

Coreshield 40

Coreshield 40 is a self-shielded flux cored wire primarily designed for multiple pass, horizontal and flat position welding of low and medium carbon steels when toughness is not a requirement. The larger sizes achieve very high deposit rates for very low joining costs. The low penetration, convex fillet bead shape and ability for the slag to desulfurize the deposit make it an ideal choice when crack resistance is a primary consideration. The flat position deposits are smooth and uniform with good wetting into the side walls. The core ingredients are carefully balanced to stabilize the droplet transfer, enhance the ability to handle mill scale and easily detach the slag for quick cleaning. Coreshield 40 is designed to operate on DCEP (electrode positive) with longer electrical stickout. The longer extension increases the deposit potential by preheating the wire.

Specifications

Classifications	ASME SFA 5.36 AWS A5.36 : E70T4-Z-CS3 ASME SFA 5.20 AWS A5.20 : E70T-4
Industry	Railcars Industrial and General Fabrication Civil Construction

Typical Tensile Properties

Condition	Yield Strength	Tensile Strength	Elongation
As Welded	430 MPa (62 ksi)	595 MPa (86 ksi)	29 %

Typical Weld Metal Analysis %

C	Mn	Si	S	P	Al
0.20	0.30	0.30	0.007	0.012	1.30

Deposition Data

Diameter	Current	Voltage	Wire Feed Speed	Deposition Efficiency (%)	Electrical Stickout	Deposition Rate
2.4 mm (3/32 in.)	350 A	28 V	498 cm/min (196 in./min)	82 %	63.5 mm (2.5 in.)	6.26 kg/h (13.8 lbs/h)
2.4 mm (3/32 in.)	375 A	29 V	539 cm/min (212 in./min)	84 %	63.5 mm (2.5 in.)	6.85 kg/h (15.1 lbs/h)
2.4 mm (3/32 in.)	400 A	30 V	582 cm/min (229 in./min)	84 %	63.5 mm (2.5 in.)	7.3 kg/h (116.1 lbs/h)
2.0 mm (5/64 in.)	220 A	27 V	305 cm/min (120 in./min)	77 %	44.5 mm (1.75 in.)	2.7 kg/h (6 lbs/h)
2.0 mm (5/64 in.)	300 A	28 V	452 cm/min (178 in./min)	85 %	44.5 mm (1.75 in.)	4.26 kg/h (9.4 lbs/h)
2.0 mm (5/64 in.)	400 A	29 V	584 cm/min (230 in./min)	84 %	44.5 mm (1.75 in.)	5.26 kg/h (11.6 lbs/h)