



75 Electrode for Malleable, Ductile, and Nodular Cast Irons Instructions

Begin by beveling the joint. Drill holes 1/2" from each end of the crack to prevent further cracking while welding. Tack weld to retain alignment. Use AC or DC reverse polarity, electrode positive. (50-80 amps for 3/32", 70-110 amps for 1/8" rods, 100-140 amps for 5/32" rods) Maintain a short arc and make short passes and peen each pass promptly to chip off slag before cooling. Continue back whipping and overlapping until all deposits are connected. Cool naturally.

Tips

- For best results clean and bevel the cast iron before welding. Remove all surface oil and grease along with rust, paint, etc. A bright shiny surface by grinding or sanding disk is optimal for the best penetration.
- Never cool the cast iron with water.
- Welding with wind blowing on your cast is not advised.
- Soaking electrodes in water will help remove the coating for TIG welding. TIG welders usually use 3/32" or for thinner cast or 1/8" rods for heavier sections.
- Never weld more than 2 inches at a time and allow cast to cool for 2 minutes between passes. For some cast irons you may only want to weld an inch or less and let cool 1 minute between passes.
- Our electrodes work best when used on clean, un-welded surfaces, if using over an existing weld thoroughly remove existing weld.
- Try not to heat or preheat the cast iron excessively. Cast iron welds are susceptible to cracking from rapid hot to cool descending temperatures.
- If the rod is not penetrating check the ground, amperage, and machine settings.
- Low and slow is the key to a sound cast iron weld.
- You can use a mild steel patch over large holes, the 77 and 75 will weld the steel to the cast iron.
- Many welders use the 3/32 rods to keep the heat lower.
- TIG welders usually will work with the 3/32 size rods
- Gently pre-heat the cast iron if possible, no need to get it red hot but it will lay flatter when you first start your bead and preheating removes moisture out of the cast to prevent pinholes and porosity.
- If the rod undercuts, turn your amperage down.
- If the rod looks ropery or doesn't penetrate, turn your amperage up.
- Remove any JB Weld or previous rod before welding with MuggyWeld products.
- Be aware of any engine sealants before welding as it may contaminate the weld.
- Drill holes at the end of any cracks to stop propagation.

FIRST AID MEASURES:

Inhalation: Remove to fresh air immediately or administer oxygen. Get medical attention immediately.

Skin: Flush skin with large amounts of water and soap. If irritation develops and persists, get medical attention.

Eye: Flush eyes with water for at least 15 minutes. Get medical attention.

Ingestion: Obtain medical attention immediately if ingested.

Electric Shock: Disconnect and turn off the power. Use a nonconductive material to pull victim away from contact with live parts or wires. Immediately contact a physician.

FIRE-FIGHTING MEASURES:

Suitable Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Welding arcs and sparks can ignite combustible and flammable materials. Use the extinguishing media recommended for the burning material and fire situation.

Unsuitable Extinguishing Media: Do not use water on molten metal. Large fires may be flooded with water from a distance.

Specific Hazards Arising From Chemical: Keep away from heat/spark/open flames/hot surfaces. No smoking. Hydrogen fluoride, Calcium oxide, Iron oxides, Carbon oxides, Strontium oxides, Manganese/manganese oxides, Barium oxide, Nickel/nickel oxides, Aluminum oxide, Sodium oxides, Silicon oxides

Protective Equipment: Fire fighters should wear complete protective clothing including self-contained breathing apparatus.

HANDLING AND STORAGE:

Precautions for Safe Handling: Handle with care to avoid stings or cuts. Wear gloves when handling welding consumables. Avoid exposure to dust. Do not ingest. Some individuals can develop an allergic reaction to certain materials. Retain all warning and identity labels.

Conditions for Safe Storage: Store in dry place in closed packages. Keep separate from chemical substances like acids and strong bases, which could cause chemical reactions. Ground/bond container and receiving equipment.

EXPOSURE CONTROLS/ PERSONAL PROTECTION:

Engineering Controls: Avoid exposure to welding fumes, spatter, electric shock, heated materials and dust.

Ensure sufficient ventilation, local exhaust, or both, to keep welding fumes and gases from breathing zone and general area. Keep work place and condition of protective clothing clean and dry. Train welders to avoid contact with live electrical parts and insulate conductive parts. Check condition of protective clothing and equipment on a regular basis.

Exposure Limits: Use industrial hygiene equipment to ensure that exposure does not exceed applicable national exposure limits. Unless noted, all values are for 8 hour time weighted average.

Respiratory protection: Use an air purifying dust respirator when welding or brazing in a confined space, or when local exhaust or ventilation is not sufficient to keep exposure values within safe limits.

Hands protection: Wear appropriate gloves to prevent skin contact.

EN 12477: Protection gloves for welders

Type B gloves are recommended when high dexterity is required as for TIG welding, while type A gloves are recommended for other welding processes. The contact temp (°C) is 100 and the threshold time (seconds) >15.

Eyes protection: Welder's helmet or face shield with color absorbing lenses. Shield and filter to provide protection from harmful UV radiation, infra red and molten metal approved to standard EN379. Filter shade to be a minimum of shade 9.

Skin protection: Heat-resistant protective clothing. Wear safety boots, apron, arm and shoulder protection. Keep protective clothing clean and dry. Clothing should be selected to suit the level, duration and purpose of the welding activity.

Please visit <http://www.aws.org/technical/facts/> prior to using Muggy Weld products, and adhere to all AWS welding safety guidelines. Further product safety information is available at <http://muggyweld.com/safety-guidelines>. Muggy Weld LLC shall not be liable for any loss, injury, claim, liability, or damage of any kind resulting in any way from (a) your use of Muggy Weld products, (b) any errors in or omissions from these instructions. BY OFFERING FOR SALE WELDING ALLOYS THROUGH ITS WEBSITE, MUGGY WELD LLC DOES NOT REPRESENT OR WARRANT THAT WELDING IS WITHOUT RISK, AND IS NOT LIABLE FOR DAMAGES OR LOSSES THAT MAY RESULT FROM PARTICIPATION IN SUCH ACTIVITIES.