

STOODY®

VANCAR®

**An Alternative to Expensive
Tungsten Carbide**



www.stoody.com

VANCAR® was developed as a replacement alloy for higher cost tungsten carbide products. It provides similar wear resistance, but with its lower density, the weight of VANCAR applied to achieve the same coverage is much less than with tungsten carbide. With VANCAR material costs can be reduced by up to 50%.

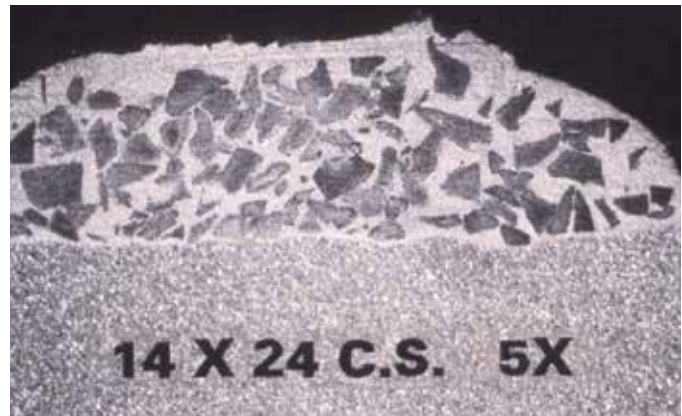
VANCAR provides a distribution of fine vanadium carbides very different from the large angular carbides found in the common 14 x 24 crushed sintered "dropped carbide" deposit. Its finely dispersed vanadium carbides are supported in a strong steel matrix, and since there is less matrix to wear out, carbides stay suspended longer. VANCAR deposits exhibit better performance under impact loading. Compared to tungsten carbide, VANCAR offers better control of the carbide distribution through the thickness of the deposit and a higher volume fraction.

Benefits

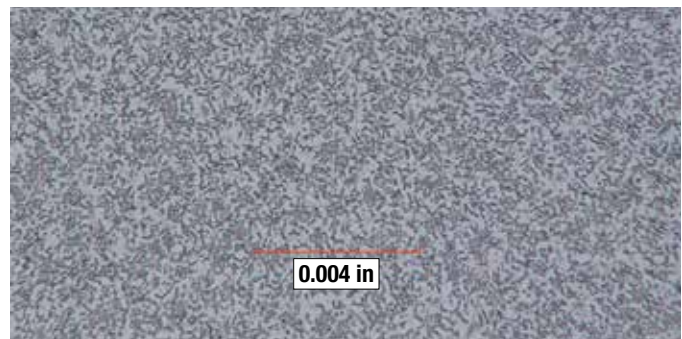
Some of the other benefits include

- Superior wear resistance over conventional chromium carbides
- Can be welded out-of-position (horizontal) when compared to welding in the flat position only with MIG dropped carbides – welds can be made in-situ without removing the component from service
- Can be welded over existing VANCAR deposits
- VANCAR can be deposited in multiple layers, retaining its original hardness – bulk carbide is limited to one pass
- With VANCAR, achieve the same level of wear protection and reduce material cost by up to 50%

Below are examples of MIG carbide and a typical VANCAR or vanadium carbide deposit. Notice the fine uniform structure of the VANCAR.



MIG carbide deposit of recycled crush sintered tungsten carbide particles at 5x.



VANCAR-O deposit, 200x

Applications

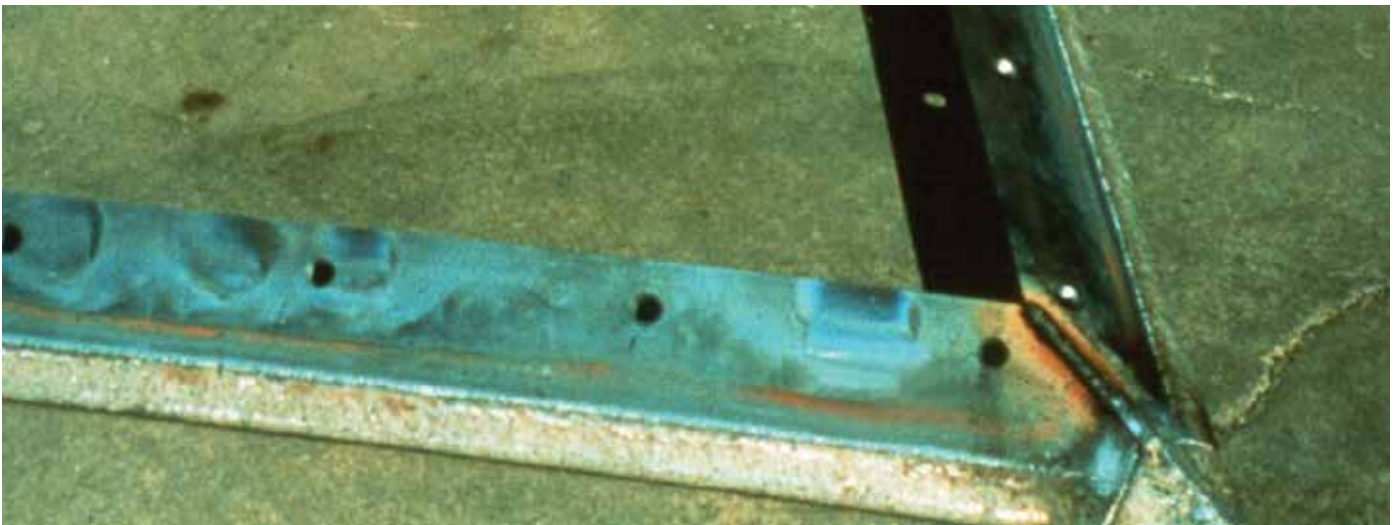
Applications include tillage tools, earth moving components, oil production wear parts and recycling hammers. The following applications utilize VANCAR® with great success.



Tub grinder hammers for pulverizing into chips



Track pad grouser bars used on an earth moving tractor



VANCAR on a large agriculture tillage sweep

Available VANCAR® Products

Product is available in various forms to meet the customer's process needs. The products include wire, rod and stick electrodes.

Product	Package	Part Number	Parameters
5/32 VANCAR G	50# Bulk Box (NS) ¹	11334900	Oxy Acetylene gas. See data sheet.
5/32 VANCAR E	10# Vac. Pak	11327600	80 – 130 Amps (DC-)
3/16 VANCAR E	10# Vac. Pak	11296500	130 – 165 Amps (DC-)
1/4 VANCAR E	10# Vac. Pak (NS) ¹	11366500	175 – 250 Amps (DC-)
1/16 VANCAR O	33# Wire Basket	11420200	22-26 Volts, 150 – 200 Amps ½" - ¾" stick out. See note below. ²
1/16 VANCAR O	50# Poly Pak	11420100	22-26 Volts, 150 – 200 Amps ½" - ¾" stick out. See note below. ²
3/32 VANCAR O	60# Coil	11333700	25-27 Volts, 200 – 300 Amps 1" - 1¼" stick out. See note below. ²

¹ NS = Non stock but can be manufactured (300 lb minimum)

² VANCAR wires are open arc wires requiring no shielding gas. However, one can improve weldability and deposit wetting characteristics using 75% Ar - 25% CO₂ or 100% CO₂ shielding gas.

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A Global Cutting & Welding Market Leader™

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