

ABS; AWS/SFA CLASSIFICATION
A5.22-95 E309LT0-3

DESCRIPTION

Stoody's "SOS" wires offer the productivity and efficiencies of continuous welding wire and the convenience and low cost of open arc (gas-less) welding. Welding can be done indoors or outdoors – even in moderate wind or draft conditions. Weldability is excellent, producing weld deposits that are sound and clean with flat to slightly convex bead shape. Stoody "SOS" wire deposits have lower percentage of penetration than GMAW deposits at the same current levels which means less dilution and distortion. Stoody "SOS" wires can be used as a direct replacement for solid stainless wires or electrodes of the same grade both in fabricating and overlay applications.

Stoody's "SOS" wires do not require specialized equipment. For best results, a constant voltage, direct current power source is recommended.

TYPICAL DEPOSIT CHARACTERISTICS

Tensile Strength, Ksi (MPa)	88 (610)
Elongation (%)	38

TYPICAL DEPOSIT CHEMISTRY (wt%)

Carbon	0.02
Manganese	1.2
Silicon	0.5
Chromium	24.4
Nickel	12.6
Ferrite Number	15.0

TYPICAL APPLICATIONS

DOWNHAND ONLY – For use when welding on types 309L stainless steels to join AISI 304 to carbon and low alloy steels. 1/16" wires can be welded horizontally in cladding operations.

OPERATIONAL CHARACTERISTICS / WELDING PARAMETERS (DCEP)

.045" (1.2mm)	Low	Optimum	High
Amps	140	160	180
Volts	26	27	28
WFS, in/min	310	350	385
(m/min)	(7.9)	(8.9)	(9.8)
Wire Extension, in	5/8"	1/2"	3/8"
(mm)	16	13	10

1/16" (1.6mm)	Low	Optimum	High
Amps	170	200	225
Volts	26 – 27	27	28
WFS in/min	175	210	290
(m/min)	(4.5)	(5.3)	(7.4)
Wire Extension, in	3/4"	5/8"	3/4"
(mm)	19	16	19

5/64" (2.0mm)	Low	Optimum	High
Amps	200	225	250
Volts	25	26	27
WFS, in/min	155	175	195
(m/min)	(4.0)	(4.5)	(5.0)
Wire Extension, in	1/2"	1/2"	3/4"
(mm)	13	13	19

3/32" (2.4mm)	Low	Optimum	High
Amps	275	300	320
Volts	28	29	30
WFS, in/min	175	225	250
(m/min)	(4.5)	(5.7)	(6.4)
Wire Extension, in	1 1/4"	1"	3/4"
(mm)	32	25	19

**OPERATIONAL CHARACTERISTICS /
WELDING PARAMETERS (DCEP) – Cont'd.**

7/64" (2.8mm)	Low	Optimum	High
Amps	300	325	350
Volts	28	29	30
WFS, in/min	200	220	240
(m/min)	(5.1)	(5.7)	(6.2)
Wire Extension, in	1 ¼"	1"	1"
(mm)	32	25	25

STANDARD SIZES & PACKAGING

Diameter	Packaging	Part #
.045" (1.2mm)	33# Wire Basket	11848900
.045" (1.2mm)	50# Poly Pak	11849000
1/16" (1.6mm)	33# Wire Basket	11233600
1/16" (1.6mm)	50# Poly Pak	11233500
5/64" (2.0mm)	33# Wire Basket	11314600
5/64" (2.0mm)	50# Poly Pak	11314500
5/64" (2.0mm)	200# Half Pak	11508200
3/32" (2.4mm)	50# Poly Pak	11231200
3/32" (2.4mm)	250# Half Pak	11608600
7/64" (2.8mm)	60# Coil	11876300