



Product Data Sheet

NFG

AWS : None

I. APPLICATIONS:

Cutting – With NFG metal sheet and plate up to 10mm thick can be metal-arc cut with ease, the electrode should be held at a shallow angle of about 15°C to the surface of the plate

With thicker plates an up-and-down motion should be made in the direction of thickness so that the molten metal and slag may run clear out of the cut.

Grooving/gouging – The force of the NFG arc removes the molten metal, by pushing it out in front of the groove, whilst a forward-and-backward motion.

Where possible, the work piece should be inclined so that the molten metal can run free under the force of gravity.

NFG is used to gouge out any faulty weld metal deposit without the need for special cutting and grinding tools. In single-V preparations such gouging eliminates the need for grinding. In double-V preparations NFG for gouging instead of back grinding.

Metal-arc cutting is widely used for cutting holes into piping subsequent welding of branches and connections. NFG is particularly effective in cutting, piercing and gouging metals and alloys which are difficult to machine, eg. armour steel, air and deep hardening steels, stainless steels, cast irons and hard metal or work hardening overlays.

Iron both ferrous and non-ferrous foundries, NFG is used for the removal of risers and gates from casting and for cutting heavy scrap prior to remelting.

II. DESCRIPTION:

Special purpose manual metal arc electrode for the arc cutting, grooving and piercing of ferrous and non-ferrous metals and back gouging weld preparations for a wide range of repair and maintenance applications.

Metal –arc cutting with NFG occurs as a result of melting and removal of metal along desired line of travel using an electric arc struck between the work piece and a special desired line of travel using an electric arc struck between the work piece and a special covered electrode. The electrode coating is specifically designed to:

- Concentrate a forceful and penetrating arc
- Stabilize the arc and prevent its extinction'
- Blow the molten metal and dross away with a positive jet of gasses.

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All the above criteria are carefully balanced to enable the operator to maintain a high degree of control. The physical properties of the coating ensure that it decomposes more slowly than the melting rate of the core wire which results in the formation of a deep cup, 3-5mm deep, at the tip of the electrode. This ensures the operation of the arc within that space, without short circuiting, even when the electrode is inserted into holes during piercing, or in tight gaps and grooves. The insulating properties of the coating prevent side arcing. Suitable for use with AC (minimum OCV of 70V) and DC +.

III. NOTES ON USAGE:

- The speed of metal arc cutting is dependent upon the diameter of the electrode, current and the plate thickness.
- With good quality power source, the full potential of the electrode can be utilized. For instance, in piercing, the electrode can actually be “pushed: through metal without “freezing”.
- For situations with difficult access, a cutting and gouging flux-covered electrode has distinct advantages over the carbon arc and oxygen-cutting processes because it can be manipulated in very confined spaces.

IV. WELDING POSITIONS: FLAT, FILLET, VERTICAL UP, OVERHEAD

V. SIZES AVAILABLE AND RECOMMENDED CURRENTS : AC or DC (+)

Size	Dia.	2.5	3.2	4	5
(mm)	Length	350	350	350	350
Current Range Amp		100~150	150~250	250~350	300-450