



WELD-ON

WELD-ON 40

CLEAR, TWO COMPONENT, REACTIVE
HIGH STRENGTH ACRYLIC CEMENT

SUBSTRATE RECOMMENDATIONS

WELD-ON 40 is especially formulated to bond extruded, cast, and cross linked acrylic sheets. It will also bond acrylic to polyester, butyrate, polycarbonate, PVC and other materials.

BONDING RECOMMENDATIONS

WELD-ON 40 is recommended for bonding of acrylic plastics especially where good clarity retention is required. It is versatile having many applications in the sign industry and in the manufacturing and repair of aquariums, museum quality cases and other plastics fabrication industries.

GENERAL DESCRIPTION

WELD-ON 40 is a 2-component, clear, medium syrupy, reactive acrylic cement. It polymerizes at room temperature, forming high strength joints within a few hours. The cemented joint retains high clarity, good strength and resistance to the effects of weathering and aging. In cases where a lower viscosity is desired, WELD-ON 3061 may be used as a reactive diluent. To maintain similar curing properties it is not recommended to dilute more than 10% to the undiluted WELD-ON 40, Component "A". Meets MIL SPEC. A-8576 Type III.

BOND STRENGTH DATA

The following bond strength data reflects average tensile strengths of cemented joints at a 0.2"/min. straining rate. The materials tested were butt joints of ¼ sq. in. bond area. (Bond strength data indicating elevated temperatures are post cures at the given temperature. Initial cure is at room temperature for 24 hours in all cases.)

SUBSTRATE MATERIAL

Acrylic

TIME	TEMP.	STRENGTH
24 HRS	R.T.	2600 PSI
1 WEEK	R.T.	4000
24 HRS	120°F	4500
1 WEEK	120°F	5700
24 HRS	150°F	5900
1 WEEK	150°F	7000

ADHESIVE PROPERTIES AND CHARACTERISTICS

COLOR:	Clear	80% STRENGTH:	72 hours
VISCOSITY:	2900 cps	SPECIFIC GRAVITY:	1.03 ± .040
REACTIVITY:	35 to 40 minutes	COVERAGE:	10mil: 30sq.ft/Pint 240sq. ft/Gallon
WORKING TIME:	20 minutes		20mil: 15sq.ft/Pint 120sq. ft/Gallon
FIXTURE TIME:	2 hours		

DIRECTIONS FOR USE

Surface Preparation: Surfaces to be joined should be clean and fit without forcing. It should not be necessary to flex either piece more than a few thousandths of an inch to achieve complete contact. Surfaces should be sanded with 240 to 400 grit sandpaper before bonding.

Mixing: Before mixing, bring both Components (A & B) to room temperature. Per 100cc or grams of Comp. "A", add 5cc or 5 grams of Comp. "B". Stir until completely mixed. If base cement is above 85°F, pre-cool to 75°F before mixing.

Pot Life: When mixed, pot life at 75°F is approximately 20 minutes. Note: shorter pot life may result where larger masses are used or when temperature is above 75°F.

Preliminary Annealing: To prevent crazing during bonding, acrylics should be annealed following machining and forming. (Refer to acrylic sheet manufacturer's published Annealing Schedules.)

Making The Joint: Apply cement with suitable applicator to one or both surfaces and assemble immediately. If cellophane masking tapes are used, avoid contact of cement with adhesive side of tape. Apply just enough pressure to remove air bubbles. Do not squeeze parts so hard as to force cement out of joint, a dry joint could result. If possible, cover joint with cellophane to prevent inhibition of cure by air.

Properties of the Bond: The tack free time for WELD-ON 40 when applied at 20mil thickness is about 7-8 minutes and the cure time is about 20 minutes. The film will become hard in 45-60 minutes. Usually joints are hard enough for handling in about 4 hours at 70°F. Machining may be done after 24 hours.

STORAGE AND SHELF LIFE

Keep away from sources of heat, open flame, sparks and sunlight. Storage near the ceiling in unairconditioned warehouses is not recommended. One year shelf life is expected when both components are stored in a cool (70-75°F) dry place in containers. Shelf life is reduced at higher temperatures and enhanced at lower temperatures.

SHIPPING

Shipping Information for Individual Containers Larger than One Liter: DOT Shipping Name: Adhesive. DOT Hazard Class: 3. ID #: UN1133. Packaging Group: II. Label: Flammable Liquid. Normally shipped as a kit under UN1133, Adhesive. If components are shipped separately, see MSDS for shipping instructions.

Shipping Information for Less than One Liter: DOT Shipping Name: Consumer Commodity. DOT Shipping Class: ORM-D

SAFETY AND ENVIRONMENTAL PRECAUTIONS

Weld-On 40 is a flammable reactive cement and considered a hazardous material. In conformance with the Federal Hazardous Substances Labeling Act, the following hazards and precautions are given. Purchasers who may repackage this product must also conform to all local, state and federal labeling, safety and other regulations.

DANGER - FLAMMABLE - VAPOR HARMFUL - MAY BE HARMFUL IF SWALLOWED - MAY IRRITATE SKIN OR EYES

Keep out of reach of children. Do not take internally. Keep away from heat, spark, open flame and other sources of ignition. Keep container closed when not in use. Store in the shade between 45°F and 75°F. Use only in well ventilated area. Avoid breathing of vapors. Atmospheric levels should be maintained below established exposure limit values contained in Section II and VIII of the Material Safety Data Sheet. If airborne concentrations exceed those limits, use of a NIOSH-approved organic vapor cartridge respirator with full face-piece is recommended. The effectiveness of an air-purifying respirator is limited. Use it only for a single short-term exposure. For emergency and other conditions where short-term exposure guidelines may be exceeded, use an approved positive pressure self-contained breathing apparatus. Do not smoke, eat or drink while working with this product. Avoid contact with skin, eyes and clothing. May cause eye injury. Protective equipment such as gloves, goggles and impervious apron should be used. Carefully read Material Safety Data Sheet and follow all precautions. Contains Methyl Methacrylate Monomer (80-62-6). Do not use this product for other than intended use.

"Title III Section 313 Supplier Notification": This product contains toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and of 40CFR372. This information must be included in all MSDS's that are copied and distributed for this material

FIRST AID

Inhalation: If ill effects from inhalation, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call physician.

Eye or Skin Contact: Flush with plenty of water for 15 minutes. If irritation persists, get medical attention.

Ingestion: If swallowed, do not induce vomiting. Contact physician immediately.

QUALITY ASSURANCE

Every batch of this cement is checked to assure that consistent quality is maintained. An infrared absorption curve is recorded for each batch to ensure that this cement is properly formulated. Samples are taken from all batches and kept for a period of at least one year. A batch identification code is stamped on each container.

IMPORTANT NOTE

This product is intended for use by skilled individuals at their own risk. These suggestions and data are based on information we believe to be reliable. Users should verify by test that this product, as well as these methods, are suited to their application. Since specific use, materials and handling are not controlled by IPS, our warranty is limited to the replacement of defective IPS products.