

# GM ST21

## IDENTIFICATION

GM ST-21, ERCoCr-E

## CLASSIFICATION

AWS/SFA 5.21: ERCCoCr-E

## DESCRIPTION

Cobalt base alloy mig wire providing excellent resistance to metal-to-metal wear, thermal shocks, oxidised corrosive environments at high temperatures.

## CHEMICAL ANALYSIS (RANGE) %

C	Mn	Si	Cr	Ni	Mo	Fe	Co
0.15 - 0.40	2.0 max	1.5 max	25 - 30	15 - 40	4.5 - 7.0	5.0 max	Bal

## TYPICAL APPLICATIONS

- Extrusion dies, hot working tools, turbine injectors, valve seats, ingot tong bits.
- Hardfacing of forging dies.

**HARDNESS** : 22 - 32 RC as deposited 38 - 40 Work hardened.

## GENERAL CHARACTERISTICS

- **Microstructure** : Austenitic matrix with dispersed precipitation of small Cr and Mo Carbides.
- **Machinability** : Good
- **Deposit thickness** : Depends upon application and procedure used.
- **Shielding gas** : Pure argon or argon 98% + oxygen 2%

## WELDING PARAMETER

Diameter (mm)	Current intensity (A)	Voltage (V)	Stick-out (mm)	Gas flow (l/mm)	Weight / Spool (kg)
1.2	110 - 180	20 - 31	20 max	Dec-15	12.5 / 15.0
1.6	150 - 250	20 - 31	20 max	Dec-15	12.5 / 15.0
2.40 / 2.50	300 - 400	24 - 31	20 max	15 - 20	12.5 / 15.0