

## Select FP 439Ti

### Description:

Select FP 439Ti is a ferritic stainless steel, metal-cored, composite electrode for gas metal arc welding of 18 percent chromium steel, particularly on thin section, aluminized material. Titanium is the stabilizing agent utilized to provide oxidation and corrosion resistance. Argon-based shielding gases containing 2-5 percent oxygen provide the best electrode performance. The use of more oxygen, or less argon, may cause excessive oxidation of the chromium and the titanium. This product is designed to operate on DCEP.

### Classification:

- EC439 per AWS/ANSI A5.9, ASME SFA 5.9

### Characteristics:

Select FP 439Ti is designed to weld aluminized, ferritic stainless steels containing 18 percent chromium with a minimum of spatter and literally no burn through on thin material (~0.8mm). A stable spray arc is achieved over a wide range of current and voltage settings with emphasis on low heat input to achieve premium performance on thin stock. Select FP 439Ti has proven weldability on a wide range of power sources and modified waveform pulse programs. Titanium stabilization imparts excellent resistance to sensitization, hence reducing the chances of stress corrosion cracking when welding over lubricants, oils and other hydrocarbons. As this is a metal cored electrode, it offers tremendous advantages over solid wires when welding joints with poor fit up, thin materials and bridging wide gaps. There are also great productivity gains when using Select FP 439Ti in place of solid wire. This 18 percent chromium composition provides better corrosion resistance at higher temperatures than the 12 percent chromium materials can achieve.

### Applications:

Select FP 439Ti is an excellent choice for welding aluminized exhaust system components of 18 percent chromium. Designed for arc stability at low heat input, the FP 439Ti easily performs on any power source over a wide range of pulse programs. Enhanced weldability yields excellent performance on aluminized or other coated steels while minimizing penetration for thin stock. Typical components are fabricated from sheet stock and include manifolds, mufflers, catalytic converters and exhaust tubing.

### Typical Composition:

<b>Wt. %</b>	<b><u>C</u></b>	<b><u>Mn</u></b>	<b><u>P</u></b>	<b><u>S</u></b>	<b><u>Si</u></b>	<b><u>Cr</u></b>	<b><u>Ti</u></b>
	.02	.45	.010	.015	.56	17.90	.80

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Notice: The results reported are based upon testing of the product under controlled laboratory conditions in accordance with American Welding Society Standards. Actual use of the product may produce different results due to varying conditions. An example of such conditions would be electrode size, plate chemistry, environment, weldment design, fabrication methods, welding procedure and service requirements. Thus the results are not guarantees for use in the field.