

ARCTEC® 12 COBALT ALLOY

Conforms to AWS A5.13 ECoCr-B



a quality welding alloy

GENERAL CHARACTERISTICS:

ARCTEC® 12 Cobalt is a cobalt-base alloy containing chromium and tungsten. Deposits are of intermediate hardness compared to the 1 and 6 Cobalt alloy and have good abrasion resistance under corrosive conditions. The coefficient of friction is low and the deposit acquires a high polish in service. Elevated temperature hardness is an outstanding property of cobalt-base alloys. Many surfacing alloys are softened permanently by heating to elevated temperatures but the cobalt-base alloys are an exception. While they do exhibit lower hardness when hot, they return to approximately their original hardness upon cooling and can be considered immune to tempering. This alloy is not intended for use in applications where resistance to impact is a major consideration. Available in flux coated electrodes and bare rods.

APPLICATIONS:

ARCTEC® 12 Cobalt Alloy is recommended for applications where greater hardness and abrasion resistance, than that attained with 6 Cobalt, are needed. Surfacing of parts such as shafts, bearing surfaces, thrust washers, brake drums, cams, tappets, valve push rods and valve stem ends in combustion engines are typical applications where this alloy performs well.

WELDING PROCEDURE:

Clean weld area free from dirt, oil, grease, rust and other contaminants. Select lowest amperage possible. Maintain short to medium arc with electrode vertical to workpiece. Preheat heavy section to approximately 550°F (290°C).

MECHANICAL PROPERTIES:

Typical Hardness Values

Oxyfuel Gas Welded:	45-49 RC
Arc Welded:	34-47 RC

Please Note: Lower hardness values can be expected in single layer deposits due to dilution with base metal.

OPERATING PARAMETERS:

WELDING PROCESS: SMAW or OAW

POLARITY: DC Reverse

Recommended Amperage:

Diameter	3.25mm 1/8"	4.00mm 5/32"	5.00mm 3/16"
Amperage	70-90	100-120	130-150

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