»CARBIDE AND COATINGS

# CONVEYING MIXING EXTRUDING Consistent. Lasting. Dimensional stability.



## **» CARBIDE TECHNOLOGY**

Parts, tools and components made of cemented carbide are **the ultimate in** wear resistance and longevity and ensure utmost versatility. DURIT carbide solutions stand up to the toughest demands.

#### **» DEDICATED TO CARBIDE**

**Carbide from a single source**—from blanks to high-precision final products. DURIT produces **customized parts** and realizes **individual shapes** as well as **complex geometries**.

#### **» WE OFFER FULL-SERVICE CARBIDE**



### **M** » DURIT HARTMETALL

» SINCE 1982

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- Successful and solution-oriented
- » OVER 500 EMPLOYEES Worldwide
- » MORE THAN 60 CARBIDE GRADES For wear protection and metal forming
- **» 100 % COATING EXPERTISE** HVOF, APS, EAWS, Laser Cladding, PVD and CVD

## **» WEAR PROTECTION FOR CONVEYING, MIXING, EXTRUDING**

Cemented carbide components and tools are successfully applied in many processes to **prevent premature wear,** including the field of conveying, mixing and extruding, which plays an important role in many different industry sectors. DURIT has **excellent references** in this special area and creates first-grade, consistent solutions for all requested applications.

#### **» WE SOLVE WEAR PROBLEMS**

**Consistency, longevity and dimensional stability** are essential demands in this field of application. Cemented carbide offers the perfect solution for many of these challenging applications.

**» WITHSTANDS MOST EXTREME DEMANDS** 

### **Products ::**

extruder screws · augers · screw segments · mixer paddles · linings · sleeves · perforated and multi-hole plates · mouthpieces · shaping rolls · scrapers · kneading bolts

## **Typical applications ::**

ceramics · plastics industry · paints and coatings · concrete industry for roof tiles · food industry · composites and more

## Selection of application-specific carbide grades ::

GRADE	Composition	Binder (%)	Grain size	Hardness (HV30)	Fracture toughness (MPa * m <sup>1/2</sup> )
GD08F	WC-Co	8,00	submicron	1625	10
GD13F	WC-Co	10,00	submicron	1540	12
GD10	WC-Co	6,00	medium	1600	10
GD15	WC-Co	8,00	medium	1460	12
GD20	WC-Co	10,00	medium	1350	15
GD30	WC-Co	15,00	medium	1150	15,5
GD10N	WC-Ni	7,00	fine	1530	10
GD20N	WC-Ni	9,00	fine	1400	10
GD10NC	WC-Ni/Cr	6,80	fine	1630	11,5

## **» COATING TECHNOLOGY**

DURIT coatings **distinctly increase resistance** of tools, components and parts. Our experts realize **high-tech solutions** that stand out through highly specific properties.

#### **» MORE EFFECTIVE AGAINST WEAR**

In addition to solid cemented carbide, advanced coatings achieve optimized results, especially on large-volume parts. **Thermal spray coatings** and **laser cladding** perfect various high-precision components. In many cases DURIT coatings are the perfect choice to **increase productivity.** 

#### **» TARGETED IMPROVEMENT OF PRODUCTIVITY**

## LASER CLADDING » Alloys

Weldable powders (carbides, metals) comparable with Stellite, Triballoy, Colmoloy, Hastalloy, Inconel or similar

### **HVOF** High Velocity Oxygen Fuel

### » Carbides

WC/Co	WC/Co	-Cr	WC/Ni	
WC/NiC	rBSiFe	Cr <sub>2</sub> C <sub>3</sub> /NiCr		





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