

# Techalloy® 385

AWS ER385

## CONFORMANCES

AWS A5.9 ER385

UNS N08904

ISO 14343: 2009 (20 25 5 Cu L)



**Techalloy® 385** is used for welding materials of similar chemical composition (Type 904L). These materials are used in fabrication of equipment and vessels for handling and storage of sulfuric acid and phosphoric acid. The weld metal is fully austenitic, and must be done with low heat input, using a stringer bead technique.

## DIAMETERS / PACKAGING

Diameter in (mm)		MIG WIRE 33 lb (14.9 kg) Wire Basket	TIG 10 lb (4.5 kg) 30 lb (13.6 kg) Master Carton	SAW WIRE 55 lb (25 kg) Coil
0.035	(0.9)	MG385035667		
0.045	(1.2)	MG385045667		
1/16	(1.6)	MG385062667	TG385062638	
3/32	(2.4)		TG385093638	SA385093726

**DEPOSIT COMPOSITION**

	%C	%Cr	%Ni	%Mo	%Mn
<b>Requirements</b> AWS ER385	0.025 max.	19.5 - 21.5	24.0 - 26.0	4.2 - 5.2	1.0 - 2.5
<b>Typical Performance</b> Techalloy® 385	0.010	19.9	25.0	4.2	1.8
	%Si	%P	%S	%Cu	
<b>Requirements</b> AWS ER385	0.50 max.	0.02 max.	0.03 max.	1.2 - 2.0	
<b>Typical Performance</b> Techalloy® 385	0.3	0.01	0.001	1.4	

**TYPICAL OPERATING PROCEDURES**

Process	Diameter in (mm)	Voltage (volts)	Amperage	Gas Flow	Gas
MIG	0.035 (0.9) 0.045 (1.2) 1/16 (1.6)	26-29 28-32 29-33	160-210 180-250 200-280	30-50 CFH	98/99% Argon + 2/1% Oxygen 97% Argon + 3% CO <sub>2</sub>
TIG	1/16 (1.6) 3/32 (2.4)		90 - 130 120 - 175	20-40 CFH	100% Argon
SAW	3/32 (2.4)	28-33	275-350		Lincolnweld® P2007

Material Safety Data Sheets (MSDS) are available on our website at [www.techalloy.com](http://www.techalloy.com)

**TEST RESULTS**

Test results for mechanical properties, deposit or electrode composition and diffusible hydrogen levels were obtained from a weld produced and tested according to prescribed standards, and should not be assumed to be the expected results in a particular application or weldment. Actual results will vary depending on many factors, including, but not limited to, weld procedure, plate chemistry and temperature, weldment design and fabrication methods. Users are cautioned to confirm by qualification testing, or other appropriate means, the suitability of any welding consumable and procedure before use in the intended application.

**CUSTOMER ASSISTANCE POLICY**

The Lincoln Electric Company is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for information or advice about their use of our products. Our employees respond to inquiries to the best of their ability based on information provided to them by the customers and the knowledge they may have concerning the application. Our employees, however, are not in a position to verify the information provided or to evaluate the engineering requirements for the particular weldment. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or advice. Moreover, the provision of such information or advice does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or advice, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose is specifically disclaimed.

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