



Colmonoy® 56 Metal Cored Wire

Colmonoy® 56 and 88 Wire:

Nickel-Based
Metal Cored Wire
With High Crack Resistance
For Fast On-Site Application

Description:

Colmonoy® 56 and Colmonoy® 88 wire are available as 1/16" (1.6mm) diameter wire and are generally preferred for application by GMAW or MIG. Colmonoy® 88 is also available in 0.045" (1.2 mm). These are metal cored wires. The wire deposits are identical to the powder deposits made by the Sprayweld™ Process. The wire deposits exhibit high crack resistance, especially in thicker deposits.

Nominal Composition - % by Weight:

Colmonoy® Alloy	B	C	Cr	Fe	Si	W	Ni
56	2.0	0.8	17.5	3.5	4.5	-	Bal
88	3.0	0.8	15.0	3.5	4.0	17.3	Bal

Parameters (Starting Point):

Polarity	D.C.R.P
Voltage	27 volts
Amperage	325 amps
Feed Rate	260 ipm
Deposition Rate (at 260 ipm)	approx. 12lbs/hr
Shielding Gas	100% Argon or 95/5 (Co ₂)
Welding Position	Horizontal
Weld Pattern	Slight weave, up to 1" (25mm) wide

Typical Uses:

Wire has proven successful in many different applications within a vast number of industries. In the automotive industry, they are successful on camshaft lobes in combustion engines, camshafts, on motorcycles and engine valves and seats. They are also used in many high performance racing applications. In the paper & pulp industry, wires have been successful on hammers, pulp beater blades, and log haul chutes and chains. In the plastics industry, they have been successfully used on Banbury* mixers and extrusion screws to increase abrasion resistance.

Application Methods:

Colmonoy® 56 and 88 wires are easily applied to all steels having less than .25% carbon, gray cast iron; Meehanite, malleable, ingot and wrought iron; nickel, Monel^a alloy 400, Inconel^a alloy 600, Nichrome, Chromel^b. Most high-temperature alloys can be overlaid without special precautions.

Steel having more than .25% carbon can also be overlaid, but requires controlled slow cooling after fusion, in suitable insulation such as Sil-O-Cel, mica, etc. Generally, do not apply to ferrous metals that require subsequent hardening and tempering, because the dimensional change associated with the formation of martensite will crack the deposits.

Hardenable base metals may be overlaid, but must be annealed isothermally after uniform austenitizing to prevent cracking of the deposits. (Consult [Technical Services](#) for further details).

Finishing Methods:

A green silicon carbide wheel is recommended for finishing the hard phases exclusive to Colmonoy® 56 and 88 wires. A 3-6 micrometer RMS can be achieved by grinding.

Colmonoy® 56 and 88 wires can be effectively machined with BZN-6000^c Compacts (a polycrystalline cubic boron nitride cutting tool). For more information, contact your local GE Superabrasives dealer. (Consult [Technical Services](#) for further details).

Safety:

Welders must wear clothing to protect them from being burned. Welding arcs are very intense and can cause burns to skin and eyes with just a few minutes of exposure. Wool clothing is suggested over synthetics (which should never be worn because it melts when exposed to extreme heat) or cotton, unless it is specially treated for fire protection.

Other protective wear for heavy work or especially hazardous situations includes: flame-resistant suits, aprons, leggings, leather sleeves/shoulder capes, and caps worn under your helmet.

Heavy, flame-resistant gloves, such as leather, should always be worn to protect your hands from burns, cuts, and scratches. In addition, as long as they are dry and in good condition, they will offer some insulation against electric shock.

ARC RAYS can burn.

Wear eye, ear and body protection. Be aware of fumes and gases when welding. Keep your head out of the the fumes. You need to minimize your exposure. Work in as ventilated an area as possible.

Read: AWS ANSI Z49.1, Safety in Welding, Cutting and Allied Processes. OSHA Safety & Health Standards are available at all government printing offices. Read and understand the manufacturer's Safety Data Sheet (SDS), which is on file with your employer, before using the product(s).

Storage Requirements:

Keep wire in a closed container and protect against dirt, oil, and grease.

Danger: Follow your employer's safety procedures and the equipment manufacturers instructions when welding. Electric shock can kill. Properly install and ground electrical equipment prior to use. Infrared and ultraviolet radiation emitted from the hot metal or welding arc can injure eyes and burn skin. Use appropriate personal protective equipment.

The information provided herein is given as a guideline to follow. It is the responsibility of the end user to establish the process information most suitable for their specific application(s). Wall Colmonoy assumes no responsibility for failure due to misuse or improper application of this product, or for any incidental damages arising out of the use of this material.

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b Registered trademark of Concept Alloys.

c General Electric Co., USA

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