

ADHESIVE SELECTOR GUIDE

Product	Description	Color	Mix Ratio by Vol.	Viscosity, cP	Working Time ¹ min	Fixture Time ² min	Tensile ³ Strength psi	Tensile Elongation %	Shear ⁴ Strength psi
MA300	All Purpose Adhesive High Strength	Cream Black	1:1	A: 40,000-60,000 B: 40,000-60,000	4-6	12-15	3000-3500	15-25	3000-3500
MA310	High Strength Use with "Difficult to Bond" Plastics	Cream	1:1	A: 40,000-60,000 B: 40,000-60,000	15-18	30-35	4000-4500	5-15	3000-3500
MA330	Pigmented MA310 Use with "Difficult to Bond" Plastics	Gray	1:1	A: 40,000-60,000 B: 40,000-60,000	15-18	30-35	4000-4500	5-15	3000-3500
MA530	All Purpose Adhesive High Strength/High Toughness Medium Open Time	Black	1:1	A: 160,000-180,000 B: 160,000-180,000	30-35	90-160	3000-3500	130-170	1900-2200
MA560-1	All Purpose Adhesive High Strength/High Toughness Long Open Time	Black	1:1	A: 145,000-185,000 B: 170,000-205,000	55-70	220-240	2500-3000	>130	1700-2200
MA590	All Purpose Adhesive High Strength/High Toughness Long Open Time	Black	1:1	A: 175,000-220,000 B: 175,000-220,000	90-105	210-270	2000-2500	130-160	1400-1800
AO420	All Purpose Adhesive High Toughness	Blue Black Cream	10:1	A: 100,000-125,000 B: 50,000-70,000	4-6	15-18	2700-3000	100-125	1750-2250
MA320	Excellent Low Temperature and Toughness Properties	Cream White Black	10:1	A: 135,000-175,000 B: 40,000-70,000	8-12	25-30	2000-2500	100-140	1500-2000
MA3940	Use with Craze Sensitive Plastics	Cream	10:1	A: 135,000-175,000 B: 40,000-70,000	12-15	25-30	2000-2500	125-175	1500-2000
MA422	All Purpose Adhesive Medium Open Time	Blue	10:1	A: 100,000-125,000 B: 40,000-60,000	17-24	35-40	2000-2500	75-100	1500-1800
MA425	All Purpose Adhesive Long Open Time	Blue	10:1	A: 100,000-125,000 B: 40,000-60,000	30-35	80-90	2000-2500	120-140	1500-1800
MA550	Excellent Marine Adhesive White, UV Stable	White	10:1	A: 130,000-160,000 B: 40,000-60,000	40-45	70-75	1750-2000	35-45	1300-1800
MA556	Low Exotherm Adhesive Bond Lines up to 1" thick	Blue	10:1	A: 190,000-220,000 B: 40,000-60,000	40-45	110-120	2500-3000	140-160	1250-1500
MA557	Low Exotherm Adhesive Bond Lines up to 1.5" thick	Blue	10:1	A: 180,000-220,000 B: 40,000-60,000	80-90	180-220	2000-2500	120-160	1250-1550
MA830	All Purpose Adhesive High Strength/High Toughness No Primer Metal Bonding	Gray	10:1	A: 90,000-120,000 B: 50,000-80,000	4-6	20-25	3200-3800	30-60	2300-2800
MA832	All Purpose Adhesive High Strength/High Toughness No Primer Metal Bonding	Gray	10:1	A: 90,000-120,000 B: 50,000-80,000	12-16	50-60	3500-4000	30-60	2300-2800
MA920	Low Odor, All Purpose High Toughness	Blue	10:1	A: 100,000-125,000 B: 50,000-70,000	4-6	15-18	2700-3000	80-100	1500-2000
MA925	Low Odor, All Purpose Long Open Time	Blue	10:1	A: 100,000-125,000 B: 40,000-60,000	30-35	80-90	1700-2200	100-120	1400-1700
MA1020	Low Shrinkage, Low Odor All Purpose	Blue	10:1	A: 100,000-125,000 B: 50,000-70,000	4-6	15-20	1750-2000	90-110	1250-1600
MA1025	Low Shrinkage, Low Odor Bond Lines up to 1" thick	Blue	10:1	A: 180,000-220,000 B: 40,000-60,000	20-25	40-45	1750-2000	90-110	850-1200

NOTE: The above list represents a portion of the ITW Plexus adhesives product line. Others are available that may suit your needs. Please consult an ITW Plexus Sales Representative or ITW Plexus Technical Service for further assistance at 1-800-851-6692.

