) 0.02	15-30 secs	30-60 mins	(15-25) 2,200 - 3,600	(-55 to 120) -65 to 250
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Single Component

TA437	For high temperature ferrites to metals applications. Note cure speed can be increased with Initiator 41 see above.	Orange	20rpm: 40,000 2.5rpm: 130,000	(0.5) 0.02	5 - 10 mins	1-2 hrs	(14-20) 2,000 - 3,000	(-55 to 200) -65 to 390
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2-part 1:1 Mix Acrylic

TA452	2-part 1:1 rapid set, low odour, non-flammable, metal bonder	A: Red B: Green Mixed: Brownish Purple	4,500 (mixed)	(0.5) 0.02 with nozzle (0.2) 0.008 bead on bead	2-3 min nozzle life	6-9 mins	(20-24) 2,900 - 3,500	(-55 to 130 [150 peak]) -65 to 270 [300 peak]
TA4522	2-part 1:1 low odour, non-flammable, metal & plastic bonder	A: White B: Green/Blue Mixed: Green	4,500 (mixed)	(0.5) 0.02 with nozzle (0.2) 0.008 bead on bead	4-7 min nozzle life	10-15 mins	(21-23) 3,000-3,300	(-55 to 130 [150 peak]) -65 to 270 [300 peak]
TA4605	2-Part 1:1 polyolefin bonder - suitable for bonding untreated Polypropylene and Polyethylene as well as other materials.	A: Off-white B: Almost colourless Mixed: Off-white	125,000 (mixed)	(1) 0.04	5-10 mins	2-4 hours	Polypropylene: (5-8) 725-1200	(-55 to 100) -65 to 215
TA4610	Slower curing version of TA4605.	A: Off-white B: Almost colourless Mixed: Off-white	210,000 (mixed)	(1) 0.04	12-15 mins	6-8 hours	Polypropylene: (5-8) 725-1200	(-55 to 100) -65 to 215

2-part • 1:1 Mix MMA

TA4200	2-part 1:1 rapid curing, gap filling, toughened. Ideal for structural bonding of aluminium.	A: Cream B: Cream Mixed: Cream	45,000 (mixed)	(4) 0.16	7-10 mins	25-35 mins	(23-25) 3,300-3,600	(-40 to 150 [180 peak]) -40 to 300 [350 peak]
TA4202	2-part 1:1 very rapid cure. Can be applied bead on bead; multipurpose.	A: Pink B: Green Mixed: Light amber	4,000 (mixed)	(0.5) 0.02	2-3 mins	20-25 mins	(24-25) 3,500-3,600	(-40 to 150 [180 peak]) -40 to 300 [350 peak]
TA4204	2-part 1:1 very rapid cure. Can be applied bead on bead; multipurpose. Crystal clear appearance.	A: Clear B: Clear Mixed: Clear	55,000 (mixed)	(3) 0.12	1-2 mins	20-25 mins	(19-21) 2,800-3,000	(-40 to 150 [180 peak]) -40 to 300 [350 peak]
TA4210	2-part 1:1 longer handling time than TA4200, gap filling, toughened. Ideal for structural bonding of aluminium.	A: Cream B: Cream Mixed: Cream	45,000 (mixed)	(4) 0.16	20-25 mins	50-60 mins	(23-25) 3,300-3,600	(-40 to 150 [180 peak]) -40 to 300 [350 peak]
TA4810	2-part 1:1 develops strength rapidly. Toughened, ideal for structural bonding of plastics & unprimed metals.	A: Off-white B: Amber Mixed: Cream	175,000 (mixed)	(2) 0.08	10-15 mins	50-60 mins	(21-28) 3,000-4,000	(-40 to 120) -40 to 250
TA4820	2-part 1:1 longer handling time than TA4810. Toughened, ideal for structural bonding of plastics & unprimed metals.	A: Off-white B: Amber Mixed: Cream	200,000 (mixed)	(2) 0.08	30-35 mins	100-120 mins	(21-28) 3,000-4,000	(-40 to 120) -40 to 250