Product Datasheet

Chemweld™ 825A/B

METHACRYLATE ADHESIVE, 30 MINUTE FIXTURE TIME

Chemweld™ 825 A/B is two component, 100% reactive, toughened structural methacrylate adhesive formulated for electronics, optic, and the solid surface industry. It was a medium, self-levelling viscosity. The adhesive has excellent bond strength to a wide variety of plastics, metals, composites, glass, stone, and solid surface materials. Its chemistry eliminates the need for primers and most surface preparation prior to bonding. The Chemweld™ 825 A/B system has a 10:1 by volume mix ratio and is easy to apply from a dispensing nozzle or with a spatula, stiff brush, or squeegee. The cured adhesive features good peel strength and excellent impact, thermal shock, and fatigue resistance.

Other Chemweld™ 800 series adhesives are available with fixture times ranging from 2 – 120 minutes. Thickened and thinned versions are also available, as are custom colors. Please contact us to discuss your application if you think such a variation might be needed.

TYPICAL APPLICATIONS

- Ideal for electronics, optical, sign, solid surface and other assembly applications.
- High bond strength to glass, granite, marble, quartz surfaces, solid surface materials, metals, and many rigid plastics such as PMMA, polycarbonate, ABS, PVC, & FRP.
- In solid surface applications allows the creation of invisible seams

HANDLING PROPERTIES

Chemweld™ 825A	VALUE	TEST METHOD
Appearance	Clear (also available in various colors	
Density g/cm³	1.06	ASTM E-201
Viscosity at 25ºC, cps	40,000 – 100,00	ASTM D-2393
Chemweld™ 825B	**VALUE**	**TEST METHOD**
Appearance	Clear – slight haze	
Density g/cm³	1.06	ASTM E-201
Viscosity at 25ºC, cps	18,000 – 25,000	ASTM D-2393
Mix Ratio by Volume	10A:1B	Calculated
Viscosity, Mixed at 25ºC, cps	~35,000	ASTM D-2393
Working Time at 25ºC	10 - 15 minutes	ASTM D-2471
Fixture Time at 25ºC	20 - 30 minutes	

Recommended Cure Schedule: approximately 80% of bond strength is develop within 1-2 hours after mixing and full strength is developed within 24 hours at 25ºC.

PHYSICAL PROPERTIES	VALUE	TEST METHOD
Color	Clear or color match to many solid surface materials*	Visual
Shore D Hardness	75	ASTM D-2240
Tensile Strength, psi	3,400	ASTM D-638
Tensile Elongation at break	3% - 5%	ASTM D-638
Lap Shear Strengths, various substrates at 25ºC / 77ºF:		ASTM D-1002

Substrate	Shear Strength
Solid Surface Materials	4000 - 6000 psi (cohesive failure)
Quarts Surfaces	3000 - 4000 psi (cohesive failure)
ABS / ABS	1055 psi (substrate failure)
FRP / FRP	1760 psi (fiber tear)
Aluminum / ABS	1280 psi (substrate failure - ABS)

Note: substrate failure indicates that the bonded substrate broke before the adhesive bond failed, fiber tear indicates that the fiber reinforced plastic tore apart from its fiber reinforcement before the adhesive bond failed

NOTE : Typical Properties determined using Chemweld™ 825A/B cured for 24 hours at 25ºC. Values are based on laboratory or average production results – not for specification purposes.
*Custom colors available by request

SUGGESTED PROCESSING GUIDELINES:

Chemweld™ 825A/B is supplied in dual syringe cartridges and can be applied by stiff brush, roller, squeegee, knife, or spatula. Dispensing directly from disposable dual cartridges or meter-mix-dispensing equipment is strongly recommended as it ensures proper mixing without incorporating air and give consistent results. Product supplied in dual syringe cartridges can be dispensed using manual or pneumatic dispensing guns.

When meter-mix dispense systems are used, care must be taken to assure compatibility between the adhesive components and the equipment components that they contact. All wetted metal components should be constructed of stainless steel or aluminum or have a sufficient thickness of a chemically resistant material to prevent contact between the adhesive components and the base metal. Contact with copper, zinc, brass, and/or alloys containing these materials must be strictly prevented. All non-metallic seals and gaskets should be fabricated from Teflon® or UHMW polyethylene based materials.

