

Inspired Bonding Solutions for Transportation





WE WORK CLOSELY WITH OUR CUSTOMERS

PLEXUS

Plexus is a brand of ITW Performance Polymers, a global supplier of chemical solutions targeting industrial manufacturers.

We work closely with our customers to provide them with value-added solutions, and are committed to the continuous delivery of superior technical support and expertise, premium quality products and ongoing R&D initiatives.

QUALITY POLICY

Plexus is committed to constantly meeting customers' requirements by providing consistently high quality products and services and by encouraging continuous improvements in long-term and daily operations.

REACH

Plexus has successfully pre-registered all substances in its products eligible under EU REACH legislation. Substance registration, where appropriate, will continue to be our focus to remain compliant with EU REACH regulations. We are committed to provide a greater responsibility to industry by managing the risks from chemicals and communicating safety information on the substances within our supply chain.

ISO CERTIFIED

Plexus is ISO 9001 and ISO 14001 certified and we ensure that our products and process management conform to meet the standard requirements.

INSPIRED BONDING SOLUTIONS

Plexus is world renowned for manufacturing and distributing highly engineered fastening, joining and sealing technologies.

Our patented structural adhesives bond nearly all thermoplastics, metals and composite materials providing extremely durable bonds with little or no surface preparation. A proven record and outstanding performance in the most demanding applications make Plexus adhesives a viable and competitive alternative to both polyurethane and epoxies.

Would you like to improve your productivity and create better value products? The answer could be in your structural adhesive. The Plexus team understands how demanding today's production environments can be, that's why we take pride in providing you with options and innovative solutions, regardless of the industry you are in.

CORE SHELL TECHNOLOGY

Enhanced resistance to fracture, impact, fatigue and thermal stress

The ability of Plexus structural methacrylate adhesives to absorb energy without catastrophic failure is achieved by our patented core-shell impact modifiers.

Plexus Core Shell technology offers resistance to high peel strengths, cracking, fatigue and thermal stresses with no sacrifice to other properties.

Our commitment to quality is delivered in every adhesive system we produce, providing our customers with confidence in the reliability and consistency of our products.

Due to the many potential variations in substrates and surface chemistries, Plexus strongly recommends all substrates be tested with the selected adhesive in the anticipated service condition to determine suitability.

PROFESSIONAL SUPPORT AND TECHNICAL SERVICES

Plexus specialists provide full support and service for our customer's technical requirements

- Advice and recommendations based on the customers unique application requirements
- Fully equipped laboratory for testing the customer's own substrates
- Continuous improvement to existing products
- New groundbreaking product developments



