

## Classifications

EN ISO 17633-A	EN ISO 17633-B	AWS A5.22 / SFA-5.22
T Z 17 Ti L M M12 1	TS Z439 M M12/M13 1	EC439

## Characteristics and typical fields of application

Metal-cored wire of T Z 17 Ti L / EC439 type for catalyzers, silencers, exhaust mufflers and inlet manifolds of similar or matching composition. Stabilized with titanium to reduce tendency to grain coarsening. The wire is resistant to scaling up to 900°C. The easy handling and high deposition rate result in high productivity with excellent welding performance and very low spatter formation. The wire shows good wetting behavior and results in a finely rippled surface pattern. The wide arc ensures even penetration and side-wall fusion to prevent lack of fusion. The focus application is robotic welding of exhaust systems for the automotive industry, especially for thin sheet one-layer joints with a high travel speed.

## Base materials

1.4016 X6Cr17, 1.4510 X3CrTi17  
 UNS S43000, S43035  
 AISI 430, 439

## Typical analysis

	C	Si	Mn	Cr	Ti
wt.-%	0.02	0.5	0.7	18.5	0.85

## Mechanical properties of all-weld metal - typical values (min. values)

Condition	Hardness
	HB
u	180
u untreated, as-welded – shielding gas M12 (Ar + 2.5% CO <sub>2</sub> )	

## Operating data

	<b>Polarity</b>	DC +	<b>Dimension mm</b>
	<b>Shielding gas (EN ISO 14175)</b>	M12, M13	1.2

Welding with conventional or pulsed power sources using DC+ polarity, but pulsed arc may be advantageous and especially when welding out of position. Forehand (pushing) technique preferred with a work angle of appr. 80°. Ar + 2 – 3% CO<sub>2</sub> or Ar + 1 – 2% O<sub>2</sub> can be used as shielding gas. The gas flow should be 15 – 20 l/min and the wire stick-out 15 – 20 mm. When welding out of position, the metal-cored wires are similar to solid wires and pulsed arc welding is recommended. Preheating and interpass temperature as required by the base metal.

## Approvals

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