



**SUBSTRATE RECOMMENDATIONS:**

WELD-ON® 28™ is formulated for bonding all acrylics, including cell cast, continuous cast, extruded, and cross-linked acrylic and molded parts. It will also bond acrylics (PMMA) to polyester (PET), cellulose acetate butyrate (CAB), polystyrene, wood, and other materials.

**SUGGESTED BONDING APPLICATIONS AND RECOMMENDATIONS:**

WELD-ON 28 is recommended for use as a high strength structural adhesive for bonding acrylics and other plastics. It has many applications and may be used for bonding acrylic to fabric-acrylic impregnates used in aircraft canopy construction. May also be used for laminating and wet lay-up work. Meets Military Spec A-8576C Type II.

**GENERAL DESCRIPTION:**

WELD-ON 28 is a 3-component, medium syrupy, clear, reactive acrylic cement. It polymerizes at room temperature forming high strength joints within a few hours. The bonded joint retains high strength and resists the effects of weathering, but may exhibit slight yellowing in especially harsh conditions. Where retention of clarity is required, WELD-ON® 40™ is recommended.

**COMPONENT A:** Acrylic, medium syrupy resin based cement. Packaged in 4oz (118 ml), pint (473 ml) and gallon (3.785 l) containers.

**COMPONENT B:** Catalyst, 50% Benzoyl Peroxide-phlegmatized powder. Packaged in 2.4 gram capsules.

**COMPONENT C:** Promoter. Water thin liquid. Packaged in 5cc vial for 4oz. (118 ml) jar, in 30cc vial for pint (473 ml) jar and in ½ pint (236 ml) jar for gallon (3.785 l) container.

**TYPICAL BOND STRENGTH †:**

Substrate Material	Aged Bond Strength, lbs/in <sup>2</sup> (kg/cm <sup>2</sup> )		
	2 Hours	24 Hours	1 Week
Acrylic (Cast & Extruded)	2000 (141)	2700 (190)	2800 (197)
PVC	3400 (239)	3500 (246)	3800 (267)
Polycarbonate	1300 (91)	1700 (119)	2000 (141)

† Substrate Thickness: 0.25 inch (0.64 cm). Bond area: 1.0 in<sup>2</sup> (6.45 cm<sup>2</sup>)

**ADHESIVE PROPERTIES AND CHARACTERISTICS:**

COLOR: Clear  
 VISCOSITY: 3,100 ± 500 cP  
 REACTIVITY: 18 minutes  
 WORKING TIME: 15 minutes  
 FIXTURE TIME: 1 hour  
 TIME TO REACH 80% OF ULTIMATE BOND STRENGTH: 24 hours  
 SPECIFIC GRAVITY: 1.03 ± 0.04

**DIRECTIONS FOR USE:**

**Mixing:** Before making final mixture, bring Component A to room temperature. **CAUTION: Never mix Component B and C directly. (A violent reaction will occur).** Per 4 fluid ounces of Component A, add 2.4 gram capsules of Component B. Stir until completely dissolved. Then add 5cc vial of Component C and stir slowly and evenly to prevent excess air from entering into mixture.

**Pot Life:** When mixed, pot life at 75°F / 24°C is approximately 18 minutes. If base cement is above 85°F/ 29°C, pre-cool to 75°F/ 24°C before mixing. Note: Shorter shelf life may result where larger masses are used and when temperature of base resin is above 75°F/ 24°C.

	APPROXIMATE POT LIFE AT VARIOUS TEMPERATURES			
	45°F / 7°C	60°F / 15.5°C	73°F / 23°C	90°F / 32°C
Components A, B, and C mixture	90 Minutes	50 Minutes	25 Minutes	10 Minutes

**Surface Preparation:** Surfaces to be joined should fit accurately 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.

**Preliminary Annealing:** To prevent crazing during bonding, acrylic should be annealed following machining and forming. Joint should be made as soon as possible after annealing. The time between annealing and bonding should not exceed 24 hours. (See Rohm and Haas Bulletin on Annealing Schedules)

**Making The Joint:** Apply cement with suitable applicator to one or both surfaces and assemble immediately. If plastic 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, or a dry joint could result. If possible cover joint with cellophane to prevent inhibition of cure air.

**Cure Time:** Usually joints are hard enough for handling in 2 hours at room temperature. Machining may be done after 4 hours. We recommend where possible, a 24 hour cure before machining. For maximum strength, the joint should be cured for 4 hours at 158°F/ 70°C, preferably within 24 hours after assembly.

#### **SHELF LIFE:**

1 year in tightly sealed containers stored in a cool 50 - 80°F (10 - 27°C) dry place. Storage near the ceiling in non air-conditioned warehouses is not recommended. Shelf life is reduced at higher temperatures and enhanced at lower temperatures. Keep away from sources of heat, open flame, sparks and sunlight. The date code of manufacture is stamped on the bottom of the container.

#### **QUALITY ASSURANCE:**

WELD-ON 28 is carefully evaluated to assure that consistent high quality is maintained. Fourier transform infrared spectroscopy, gas chromatography, and additional in depth testing ensures each batch is manufactured to exacting standards. A batch identification code is stamped on each can and assures traceability of all materials and processes encountered in manufacturing this plastic adhesive for its intended specific application.

#### **SHIPPING:**

##### **For One Liter Kit and Above\***

Proper Shipping Name: Adhesive  
Hazard Class: 3  
Identification Number: UN 1133  
Packing Group: II  
Label Required: Flammable Liquid

##### **For Less than One Liter**

Proper Shipping Name: Consumer Commodity  
Hazard Class: ORM-D

\* If components are shipped separately, see MSDS for shipping instructions

#### **SAFETY AND ENVIRONMENTAL PRECAUTIONS:**

This product is considered a hazardous material. In conformance with the Federal Hazardous Substance Labeling Act, the following hazards and precautions are given. Purchasers who may re-package this product must also conform to all local, state, and federal labeling, safety and other regulations. There is no measurable VOC emission.

#### ***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 50° - 80°F (10° - 27°C). 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), Organic Peroxide (94-36-0) and N.N. Dimethylaniline (121-69-7). 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 overcome with vapors, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call physician.  
Eye Contact: Flush with plenty of water for 15 minutes and call a physician.  
Skin Contact: Wash skin with plenty of soap and water for at least 15 minutes. If irritation develops, get medical attention.  
Ingestion: If swallowed, give 1 or 2 glasses of water or milk. Do not induce vomiting. Contact physician or poison control center immediately.

**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, is suited to their application.

**WARRANTY:**

IPS® Corporation ("IPS Corp.") warrants that all new IPS Corp. products shall be of good quality and free from defects in material and workmanship for the shelf life as indicated on the product. If any IPS Corp. product becomes defective, or fails to conform to our written limited warranty under normal use and storage conditions, then IPS Corp. will, without charge, replace the nonconforming product. However, this limited warranty shall not extend to, nor shall IPS Corp. be responsible for, damages or loss resulting from accident, misuse, negligent use, improper application, or incorporation of IPS Corp. products into other products. In addition, any repackaging of IPS Corp. products also shall void the limited warranty. IPS Corp. shall not be responsible for, nor does this limited warranty extend to, consequential damage, or incidental damage or expense, including without limitation, injury to persons or property or loss of use. Please refer to our standard IPS Corp. Limited Warranty for additional provisions.



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