

ChemWeld™ 820A/B



PLASTIC BONDING ADHESIVE, 2 - 3 MINUTE FIXTURE TIME

ChemWeld™ 820 A/B is a rapid-setting, adhesive specially designed to bond low surface energy plastics including many grades of polypropylene, polyethylene, TPO, UHMWPE, and some Fluoroplastics without the use of a primer or other surface treatment. Adhesive bonds are peel resistant and structural bond strengths are achieved with some plastics.

The adhesive has a 10:1 by volume mix ratio, is gap filling up to 3 mm in thickness, and maintains its strength over a wide temperature range. Full cured bonds show excellent resistance to humidity and water immersion.

Other ChemWeld™ 800 series adhesives are available with different fixture times, viscosities, and color. Please contact us to discuss your application if you think such a variation might be needed.

TYPICAL APPLICATIONS

- Ideal for bonding PVC, PP, HDPE, UHMWPE, LDPE, TPO, and FEP.

HANDLING PROPERTIES

<u>ChemWeld™ 820A</u>	<u>VALUE</u>	<u>TEST METHOD</u>
Appearance	Amber paste	Visual
Density g/cm ³	1.05	ASTM E-201
Viscosity at 25°C, cps	10,500	ASTM D-2393
<u>ChemWeld™ 800B</u>	<u>VALUE</u>	<u>TEST METHOD</u>
Appearance	Cream paste	Visual
Density g/cm ³	1.07	ASTM E-201
Viscosity at 25°C, cps	8,000	ASTM D-2393
Mix Ratio by Volume	10A:1B	Calculated
Viscosity, Mixed at 25°C, cps	10,000	ASTM D-2393
Working Time at 25°C	2 - 3 minutes	ASTM D-2471
Handling Time at 25°C	2 - 3 hours	
Recommended Cure Schedule:	Full strength is developed within 24 hours at 25°C.	

PHYSICAL PROPERTIES	VALUE	TEST METHOD
Color	off-white to tan	Visual
Tensile Elongation at break	5% - 10%	ASTM D-638
Lap Shear Strengths, various substrates at 25°C / 77°F:		ASTM D-1002
<u>Substrate</u>	<u>Shear Strength</u>	
PP to PP	3400 psi (substrate failure)	
HDPE to HDPE	1150 psi (substrate failure)	
LDPE to LDPE	950 psi (substrate failure)	
TPO to TPO	1425 psi (cohesive failure)	
UHMWPE to UHMWPE	750 psi (substrate failure)	
PVC/PVC	2050 psi (adhesive failure)	
FEP to FEP (ex. Teflon)	325 psi (adhesive failure)	
Note: substrate failure indicates that the bonded substrate broke before the adhesive bond failed, fiber tear indicates that the fiber reinforced plastic tore a part from its fiber reinforcement before the adhesive bond failed		
Suggested Service Temperature:	-55°F to 250°F (-49°C to 121°C)	

NOTE : Typical Properties determined using ChemWeld™ 820A/B cured for 24 hours at 25°C. Values are based on laboratory or average production results – not for specification purposes.

SUGGESTED PROCESSING GUIDELINES:

ChemWeld™ 820A/B can be applied by directly from a dual syringe cartridge through a static mixing nozzle. 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. To achieve the desired coverage, the applied adhesive can be spread with a brush, roller, squeegee, knife, or spatula as desired.

Product supplied in dual syringe cartridges can be dispensed using manual or pneumatic dispensing guns.

Dispense enough material to completely fill the joint when parts are clamped. To assure the highest bond strength, surfaces must be bonded within the adhesive's working time. Clamp or otherwise hold in place bonded parts so that they will not move prior to the bond curing, light even pressure is generally sufficient. Allow to cure at room temperature for at least the handling time of 2-3 hours before any movement, impact or force is applied to the bonded parts. After the minimum handling time has elapsed you wish to check the edges of the bond or a witness sample to confirm proper setting before removing clamps and then can carefully handling the bonded parts. The parts can often be subject to normal handling and limited shock and chemical exposure once about 6-8 hours have passed. has elapsed. Exact curing speed will be effected by the ambient temperature. Temperatures below 55°F will slow the cure and temperatures; above 85°F will accelerate curing. To speed the curing process, a heat cure of 15 minutes at 120°F-140°F (49°C-60°C) is possible.

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 hands and other skin areas as well as leather fabric, wood, and painted metals, we recommend and supply GOOP® waterless Hand Cleaner. It is excellent for cleaning and protecting skin, wood, and other surfaces that would be dried out or damaged by stronger chemical mixtures. 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 6 months from day of shipment when stored between 50°F and 77°F. Long term exposure above 77°F will reduce the shelf life of these materials.

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.

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 supersedes 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

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