METALS, PLASTICS AND COMPOSITES

METALS, PLASTICS AND COMPOSITES

										Aluminium	Cast iron	Electrogalvanized	Painted/coated metals	Plated metals	Sheet metal	Stainless steel	Cold rolled steel	ABS	Acrylics (PMMA)	Polyamides (nylons)	Polyesters (PBT, PET)	Polycarbonate	Vinyls (PVC)	Polyurethanes	PDCPD	Fibreglass	Gelcoats	SMC	Phenolics	Laminates	RTM	Rubber		
Adhesive	Description	Mixed Color	Mix ratio (by volume)	Viscosity (cps)	Working time (mins)	Fixture time (mins)	Shear strength (MPa)	Tensile elongation (%)	Gap fill (mm)	Metals								Plastics								Composites								Other
MA300	All purpose, High Strength	Black, Cream	1:1	A: 40,000 - 70,000 B: 40,000 - 70,000	3 - 6	12 - 15	20.7 – 26.2	5 - 15	3.2	✓	✓		✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓		✓	✓	✓	✓	✓	✓			
MA310	High strength use with "difficult to bond" plastics	Cream	1:1	A: 40,000 - 70,000 B: 40,000 - 70,000	15 - 18	45 - 55	20.7 – 24.1	5 - 15	3.2	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
MA320	Excellent low temperature, toughness properties	Black, Cream, White	10:1	A: 135,000 - 175,000 B: 30,000 - 70,000	8 - 12	25 - 30	10.3 – 13.8	20 - 50	9.5	✓			✓	✓		✓	✓	✓	✓			✓	✓	✓	✓	✓	✓		✓	✓				
AO/MA420	All purpose, high toughness	Black, Blue, Cream	10:1	A: 100,000 - 125,000 B: 35,000 - 80,000	4 - 6	18 - 22	20.7 – 26.2	30 - 50	9.5	✓	✓		✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
MA422	All purpose, medium open time	Blue	10:1	A: 100,000 - 130,000 B: 35,000 - 70,000	17 - 24	35 - 40	11 - 15.9	75 - 100	9.5	✓			✓			✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓		✓	✓				
MA425	All purpose, long open time	Blue	10:1	A: 100,000 - 125,000 B: 35,000 - 70,000	30 - 35	80 - 90	11.7 – 17.9	110 - 150	9.5	✓			✓	✓		✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓		✓	✓				
MA530	All purpose, high strength, high toughness, medium open time	Gray	1:1	A: 130,000 - 180,000 B: 160,000 - 215,000	30 - 40	90 - 160	11.7 – 17.2	90 - 160	18	✓			✓	✓		✓	✓	✓	✓		✓		✓			✓	✓			✓	✓			
MA550	Excellent marine adhesive, white, UV stable	White	10:1	A: 130,000 - 160,000 B: 30,000 - 70,000	40 - 50	70 - 75	8.9 - 12.4	40 - 80	10	✓			✓	✓		✓	✓	✓	✓		✓	✓	✓			✓	✓			✓	✓			
MA560-1	All purpose, high strength/high toughness, long open time	Gray	1:1	A: 145,000 - 185,000 B: 170,000 - 205,000	55 - 70	220 - 240	11.7 - 17.2	>130	25	✓			✓	✓		✓	✓	✓	✓		✓		✓			✓	✓			✓	✓			
MA590	All purpose, high strength/high toughness, long open time	Gray	1:1	A: 140,000 - 230,000 B: 165,000 - 230,000	90 - 105	250 - 380	10.3 - 17.2	>130	38	✓			✓	✓		✓	✓	✓	✓		✓		✓			✓	✓			✓	✓			
MA830	All purpose, high strength/high toughness, no primer metal bonding	Gray	10:1	A: 80,000 - 120,000 B: 35,000 - 80,000	4 - 6	15 - 25	13.8 - 19.3	30 - 60	13	✓	✓		✓	✓	✓	✓	✓	✓	✓		✓		✓		✓	✓	✓	✓			✓	✓		
MA832	All purpose, high strength/high toughness, no primer metal bonding	Gray	10:1	A: 80,000 - 130,000 B: 35,000 - 80,000	12 - 16	55 - 60	13.8 – 19.3	30 - 60	12	✓	✓		✓	✓	✓	✓	✓	✓	✓		✓		✓		✓	✓	✓	✓			✓	✓		
MA8110	Next generation multi-material bonder	Gray	1:1	A: 40,000 - 80,000 B: 40,000 - 80,000	8 - 12	35 - 50	Plastics: 12.4 - 16.5 Metals: 16.6 - 20.7	40 - 70	12.7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
MA8120	Next generation multi-material bonder	Gray	1:1	A: 40,000 - 80,000 B: 80,000 - 120,000	18 - 22	75 - 90	Plastics: 12.4 - 16.5 Metals: 16.6 - 20.7	50 - 80	12.7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓			
MA920	Low odor, all purpose, high toughness	Blue	10:1	A: 80,000 - 120,000 B: 35,000 - 80,000	4 - 6	15 - 18	10.3 - 15.2	80 - 100	9.5	✓			✓	✓		✓	✓	✓	✓		✓	✓	✓			✓	✓	✓			✓			
MA1020	Low shrinkage, low odor, all purpose	Blue	10:1	A: 100,000 - 130,000 B: 35,000 - 80,000	4 - 6	15 - 20	8.6 - 11	90 - 110	9.5	✓			✓	✓		✓	✓	✓	✓		✓		✓			✓	✓	✓			✓			
MA1025	Low shrinkage, low odor, bond lines up to 1" thick	Blue	10:1	A: 180,000 - 220,000 B: 35,000 - 70,000	20 - 25	40 - 45	8.3 - 13.8	90 - 110	25	✓			✓	✓		✓	✓	✓	✓		✓		✓			✓	✓	✓			✓			
MA2045	Non sag, medium work time, high gap fill, up to 1.5"	Blue	10:1	A: 180,000 - 220,000 B: 35,000 - 70,000	40 - 45	100 - 130	11 - 15.2	90 - 125	38				✓				✓	✓			✓	✓	✓		✓	✓	✓		✓	✓				
MA2090	Non sag, long work time, high gap fill, up to 1.5"	Blue	10:1	A: 180,000 - 220,000 B: 35,000 - 70,000	80 - 100	190 - 230	11 - 15.2	90 - 120	38				✓				✓	✓			✓	✓	✓		✓	✓	✓		✓	✓				
MA3940	Use with craze sensitive plastics	Cream	10:1	A:135,000 - 175,000 B: 30,000 - 70,000	12 - 15	25 - 30	9.7 - 13.8	125 - 175	9.5				✓				✓	✓			✓	✓			✓	✓								
MA3940LH	All purpose fast setting adhesive	Blue	10:1	A: 120,000 - 160,000 B: 30,000 - 70,000	4 - 5	8 - 10	8.3 - 11	75 - 100	4				✓				✓	✓		✓		✓	✓		✓	✓	✓							

