



Supplier of Welding Alloys

## Cobalt Flux Coated Electrodes

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### Oxford Alloy® #21

**SPECIFICATIONS**

AWS 5.13  
ASME SFA 5.13

**CLASSIFICATIONS**

AWS ECoCr-E  
UNS W73021

**DESCRIPTION / APPLICATION**

Oxford Alloy #21 Coated is a low carbon, molybdenum strengthened, cobalt-chromium alloy. This electrode is recommended for metal-to-metal abrasion and high impact applications involving high temperatures and/or corrosive media. Some typical applications are valves of all kinds, shear blades, hot punches and saw guides. Oxford Alloy #21 Coated is also used as hot die material because of its high temperature strength and stability. Its inherent resistance to galling (under self-mated conditions), cavitation erosion, and corrosion resistance have made it a popular fluid valve seat-facing alloy. The weld deposits of the Oxford Alloy #21 Coated are smooth and normally acquire mirror-like finish in use. The deposits retain wear resistance at high temperatures. This alloy is nonmagnetic and is not forgeable. It can be machined with carbide tools. Oxford Alloy #21 Coated bonds well with weldable alloy steels, including stainless.

AWS Chemical Composition						
C	Co	Cr	Mo	Ni	Mn	Si
0.15-0.40	Bal	24-29	4.5-6.5	2.0-4.0	1.5 max	2.0 max
W	Fe	OET				
0.50 max	5.0 max	1.0 max				

**TYPICAL MECHANICAL PROPERTIES**

Hardness: 20-32 HRC

Note: The typical hardness values listed above are for multilayer welds. Hardness values for single deposits will be lower because of dilution from the base metal.

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Please contact our sales department for more information at 800-562-3355 or 225-273-4800.

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