



**SUBSTRATE RECOMMENDATIONS:**

WELD-ON® 45™ is formulated for bonding a wide variety of metals, plastics, wood, concrete, brick and many other substrates to themselves or each other.

**SUGGESTED BONDING APPLICATIONS AND 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 metallics. Excellent adhesion is also obtained on plastics such as PVC, polycarbonate, ABS, acrylic, and PETG. This structural adhesive should also be considered whenever bonding wood or other cellulose, as well as when working with ceramic and masonry substrates including brick and concrete.

**GENERAL DESCRIPTION:**

WELD-ON 45 is a fast curing, 2 component, low VOC, reactive structural adhesive. When mixed and applied, it polymerizes at room temperature to form high strength bonds within an hour. The adhesive has excellent resistance to corrosion by moisture and has good gap-filling capabilities, weatherability and outstanding impact strength at room, 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 <sup>2</sup> (kg/cm <sup>2</sup> )		
	2 Hours*	24 Hours*	72 Hours*
Aluminum	2000 (140.62)	2200 (154.68)	2300 (161.71)
Cold Roll Steel	1900 (133.59)	2250 (158.20)	2300 (161.71)
Brass	1600 (112.50)	1700 (119.53)	2000 (140.62)
Copper	1100 (77.34)	1200 (84.37)	1500 (105.47)
Galvanized Steel	1700 (119.53)	2100 (147.65)	2300 (161.71)
ABS	1400 (98.43)	1500 (105.47)	1600 (112.50)
Polycarbonate	1600 (112.50)	1700 (119.53)	1800 (126.56)
PVC	1600 (112.50)	1700 (119.53)	1700 (119.53)
Acrylic	1700 (119.53)	1900 (133.59)	2000 (140.62)
PETG	1600 (112.50)	1650 (116.01)	1700 (119.53)

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

Bond strength data was obtained using the compressive shear strength method (ASTM D-2564).

\* The time indicated is the interval between bond assembly and the performance of the shear test.

**ADHESIVE PROPERTIES AND CHARACTERISTICS:**

COLOR: Tan  
 VISCOSITY: 500,000 cP  
 REACTIVITY: 8 minutes  
 Tack free time = 1 hour, 0.02inch (0.05 cm)  
 film thickness, 73°F (23°C)  
 WORKING TIME: 6 minutes  
 FIXTURE TIME: 15 minutes  
 TIME TO REACH 80% OF  
 ULTIMATE BOND STRENGTH: 1 hour  
 SPECIFIC GRAVITY: Component A: 1.085 ± 0.04  
 Component B: 1.327 ± 0.04

## 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 assembled to the dispensing gun and mixing tip 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.
- Attached 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 mix 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.

## 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 Product Catalog and Price List.

## SHELF LIFE:

1 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 in cool dark place between 50° – 80°F (10° – 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 structural adhesive.

## SHIPPING:

### For One Liter 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:

WELD-ON 45 is a flammable reactive adhesive and is classified as a hazardous material. In conformance with the Federal Hazardous Substrates Labeling Act, the following hazards and precautions need to be recognized and followed. VOC emissions do not exceed 70 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, sparks, open flame and other sources of ignition. Keep container closed when not in use. Store away from direct sunlight between 50° – 80°F (10° – 27°C). Use only with adequate ventilation. Avoid breathing vapors. Atmospheric vapor levels should be maintained below established exposure limits contained in Section II of the Material Safety Data Sheet. If airborne concentrations exceed those limits, use a NIOSH-approved organic vapor cartridge respirator with full face-piece for 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. Avoid contact with skin, eyes and clothing. Do not smoke, eat or drink while working with this product. May cause eye injury. Protective equipment such as safety glasses or goggles, gloves, and impervious apron should be used. Carefully read Material Safety Data Sheets and follow all precautions. Contains Methyl Methacrylate Monomer (60-62-6). 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 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.



455 W. Victoria Street  
Compton, CA 90220 U.S.A.  
Tel: 310.898.3300  
Fax: 310.898.3392

500 Distribution Parkway  
Collierville, TN 38017 U.S.A.  
Tel: 901.853.5001  
Fax: 901.853.5008

Customer Service: 800.888.8312  
[www.ipscorp.com](http://www.ipscorp.com)