The above list represents a portion of the Plexus adhesives product line. Others are available that may suit your needs. Please consult ITW Performance Polymers for further assistance.

Above values are subject to change. Please see the product TDS for most up to date product information and our SDS for all health and safety information at www.itwpp.com



MARINE

Within the Marine industry, Plexus structural adhesives can help increase production speed and reduce dust emissions as they require little or no surface preparation. Plexus adhesives are widely used for applications such as composite stringers, liners and deck to hull bonding by a variety of companies, including: Sunseeker International, Formula Fastech and Victory Team.

- Outperforms laminated joints
- Reduces cracking and crazing of gelcoats
- Gap filling up to 38 mm
- Faster and easier assembly including ability to hand mix



TRANSPORT

Reliability combined with the ease of use of Plexus adhesives have always been appreciated by rail, bus and truck companies. Alstom, Bombardier, Volvo, Virgin and many other manufacturers are choosing Plexus for bonding floating floors and modular washrooms in railway carriages, composite body panels in buses and coaches as well as doors, headlamp surrounds and front grills for trucks.

- Rapid cure at room temperature reduces production time
- Resistant to oil and diesel
- Bonding of dissimilar substrates
- Excellent fatigue resistance



AUTOMOTIVE

Ford, GM, Chrysler and Land Rover are some of the key automotive OEM's using Plexus for bonding bumpers, spoilers, dashboards, body panels, front grills and many other applications. Being fully regrind compatible, Plexus makes it easier to recycle plastic components, eliminating the need of cutting out the joints.

- Speeds production
- Bonds dissimilar substrates
- High strength & durability
- Proven application history



WIND ENERGY

The high strength bonds achieved by Plexus adhesives on virtually all polyester resins, gelcoats, engineered thermoplastics and metals has helped change the way the wind turbine industry designs and builds. The specialist structural adhesives are extensively used in the manufacture and repair of wind blades, turbine housing assemblies and lightning suppression systems.

- Chemically Fuse Composites
- Superior bond strength and fatigue resistance
- Decrease assembly costs
- High strength and durability



ENGINEERED CONSTRUCTION

Plexus adhesive solutions are tailored to meet the specific production requirements in a variety of construction applications. Plexus has a proven track record in bonding composite and thermoplastic doors, GRP architectural features, pultruded bridges and GRP tanks in numerous projects all over the world.

- Room temperature curing
- Superior performance bonding dissimilar substrates
- Working and fixture times to suit all your applications
- Excellent chemical resistance



AGRICULTURAL

Plexus structural adhesives help agricultural machinery manufacturers to reduce production costs, streamline the assembly processes and ultimately improve overall machinery performance. Plexus works in partnership with our customers throughout their design and production process to find the right structural adhesives fit for the conditions and environmental rigors.

- Bonding of dissimilar substrates
- Variety of working and fixture times
- Resistant to oil and diesel
- Superior impact resistance



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