

Drill Coating DEX Coating

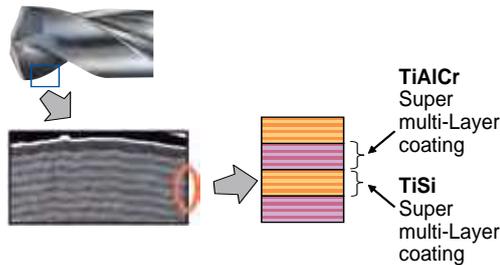


General Features

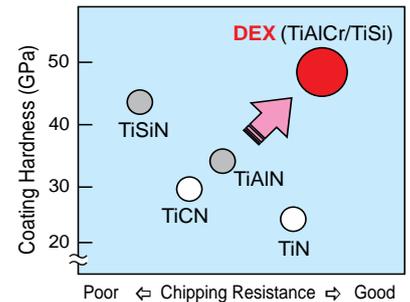
- Sumitomo Electric Hardmetal's next-generation drill coating utilises nano-coating technology to provide more than double the tool life of conventional coatings.
- Silicon and chrome improve usure, heat, and adhesion resistance.
- New super multi-layered structure offers significantly improved chip resistance (coating strength).

Characteristics

- **Coating Design**
World's first combined super multi-layered coating is made from alternate layers of super multilayered substrates.



Characteristics of Films



DEX Coat Application Examples

- MultiDrill GS Type Drilling Examples

Comparison of Usure Resistance		Comparison of Adhesion Resistance	
Edge Usure Comparison for 70m Drilling <i>Shoulder and rake face feature improved usure resistance enabling long tool life.</i>		Edge Usure Comparison for 100m Drilling <i>Offers significantly improved fracture resistance to counter problems caused by shoulder and flute adhesion in soft steel drilling.</i>	
DEX Coating MultiDrill GS Type 		DEX Coating MultiDrill GS Type 	
Concurrent A Drill 		Competitor B Drill 	
Tool: MDW 0800 GS4 Work Material: C50 (HB200) Cutting Conditions: $v_c=70\text{m/min}$, $f=0,25\text{mm/rev}$, $d_{oc}=32\text{mm}$ External coolant (Water soluble)		Tool: MDW 0600 GS4 Work Material: 15CrMo5 (HB120) Cutting Conditions: $v_c=60\text{m/min}$, $f=0,18\text{mm/rev}$, $d_{oc}=18\text{mm}$ External coolant (Water soluble)	

- Long MultiDrill XHT Type Drilling Examples

<i>Reduced margin usure during deep hole MQL drilling increases number of regrinds.</i>	
DEX Coating 	
Conventional Coating 	
Tool: MDW 0497 XHT20 ($\phi 4,97$ L/D=29) Work Material: 42CrMo4 (HB275) Crank Shaft Cutting Conditions: $v_c=70\text{m/min}$, $f=0,23\text{mm/rev}$, $d_{oc}=75\text{mm}$ MQL	

- MultiDrill SMD Type Drilling Examples

<i>Offers longer tool life with SEC MultiDrills as well.</i>	
Tool: SMDH 210 M ($\phi 21,0$) Work Material: 36Mn5 (HB350) Construction Mashine Component Cutting Conditions: $v_c=60\text{m/min}$, $f=0,25\text{mm/rev}$, $d_{oc}=25\text{mm}$ Water soluble Coolant	

Multi-Drills