Apply the adhesive to clean, dry surfaces free of dust and oils. Best results will be achieved with surfaces that have been lightly abraded or have a textured surface. Recommended bond-line thickness is 0.002" – 0.040"(2 – 40 mils or 0.05mm – 1.0 mm). Clamp or otherwise hold in place bonded parts so that they will not above prior to the bond curing, light even pressure is generally sufficient. Allow to cure at room temperature for at least the fixture time before any movement, impact or force is applied to the bonded parts. After the fixture time has elapsed check the edges of the bond or a witness sample to confirm proper setting before removing clamps or carefully handling the bonded parts. The parts can often be subject to normal handling and limited shock and chemical exposure once about 2-4 times the fixture time has elapsed. The adhesive will be expected to have reached about 80% of its final bond strength at this point. For demanding applications, allow at least the suggested full cure time before subjecting the bonded parts to significant force, vibration, heat, or chemical exposure

CLEAN UP: Adhesive components and mixed adhesive should be removed from mixing tools and application equipment with a cleaner like our Rezi-Kleen #4 before it cures. For washing up and to clean skin and to gently clean wood and painted metals, we can supply GOOP® waterless Hand Cleaner, which is excellent for cleaning and protecting skin, wood, and other surfaces that could be dried out or damaged by stronger chemicals. Cured Adhesives can be removed with solvents like our UltraStrip solvent blends.

STORAGE GUIDELINES & SHELF-LIFE:

Store this material in a clean, cool and dry environment in its tightly closed original container. Shelf life of adhesive is at least 9 months from day of shipment when stored at 55°F and 75°F. Long term exposure above 75°F will reduce the shelf life of these materials. Prolonged exposure of part B, including in dual syringe cartridges, above 100°F (37.7°C) quickly diminishes the product's reactivity and must be avoided. These products should never be frozen, but refrigerated storage at 4°C – 10°C (39°F - 50°F) will help extend the shelf-life to at least 1 year from date of shipment.

PACKAGING

This product is available in 50ml and 250 ml dual syringe cartridges. It may also be available in 5 gallon and drum kits for use with meter mix equipment for volume users. Other specialty sizes and packaging may be available please contact if you have special packaging requirements.

HANDLING PRECAUTIONS:

Mandatory and recommended industrial hygiene procedures should be followed whenever these products are being handled and processed. Read Material Safety Data Sheet before handling or using this product. Adhesive component A contains methyl methacrylate monomer and always use in a well-ventilated area. Activator component B contains peroxide. Both materials must be stored in a cool place away from sources of heat and open flames or sparks. Keep containers closed when not in use. Prevent contact with skin and eyes. In case of skin contact, wash with soap and water. In case of eye contact, flush with water for 15 minutes and seek immediate medical attention. Harmful if swallowed. Keep out of reach of children. **Note:** The chemical curing reaction that occurs when components A and B are mixed generates heat. The amount of heat generated is controlled by the mass and thickness of the mixed product. Large masses over 1/2 inch thick can develop heat in excess of 250°F/121°C and can generate harmful, flammable vapors. Large curing masses should be carefully moved to a well-ventilated area where the chance of personal contact is minimized.

FIRST AID

In case of contact:

Skin – Immediately wash skin thoroughly with mild soap and water. Remove contaminated clothing and wash before reuse. Destroy contaminated shoes and other articles made of leather.

Eyes – Immediately flush eyes with plenty of water for 15 minutes and get prompt medical attention.

Inhalation - Remove person to fresh air. Administer oxygen or artificial respiration if necessary. Call a physician.

Ingestion - Do not induce vomiting. Dilute with plenty of water and contact physician immediately. Never give anything by mouth to an unconscious person.

DISCLAIMER:

IMPORTANT: The following supercedes Buyer's documents. **SELLER / MANUFACTURER MAKES NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, INCLUDING OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE**. No statements herein are to be construed as inducements to infringe any relevant patent. Under no circumstances shall Seller / Manufacturer be liable for incidental, consequential or indirect damages for alleged negligence, breach of warranty, strict liability, tort or contract arising in connection with the product(s). Buyer's sole remedy and Seller's sole liability for any claims shall be Buyer's purchase price. Data and results presented are based on controlled or laboratory work and must be confirmed by Buyer by testing for its intended conditions of use. The product(s) has not been tested for, and is therefore not recommended for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended; or for uses for which implantation within the human body is intended

Specialty Polymers & Services, Inc. (SP&S)
27822 Fremont Court **Tel: 661-294-1790**
Valencia, CA 91355 **Fax : 661-294-0640**
www.spolymers.com **info@spolymers.com**

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