



# 3099

AC-DC electrode  
General purpose, machinable cast iron repair

**Description :**

CasTec 3099 electrodes are graphite coated and deposit a nickel alloy with exceptional ductility, high tensile strength and good machinability. The deposits are dense, crack free and base metal dilution is minimised.

The FrigidArc coating enhances the arc characteristics, making CasTec 3099 a very easy electrode to use. The arc is smooth and stable regardless of the length of the arc gap - it welds in any position including overhead. Burn-off is uniform, wash characteristics and fluidity excellent. It produces a flat, even and finely rippled bead.

Use for joining, coating, building up missing sections, and filling cracks and pores. Deposits are dense, porosity free, and machining is easy, even with a file, because the deposit contains no hard spots, inclusions, entrapped slag, or cross checks.

**Tip colour :** Light green

**Features :****Machinability :**

CasTec 3099 combines optimum amount of ductility, tensile strength and excellent machinability.

**Easy To Use :**

CasTec 3099's exclusive FrigidArc coating provides arc stability over a wide range of arc gaps. There is virtually no spatter or fuming, alloy transfer is smooth and fast, wide gaps can be bridged, and it welds in all positions including overhead.

**Versatility :**

Because of the extraordinary fluidity of the molten pool and fast deposition and solidification, CasTec 3099 can weld small sections to large sections. It welds steel to cast iron, simplifies circumferential pipe welds to flanges, and works well with low open circuit voltage power sources.

**Speed :**

Besides the fast deposition rate, CasTec 3099 also saves labour costs because there is little spatter to clean, slag is light and easy to remove, and the low profile of the weld bead minimizes electrode usage and any subsequent machining operations.

**Typical Applications :**

Repairs of grey cast iron motor blocks, pump housings and other thin walled cast iron parts. Repairs of parts such as foundry defects, surface flaws, etc. Building up missing sections, gears, impellers and housings.

**Technical Data :**

Tensile Strength: 365Mpa

**Base Metals :**

Recommended for grey cast iron. Welds steel to cast iron.

**Application Procedure :****Preparation :**

Thoroughly clean weld area. Use Xuper ExoTrode to remove all cracks, defects, damaged metal and any stress raisers.

**Preheating :**

While preheating is generally not necessary, preheating to approximately 200°C will enhance flow characteristics of weld metal. In some cases (eg complicated castings) adequate preheating and interpass temperature would facilitate welding.

**Welding :**

Use AC or DC straight polarity. Direct the arc onto the weld deposit. Lightly peen hot weld beads to relieve stresses. Remove slag between passes. Allow work piece to slowly return to room temperature.

**Welding positions :****Recommended Amperages :**

Size: 3.2mm 4.0mm

Amps: 70-120 90-140

Maximum settings result in faster deposition rates which are desirable for larger sections. Minimum settings are recommended for thinner sections.

**Standard Diameters :**

3.2mm and 4mm in 350mm lengths.

Diameters available ex-stock vary according to demand.

**Packaging :**

CasTec 3099 is packaged and shipped in Dry-Pak containers to keep every electrode clean and dry. Dry-Pak containers are made of strong, tough polypropylene - easily recyclable.

# DIGITALWELD

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