

Techalloy[®] 347

AWS ER347

CONFORMANCES

AWS A5.9 ER347

UNS S34780

ISO 14343: 2009 (19 9 Nb)



Techalloy[®] 347 electrodes are niobium stabilized stainless steel electrodes used for the welding of types 347 and 321 stainless and stainless clad steels. The addition of niobium reduces intergranular corrosion in severe operating conditions.

Applications: Food processing, Pharmaceutical equipment

DIAMETERS / PACKAGING

| Diameter in (mm) | MIG WIRE 33 lb (14.9 kg) Wire Basket | | TIG 10 lb (4.5 kg) Tube 30 lb (13.6 kg) Master Carton | | SAW WIRE 55 lb (25 kg) Coil |
|---------------------|--|-------------|---|--|-----------------------------------|
| | 0.035 (0.9) | MG347035667 | | | |
| 0.045 (1.2) | MG347045667 | | | | |
| *1/16 (1.6) | MG347062667 | | TG347062638 | | |
| *3/32 (2.4) | | | TG347093638 | | SA347093726 |
| 1/8 (3.2) | | | TG347125638 | | SA347125726 |

*Bulk packages available - Contact Lincoln Electric

DEPOSIT COMPOSITION

| | %C | %Cr | %Ni | %Mo | %Nb + Ta |
|--|-----------|-------------|------------|-----------|--------------|
| Requirements AWS ER347 | 0.08 max. | 19.0 - 21.5 | 9.0 - 11.0 | 0.75 max. | 10 x C - 1.0 |
| Typical Performance Techalloy® 347 | 0.03 | 19.5 | 9.3 | 0.25 | 0.60 |
| | %Mn | %Si | %P | %S | %Cu |
| Requirements AWS ER347 | 1.0 - 2.5 | 0.30 - 0.65 | 0.03 max. | 0.03 max. | 0.75 max. |
| Typical Performance Techalloy® 347 | 1.7 | 0.45 | 0.01 | 0.007 | 0.10 |

TYPICAL OPERATING PROCEDURES

| Process | Diameter in (mm) | Voltage (volts) | Amperage | Gas Flow | Gas |
|---------|---------------------|--------------------|----------|-----------|---|
| MIG | 0.035 (0.9) | 26-29 | 160-210 | 30-50 CFH | 98/99% Argon + 2/1% Oxygen 97% Argon + 3% CO ₂ |
| | 0.045 (1.2) | 28-32 | 180-250 | | |
| | 1/16 (1.6) | 29-33 | 200-280 | | |
| TIG | 1/16 (1.6) | | 90-130 | 20-40 CFH | 100% Argon |
| | 3/32 (2.4) | | 120-175 | | |
| | 1/8 (3.2) | | 150-220 | | |
| SAW | 3/32 (2.4) | 28-33 | 275-350 | | Lincolnweld® P2007 |
| | 1/8 (3.2) | 29-32 | 350-450 | | |

Material Safety Data Sheets (MSDS) are available on our website at 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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