



SUBSTRATE RECOMMENDATIONS

Weld-On® 45 is formulated for bonding a wide variety of metals, plastics and many other substrates.

BONDING RECOMMENDATIONS

Weld-On 45 is recommended for a variety of applications and industries including sign assembly and other fabrication and manufacturing uses where high bond strength and environmental resistance is required. This adhesive is especially suitable for bonding aluminum, CRS, brass, copper, galvanized steel and other metals. Excellent adhesion is also obtained on plastics such as PVC, polycarbonate, ABS, acrylic and PETG.

GENERAL DESCRIPTION

Weld-On 45 is a fast curing, two-component, low VOC, reactive adhesive. When mixed and applied, it polymerizes at room temperature to form high strength bonds within an hour. The adhesive has excellent corrosion resistance, good gap-filling capabilities, weatherability and outstanding impact strength at low and high temperatures. Once cured, the adhesive will withstand a temperature range of -20° F (-29° C) to 200° F (93° C). The elongation will remain the same even at high temperatures up to 200° F (93° C). UL 746C (aluminum, fiberglass).

TYPICAL BOND STRENGTH†

| Substrate Material | Aged Bond Strength, lbs/in ² (kg/cm ²) | | |
|--------------------|---|----------------|----------------|
| | 2 Hours* | 24 Hours* | 72 Hours* |
| Aluminum | 2,000 (140.62) | 2,200 (154.68) | 2,300 (161.71) |
| Cold Roll Steel | 1,900 (133.59) | 2,250 (158.20) | 2,300 (161.71) |
| Brass | 1,700 (119.53) | 2,000 (140.62) | 2,000 (140.62) |
| Copper | 1,200 (84.37) | 1,500 (105.47) | 1,500 (105.47) |
| Galvanized Steel | 1,700 (119.53) | 2,100 (147.65) | 2,100 (147.65) |
| ABS | 1,400 (98.43) | 1,500 (105.47) | 1,600 (112.50) |
| Polycarbonate | 1,600 (112.50) | 1,700 (119.53) | 1,800 (126.56) |
| PVC | 1,600 (112.50) | 1,700 (119.53) | 1,700 (119.53) |
| Acrylic | 1,700 (119.53) | 1,900 (133.59) | 2,000 (140.62) |
| PETG | 1,600 (112.50) | 1,650 (116.01) | 1,700 (119.53) |

*Substrate thickness: 0.25 inch (0.64 cm). Bond area: 1.0 in² (6.45 cm²). Bond strength data was obtained using the compressive shear strength method (ASTM D-2564). Ultimate Bond Strength is defined as strength achieved after 24-hour room temperature cure.

ADHESIVE PROPERTIES AND CHARACTERISTICS @ 73°F (23°C)

| | | | |
|-----------------|--|--|--|
| Color: | Tan | Fixture Time (Time to reach 80% of ultimate strength): | 15 Minutes |
| Viscosity: | 500,000 ± 100,000 cps | Time to reach ultimate bond strength: | 24 Hours |
| Reactivity: | 8 Minutes | Specific Gravity: | Component A: 1.064 ± 0.02 Component B: 1.295 ± 0.02 |
| Tack Free Time: | 1 Hour, 0.02 Inch (0.05 cm) Film Thickness | | |
| Working Time: | 5 – 6 Minutes | | |

DIRECTIONS FOR USE

Weld-On 45 is packaged in a twin-syringe cartridge that dispenses product in a 4:1 mix ratio. The cartridge must be inserted in the dispensing gun and the mixing tip attached prior to dispensing.

- Before inserting the cartridge in the dispensing gun, open cartridge valve and clean obstructions from cartridge nose and valve opening with a clean probe. Close valve.
- Insert cartridge into dispensing gun. Open valve. Dispense a small amount of adhesive making sure that both components freely flow from the cartridge.
- Attach the mixing tip to the cartridge. Press the dispensing gun to dispense and discard approximately 1 – 2 inches (2.5 – 5.0 cm) of the product, ensuring that the product is mixed properly in the mixing tip before use. If the mixing tip is left on the cartridge for a sufficient length of time without additional use, the adhesive may cure in the tip. If this happens, keep the mixing tip on the cartridge. When you are ready to dispense more adhesive, replace the mixing tip on the cartridge with a new one. Be sure to discard 1 – 2 inches (2.5 – 5.0 cm) of the product before use.



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AVAILABILITY

This product is available in 43 ml and 400 ml cartridges. For detailed information on mixing tips and dispensing guns, refer to the current Sign and Display Assembly Selection Guide and Price List.

SHELF LIFE

One year in unopened cartridge. The date code of manufacture is stamped on the bottom of the cartridge. Shelf life is reduced at higher temperatures and enhanced at lower temperatures. To optimize shelf life, refrigerator storage is recommended and/or store away from direct sunlight between 50° F – 80° F (10° C – 27° C). Keep away from sources of heat, open flame, sparks, sunlight and moisture.

QUALITY ASSURANCE

Each component of Weld-On® 45 is carefully evaluated to assure that consistent high quality is maintained. Significant testing and evaluation of application and bonding characteristics are conducted on each batch. A batch identification code is stamped on each cartridge providing traceability of all materials and processes used to manufacture this adhesive.

SHIPPING

Shipping Information 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

SAFETY AND ENVIRONMENTAL PRECAUTIONS

This product is a flammable, reactive adhesive. It 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. VOC emissions do not exceed 250 grams per liter.

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 away from direct sunlight between 50° F – 80° F (10° C – 27° C). Use only in adequate ventilation. Avoid breathing of vapors. Atmospheric levels should be maintained below established exposure limit values. See Section II of 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.

Component A contains Methyl Methacrylate Monomer (80-62-6). Component B contains Catalyst-Initiator and Benzoyl Peroxide (94-36-0). Do not use this product for other than intended uses.

“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 Material Safety Data Sheets 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.

