



STRUCTURAL ADHESIVES

Methyl Methacrylate Adhesives

What is structural bonding?

Structural bonding involves load-bearing adhesives that enhance the strength of bonded components. These adhesives impart robustness, durability, and dependability across diverse substrates and applications such as boats, buses, trains, cars, and airplanes. Moreover, they serve as effective alternatives to traditional mechanical fastening methods like welding, screws, and rivets. By doing so, structural adhesives not only reinforce the structural integrity but also elevate aesthetics, durability, and fatigue resistance.

Methyl-methacrylate adhesives

MMA adhesives offer an exceptional balance of qualities: impressive strength, flexibility with elongation, significant shear and peel strength, and resistance to impact and fatigue. Their versatility spans a wide temperature range.



Structured as two-component formulas, they react completely and work across mixing ratios of 10 to 1, 4 to 1, and 1 to 1.

A standout feature is their minimal surface preparation, making bonding of plastics, composites, and metals hassle-free. Precise mixing ensures controlled curing, and they handle off-ratio mixing (up to 10%) remarkably well. Notably, MMA adhesives resist moisture, water, and chemicals, boosting their reliability for various applications.

Why use SAF and FIT structural adhesives?

Designed with patented methacrylate technology, SAF and FIT range shows unmatched performance in terms of resistance, flexibility, durability and resistance to most of chemicals. These adhesives have been designed for bonding a wide range of dissimilar substrates including metals and plastics as well as composite materials for industrial applications. The outstanding properties of the SAF and FIT range allow structural bonding while keeping flexibility and resistance to fatigue. From the flexible range (400% elongation) to the hyper-structural (30% elongation), they offer open times from one minute to 90 minutes to fit your specific needs.

Applications

MARINE	SAF30 15	Bracket ,Bulkhead	Structural, High modulus, Fast curing, BV Marine
	SAF30 45	Bracket , Bulkhead, Stringer, Mas rail, Chandlery	Structural, High modulus, Medium curing
	FIT30 90	Stringer, Deck to hull, Console, Roof	Non Sagging, High gap filling, Long open time, High strength
	SAF30 LOT	Roof, Deck to hull, Stringer	Extended long open time, High strength resistance, Very high gap filling
	SAF150 15	Plastic windows, Composite parts	Underwater application, No readthrough, Medium modulus
	SAF400 15	Windows	Large area bonding, Very high elongation, Medium curing time

TRANSPORTATION	SAF Ultimate 15	Panel bonding-doors, Roof , Front grill	Metal bonding, Powder coating resistant, High impact resistant, No printing
	SAF Ultimate 25	Large panel bonding-doors, Roof	Metal bonding, High impact resistant , No printing, Slow curing
	SAF Ultimate 10	Panel bonding-doors, Roof, Seats structure	Metal bonding, High impact resistant, Fast curing
	SAF Ultimate 15 AP	Vaccum formed, Plastic parts bonding	High flexibility, Impact resistant
	SAF30 15	Brackets to composite-bumpers, Front-back face, Inside FRP parts	Structural / High modulus, Fast curing
	SAF150 15	Brackets to composite, Inside Plastic bonding, Lighths / Bumper cap	High elongation, Fast curing, Multipurpose, No printing
	SAF400 15	Windows	Large area bonding, Very high elongation , Medium curing time

SIGNAGE	SAF Ultimate15	Panel / Stiffener / Alu composite	Metal bonding / Powder coating resistant / High impact resistant / No printing
	SAF Ultimate 10	Stiffener bonding / Alu composite	Metal bonding / High impact resistant / Fast curing
	SAF150 15	Plastic bonding / Channel lettre above 60cm, Trim cap bonding	High Elongation / Fast curing / Multipurpose / No printing
	SAF150 45	Large plastic parts	High Elongation / Slow curing / Multipurpose / No printing
	B1023	Transparent plastic bonding / Channel letter under 60 cm	Crystal Clear / Ultra fast curing
	SAF102V	Plastic fixing parts / Transparent	Fast Setting for plastics

AUTOMOTIVE	SAF 30 MIB	Steppers, Rubbers, Metal	High strength resistance, Temperature performance under stress, Wide range of metal
	SAF Ultimate 15	Panel bonding	Metal bonding, Powder coating resistant, High impact resistant, No printing
	SAF150 15	Plastic binding, Dashboards, Bumpers	High Elongation, Fast curing, Multipurpose, No printing
	B1023	Transparent plastic bonding, Lights	Crystal Clear, Very fast curing, Non-yellowing
	SAF400 15	Windows	Large area bonding, Very high elongation, Medium curing time
	SAF Ultimate 5	Glycol resistant	Fast setting, Metal bonding
	SAFUltimate 15 AP	Vaccum formed, Plastic parts bonding	High flexibility, Impact resistance

