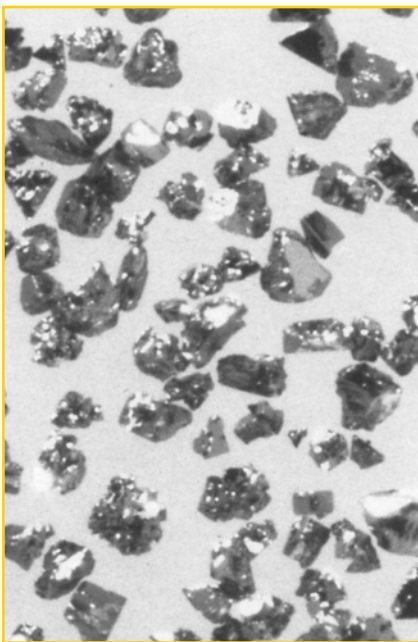




## Hardfacing Rods Extend the life of your hard-working tools!



Macrocrystalline Tungsten  
Carbide Particles

***Our hardfacing rods provide severe wear and abrasion resistance to keep your tools in service longer and significantly reduce replacement downtime and labor.***

- Ideal for wear applications where solid carbide parts are impractical because of cost or design considerations.
- Outstanding results from superior chemical carbide uniformity, a comparatively high carbon content, uniform granule distribution, and a high level of carbide particle deposition.

***The secret is our superior carbide!***

Our unique, patented high-temperature thermit process produces macrocrystalline tungsten carbide that offers severe abrasion resistance with moderate impact strength at operating temperatures up to 900° F.

- **Durable**—Superior abrasion resistance makes it an ideal constituent for tubular electrodes, automatic wire, and gas-applied rods!
- **Cost-effective**—Overlays have a more uniform structure and a lower specific gravity resulting in a decrease in cost-per-volume deposited.
- **Long-lasting**—The macrocrystalline tungsten carbide particles have a good survival rate in the welded deposit.

Typical analysis ranges:

– total carbon:	6.20%
– free carbon:	0.03%
– FE:	0.15%
– W:	balance

*(special sizes available upon request)*

Kennametal will significantly improve your oil sands productivity!

***Let us prove it.***

## Choose the right rod for your application

### When selecting or applying a hardfacing material:

- Determine the composition of the base material that you want to protect. High-alloy-content base materials will usually require special preparation such as pre-heating and/or post-heating, or the deposition of a transition/buffer layer between the hardfacing and base.

- Select the best application technique for each job. Some available methods: oxyacetylene, electric/shielded-arc, or atomic hydrogen welding techniques.
- Select the proper hardfacing product. As a deposit's tungsten carbide content increases, its abrasion resistance improves but its impact resistance decreases.

GRADE	CARBIDE FILL (WT.%)*	ROD FILLER TYPE	FILLER SIZES AVAILABLE (U.S. MESH)	DEPOSIT HARDNESS (HRC)	APPLICATION METHOD**	SINGLE-PASS COVERAGE (IN. <sup>2</sup> /LB)	DIAMETER		LENGTH	
							IN.	MM	IN.	CM
CTA-5 (Chromtung)	50	tungsten carbide, chrome carbide	40/325	54-58	OFW	113	1/8 5/32 3/16 1/4	3 4 5 6	14 18 28	36 46 71
CTE-5 (Chromtung)	50	tungsten carbide, chrome carbide	40/325	55-59	SMAW	52	1/8 5/32 3/16 1/4	3 4 5 6	14 18	36 46
KT-150-5	50	tungsten carbide, tungsten carbide/cobalt	60/200	56-60	SMAW	46	1/8 5/32 3/16 1/4	3 4 5 6	14 18	36 46
KT-150-6	60	tungsten carbide, tungsten carbide/cobalt	60/200	58-62	SMAW	75	1/8 5/32 3/16 1/4	3 4 5 6	14 18	36 46
KT-80-5	50	tungsten carbide, cobalt	40/325	56-61	OFW, GTAW	75	1/8 5/32 3/16 1/4	3 4 5 6	14 18 28	36 46 71
KT-80-6	60	tungsten carbide, cobalt	40/325	60-65	OFW, GTAW, SMAW	75	1/8 5/32 3/16 1/4	3 4 5 6	14 18 28	36 46 71
KT-110-6	60	cast tungsten carbide	10/20, 20/30, 30/40	50-60	OFW, GTAW	75	1/8 5/32 3/16 1/4	3 4 5 6	14 18 28	36 46 71
KT-110A-6	60	tungsten carbide, cast tungsten carbide	40/100	60-65	OFW, GTAW	75	1/8 5/32 3/16 1/4	3 4 5 6	14 18 28	36 46 71
RDCC	60	cast tungsten carbide additives	customer specification	50-60	OFW, GTAW	n/a	1/8 5/32 3/16 1/4	3 4 5 6	18 28	46 71
pelletube (WC/Co)	60	tungsten carbide/cobalt pellets	customer specification	58-62	OFW, atomic H2	n/a	1/8 5/32 3/16 1/4	3 4 5 6	18 28	46 71
BRT-3	30	tungsten carbide	customer specification	55-60	OFW	105	1/8 5/32 3/16 1/4	3 4 5 6	14 18 28	36 46 71
BRT-4	40	tungsten carbide	customer specification	58-62	OFW	105	1/8 5/32 3/16 1/4	3 4 5 6	14 18 28	36 46 71
RDWC	50	tungsten carbide	customer specification	58-62	OFW, SMAW	85	1/8 5/32 3/16 1/4	3 4 5 6	14 18 28	36 46 71

\*±2%

\*\*OFW=oxygen fuel welding;  
SMAW=shielded metal arc welding; GTAW=gas tungsten arc welding

**Put our hardfacing rods to the test in your demanding environment!**  
**To place an order, call 800/443-4862 or visit [www.kennametal.com](http://www.kennametal.com)**

NOTE: Metric values rounded to nearest whole unit.