



TEXAS * PENNSYLVANIA * NORTH CAROLINA
<http://hi-alloy.com>

HI-ALLOY TSM

UNIQUE MULTIPURPOSE ALLOY FOR HIGH SPEED TOOL STEELS

DESCRIPTION: Hi-Alloy TSM provides the ultimate in welding versatility and performance when welding on tools and dies made of high speed steels. A smooth stable arc, extremely low spatter, and instant re-strike allow for maximum control of alloy deposition making this the perfect electrode for welding the most intricate of parts. The deposits maintain high hardness up to 1100° F.

TYPICAL APPLICATIONS: Cold trimming dies, piercing dies, blanking dies, shear blades, shaving knives, cutting knives, composite dies, hot trimming dies, and cladding wear areas on carbon steels.

PROCEDURES: Prepare the weld area by grinding out cracks and defects, remove oxides and contaminants, preheat high speed steels to 1000° F, on other steels preheat according to manufacturer specifications, maintain temperature during welding, deposit short stringer beads and peen to relieve stresses after welding. Allow to cool to 400° F in still air, remove slag, reheat part to 1020° F and maintain temperature for 1 hour per inch of thickness minimum to eliminate hard spots and reduce embrittlement of the heat affected zone. Allow to cool slowly in still air. Repeating the temper will maximize deposit hardness. When surfacing carbon steels 3 passes are needed to overcome base metal dilution.

AVAILABLE SIZES: 3/32 1/8 5/32

AMPERAGE RANGES: 60 - 90 75 - 125 100 - 150

POLARITY: AC or DC Reverse

HARDNESS: Rockwell C 60 - 63 as Welded
Heat Treats up to Rockwell C 66