

# MIM / CIM Wear Resistant Materials

## MIM / CIM Verschleissfeste Werkstoffe

Material/Chemistry	Vickers	Flex.St	Density	Th. Exp.	Th.Conduct
		(MPa)	(%)	1°Cx10-6	W/m.K
<b>Alumina 99.6%Al<sub>2</sub>O<sub>3</sub></b> (C'met-Al)	<b>1750</b>	<b>310</b>	<b>98.5</b>	<b>7.8</b>	<b>25.0</b>
<b>Si<sub>3</sub>N<sub>4</sub> + Yt/Al<sub>2</sub>O<sub>3</sub></b> (C'met-SiN10)	<b>1600</b>	<b>370</b>	<b>98.2</b>	<b>3.5</b>	<b>32.0</b>
<b>WC +12Co</b> (C'met-WC12)	<b>1240</b>	<b>2100</b>	<b>100</b>	<b>4.8</b>	<b>94.5</b>
<b>WC +Co+TaC</b> (C'met-WCTaC)	<b>1700</b>	<b>2100</b>	<b>100</b>	<b>4.7</b>	<b>96.5</b>
<b>WC +Ni</b> (C'met-WC6)	<b>1900</b>	<b>2000</b>	<b>100</b>	<b>-</b>	<b>-</b>
<b>SiC -</b> (C'met-SiC)	<b>2100</b>	<b>380</b>	<b>97.5</b>	<b>4.0</b>	<b>84.0</b>
<b>SiC +SiC + B</b> (C'met-SiC4)	<b>2900</b>	<b>450</b>	<b>96.7</b>	<b>4.0</b>	<b>84.0</b>
<b>SiAlON -</b> (C'met-Sialon)	<b>1700</b>	<b>833</b>	<b>98.5</b>	<b>3.0</b>	<b>25.2</b>
<b>ZrO<sub>2</sub> +5Y<sub>2</sub>O<sub>3</sub></b> (C'met-Zr5)	<b>1200</b>	<b>690</b>	<b>98.8</b>	<b>10.0</b>	<b>2.0</b>
<b>ZrO<sub>2</sub> +13Y<sub>2</sub>O<sub>3</sub></b> (C'met-Zr13)	<b>1100</b>	<b>400</b>	<b>98.5</b>	<b>9.2</b>	<b>1.7</b>
<b>Al<sub>2</sub>O<sub>3</sub> +ZrO<sub>2</sub></b> (C'met-AlZr2)	<b>1800</b>	<b>400</b>	<b>99.0</b>	<b>8.0</b>	<b>16.8</b>
<b>Alotica</b> (C'met-Alotica)	<b>2000</b>	<b>360</b>	<b>99.0</b>	<b>-</b>	<b>21.0</b>
<b>AlN -</b> (C'met-AlN)	<b>1100</b>	<b>350</b>	<b>98.5</b>	<b>4.4</b>	<b>170.0</b>

The values indicated are for general guidance only. They may change based on the processing conditions.