GENERAL INDUSTRY	SAF Ultimate 15	Metal panel bonding, Chassis of solar panel	Structural, High modulus, Fast curing, BV Marine
	SAF Ultimate 25	Large Metal panel	Structural, High modulus, Medium curing
	SAF30	Composite bonding for renewable energy, Solar, Wind, Hydro	Structural, High modulus, Fast curing, Very fast to slow curing
	SAF150 15	Plastic bonding, Glass to metal, Long length bondings	High elongation, Fast curing, Multipurpose, No printing

Selector Guide

KEY FEATURES

SAF 30-5	Structural, High modulus, Ultra fast curing	SAF 150-45	Structural bonding for all type of substrate	SAF Ultimate 25	Metal bonding, High impact resistance, Medium curing
SAF 30-15	Structural, High modulus, fast curing	SAF 400-15	Large area bonding, Very high elongation, Medium curing time	SAF 30 MIB	High strength, Temperature performance under stress, Wide range of metal
SAF 30-45	Structural, High modulus, Medium curing	SAF Ultimate 5	Ultra fast curing for all type of material	SAF Ultimate 15AP	High impact resistance, Fast curing, Plastics, Metal, Medium curing
SAF 30 LOT	Extended long open time, High strength resistance, very high gap filling	SAF Ultimate 10	Metal bonding, High impact resistance, Fast curing		
SAF 150 15	Structural bonding for all type of substrate	SAF Ultimate 15	High strength resistance, High impact resistance		

SAF RANGE	COMPOSITES				PLASTICS			PLASTICS / METALS					PLASTICS / METALS / COMPOSITES
	30 5 ^{om}	30 15 ^{om}	30 45 ^{om}	30 LOT ^{om}	150 15 ^{om}	150 45 ^{om}	400 15	Ultimate 5	Ultimate 10 ^{om}	Ultimate 15 ^{om}	Ultimate 25 ^{om}	30 MIB	Ultimate 15AP
Mix Ratio	10:1	10:1	10:1	10:1	10:1	10:1	10:1	10:1	10:1	4:1	10:1	10:1	1:1
Color	off-white	off-white	off-white	white	off-white	off-white	Black	off-white	off-white	off-white	off-white	off-white	Blue
Viscosity	Non-sag	Non-sag	Non-sag	Non-sag High gap filling	Non-sag	Non-sag	Non-sag	Non-sag	Non-sag	Non-sag	Non-sag	Non-sag	Non-sag
Open time ⁽¹⁾ (mins)	2 - 3	7	20	90	7	20	7	1 - 2	5 - 6	6 - 7	15	6 - 8	4 - 5
Fixture time ⁽¹⁾ (mins)	8	11 - 17	30 - 60	100 - 135	11-17	30-60	11-17	3-5	10	10 - 15	25	15 - 30	10 - 12
Elongation (%)	25 - 30	25 - 30	25 - 30	70	150	150	230	50	100	200	200	50-60	150
Lap Shear Strength (MPa)	22	22	22	19	16	16	8	12	19	14	17	17	12
Tensile Strength (Mpa)	16 - 18	15 - 17	16 - 18	8 - 10	8 - 10	8-10	1 - 2	9 - 10	12 - 13	6 - 9	8 - 9	8 - 9	11
Modulus (MPa)	900	900	900	450	400	400	4 - 6	300 - 400	550 - 750	200 - 300	400 - 500	400 - 500	250
Hardness (Shore D)	70-80	70-80	70-80	65-70	60-65	60-65	80-90 (A)	50-60	70-80	55-60	60-70	60-70	45-50

⁽¹⁾ @23°C

⁽²⁾ Homologated BV Marine for structural applications

⁽³⁾ Homologated EN45 545, HL3 for R1 requirement

COMPOSITES / METALS

FIT RANGE	30 5	30 15	30 45	30 90	30 120
Mix Ratio	10:1	10:1	10:1	10:1	10:1
Viscosity	Non sag	Non sag	Non sag	Non sag	Non sag
Flow rate (g/min-1)	850	800	1000	1200	1000
Open time (mins)	2 - 3	5 - 7	20 - 30	55 - 65	90 - 110
Fixture time (mins)	5 - 6	12 - 15	30 - 60	90 - 110	120 - 150
Elongation (%)	30%	30%	30%	30%	30%
Modulus (MPa)	1000 - 1200	1000 - 1200	1000 - 1200	1000 - 1200	800 - 900
Lap Shear Strength (MPa)	19	20	18	15	18
Key Features	Very fast setting	Versatility	Gap fill	High gap fill	High gap fill

