

NiCAR™ Hardfacing Rods

Kennametal specializes in offering wear solutions for use in many industries. Through our comprehensive knowledge of wear and corrosion mechanisms in industrial environments, we provide effective solutions tailored for each application. Our broad portfolio of hardface and component wear solutions can extend the life of critical equipment operating in the harshest environments.



Kennametal's **NiCAR** oxyacetylene hardfacing rods are manufactured using premium tungsten carbide pellets bonded with an easy-to-weld nickel matrix. **NiCAR** produces hardface overlays with excellent wear, impact, and corrosion resistance that are compatible with most steel substrates.

NiCAR hardfacing can be used to address challenging wear situations in industries such as:

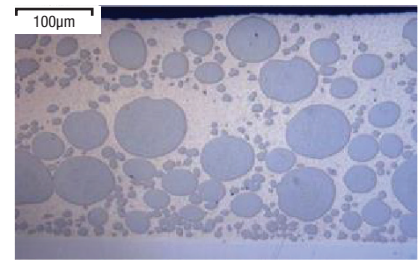
- Oil and gas exploration and drilling
- Mining
- Mineral processing
- Construction
- Material handling

Primary applications for **NiCAR** have been the hardfacing and repair of fixed cutter bits and as wear protection for stabilizers and reamers in the oil and gas industry. The large tungsten carbide pellets provide abrasion resistance while finer pellets protect the matrix from wear and erosion. The nickel matrix provides high-temperature corrosion resistance, protecting the bit body and allowing for cutter refurbishment and drill head reuse.



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Kennametal's **NiCAR** hardfacing rods can easily be applied with an oxy-fuel torch without weld bubbling or gassing issues, resulting in a smooth, wear-resistant deposit. The NiCAR formulation is a well-distributed, self-fluxing alloy without any resin binder or contaminants, resulting in good weld flowability.



Deposit Thickness 2mm (0.079")



Available Sizes

3/16" Ø 28"

1/4" Ø 28"

4.0mm Ø 28"

6.0mm Ø 28"

Suggested NiCAR Welding Guidelines

Preparation

- Before welding, read and understand the manufacturer's guidance, SDS, and your employer's safety practices.

Welding Equipment

- A standard oxygen-acetylene welding torch is used for applying the **NiCAR** rod.
- Pressure regulators: The oxygen regulator should be set in the range of 20 psi to 40 psi. The acetylene regulator should be set no higher than 12 psi.
- The welding tip should be of the proper size for the thickness of part being welded.
- A neutral flame (or up to 3X flame) can be used to deposit the **NiCAR** rod.

Process

- Preheat: Apply adequate preheat to the part prior to start of welding.
- Application: As the material temperature approaches "red hot", melt the **NiCAR** rod onto the part. Do not allow the base metal to achieve a sweating action, as the application of **NiCAR** rod is a brazing type operation.

Cool Down

- Allow the part to cool naturally in an area free of induced drafts from fans or air conditioning.

Contact Us

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