ITW PLEXUS® ADHESIVE SELECTOR GUIDE RECOMMENDATIONS

Application Details

ITW Plexus adhesives should be applied at temperatures between 65°F and 80°F. Temperatures below 65°F will slow the cure speed; above 80°F will increase the cure speed. The viscosities of Parts A and B of these adhesives are affected by temperature. For consistent dispensing in meter-mix equipment, adhesive and activator temperatures should be held reasonably constant throughout the year.

To ensure maximum bond strength, use sufficient material to completely fill the joint and mate the parts within the specified working time. After joining, the parts must remain undisturbed until the fixture time has elapsed. ITW Plexus recommends that minimal bond gaps be no less than 0.03 inches (0.75mm).

Safety Precautions

Consult Material Safety Data Sheets for exact safety and handling instructions for specific products. ITW Plexus methyl-methacrylate based adhesives are flammable. Keep away from heat, sparks and open flames. Keep containers closed after use. Avoid skin and eye contact. Wear safety glasses and chemically resistant protective gloves during use. Wash with soap and water after skin contact and treat with a skin care cream. For eye contact flush with water and seek immediate medical attention. Seek immediate medical attention if swallowed. Keep out of reach of children. For industrial use only.

Handling Precautions

ITW Plexus adhesives cure rapidly and generate intense heat during curing. Do not dispense waste material into plastic cups because heat may melt the container. Do not hold metal containers of ITW Plexus adhesive during curing. Heat generated during cure may cause burns.

Dispensing Equipment

ITW Plexus adhesive may be applied with manual or pneumatic hand-held guns, FusionMate™ bulk dispensing equipment or other approved systems. Automated application may be accomplished with a variety of meter-mix equipment that delivers both components to a static mixer. ITW Plexus Engineering should approve all wetted components of dispensing equipment. Use chemically resistant materials for gaskets, seals and O-rings. Dispensing hoses should be PTFE lined. Run equipment with adhesive and activator for approximately 30 seconds every 2 weeks if equipment is not in use. Refer to equipment manuals for cleaning and extended shutdowns. For further information concerning dispensing equipment, contact ITW Plexus.

Shelf Life

The shelf life of adhesives and activators is six months or more depending on the product. Consult individual product Technical Data Sheets for specific shelf life information. Shelf life is based on continuous storage between 55°F and 75°F. Long-term exposure above 75°F will reduce the shelf life of these materials. Prolonged exposure of activators, including cartridges that contain activators, above 100°F quickly diminishes the product's reactivity and should be avoided. Shelf life can be extended by refrigeration (45°F to 55°F). These products should never be frozen.

Clean-up

Clean up is best accomplished before the adhesive cures. For cured adhesive carefully scrape away the adhesive and clean appropriately. Spills should be cleaned up with an absorbent material and handled as flammable material. See ITW Plexus MSDS and follow federal, state and local disposal regulations.

Additional Information

For more information regarding ITW Plexus adhesives or the name of your local distributor, contact: ITW Plexus, 30 Endicott Street, Danvers, MA, 01923. Telephone: (800) 851-6692 or Fax: (978) 777-7904 or visit us at www.itwplexus.com

1. Working time is the time when parts A and B of the adhesive system are combined and the time when the adhesive mix is no longer useable. Times presented were tested at 75°F.
2. Fixture time is the time when parts A and B of the adhesive system are combined and the time the adhesive has developed sufficient strength to be handled without deformation of the bond. Fixture time will be dependent on bond line thickness, part and ambient temperatures.
3. Tensile test is of cast adhesive tested to ASTM D638
4. Shear strength derived from the maximum strength of lap shear coupons of grit blasted steel tested to ASTM D1002.

All information on this sheet is based on laboratory testing and is intended only to aid in design. ITW Plexus makes no representations or warranties of any kind concerning this data and recommends its customers perform testing on all substrates and adhesives prior to use. Due to variation in storage, handling and application of these materials, ITW Plexus cannot accept liability for the results obtained.