

# SC-91K2 Cored

Type : Rutile

## Conformances

AWS A5.36/ ASME SFA5.36 E91T1-C1A4-K2  
 (AWS A5.29/ ASME SFA5.29 E91T1-K2C)  
 JIS Z3313 T57 4 T1-1 C A-N3 H10  
 EN ISO 17632-A-T 50 4 1.5Ni P C 1

ABS AWS A5.29 E91T1-K2C  
 (-40°C ≥50 J)

DNV-GL IVY50MS H5  
 CWB CSA W48 E621 T1-K2C-H8  
 CCS 4Y50 H5

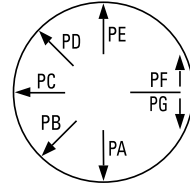
## Applications

- General fabrication
- Offshore structure
- High tensile welded structure

## Features

- Good impact value at low temperature

## Welding Position



## Current

DC +

## Shielding Gas

100% CO<sub>2</sub>

## Diameter / Packaging

Diameter mm (in)	Spool			Pac		
	12.5kg (28lbs)	15kg (33lbs)	20kg (44lbs)	100kg (221lbs)	200kg (441lbs)	250kg (551lbs)
1.2 (0.045)	√	√	√			
1.4 (0.052)	√	√	√			
1.6 (1/16)	√	√	√			

Typical Chemical Composition of All-Weld Metal (%)

C	Si	Mn	P	S	Ni	Mo
0.04	0.35	1.25	0.013	0.012	1.55	0.09

Typical Mechanical Properties of All-Weld Metal

YS MPa(lbs/in <sup>2</sup> )	TS MPa(lbs/in <sup>2</sup> )	EL (%)	Temp °C(°F)	CVN-Impact Value J (ft-lbs)
620 (90,000)	650 (94,500)	27.0	-20 (-4) -40 (-40)	110 (81) 60 (44)

Typical Welding Parameters

Diameter, Polarity Shielding Gas	CTWD mm (in)	Wire Feed Speed m/min (in/min)	Amp. (A)	Volt. (V)	Deposition Rate kg/hr (lb/hr)	Efficiency (%)		
<b>1.2mm (0.045 in) DC+</b>								
100% CO <sub>2</sub>	25 (1)	<b>All Position</b>					86-88	
		4.4 (175)	110-140	23-28	1.6 (3.5)			
		5.1 (200)	120-150	24-29	1.8 (4.0)			
		6.4 (250)	130-160	25-30	2.3 (5.0)			
		7.6 (300)	160-190	25-30	2.7 (6.0)			
		8.9 (350)	170-200	26-31	3.2 (7.0)			
		9.5 (375)	190-220	26-31	3.4 (7.5)			
		10.8 (425)	210-240	27-32	3.8 (8.5)			
		<b>Flat &amp; Horizontal</b>						
		12.1 (475)	230-260	28-33	4.9 (10.8)			
12.7 (500)	240-270	29-34	5.2 (11.4)					
<b>1.4mm (0.052 in) DC+</b>								
100% CO <sub>2</sub>	25 (1)	<b>All Position</b>					86-88	
		3.8 (150)	120-150	23-28	1.8 (3.9)			
		4.7 (180)	130-160	24-29	2.2 (4.8)			
		5.7 (225)	160-190	24-29	2.7 (5.9)			
		6.4 (250)	180-210	25-30	2.9 (6.5)			
		6.9 (275)	200-230	25-30	3.2 (7.2)			
		7.6 (300)	220-250	26-31	3.5 (7.8)			
		<b>Flat &amp; Horizontal</b>						
		8.5 (335)	240-270	26-31	4.0 (8.7)			
		9.5 (375)	260-290	27-32	4.4 (9.8)			
10.2 (400)	280-310	27-34	4.7 (10.4)					
<b>1.6mm (1/16 in) DC+</b>								
100% CO <sub>2</sub>	25 (1)	<b>All Position</b>					86-88	
		3.8 (150)	170-200	24-29	2.5 (5.5)			
		4.4 (175)	180-210	24-30	2.9 (6.4)			
		5.1 (200)	200-230	25-30	3.3 (7.3)			
		5.7 (225)	230-260	25-31	3.7 (8.2)			
		6.4 (250)	250-280	26-31	4.2 (9.2)			
		6.9 (275)	270-300	26-32	4.6 (10.1)			
		<b>Flat &amp; Horizontal</b>						
		8.3 (325)	300-330	27-32	5.4 (11.9)			
		8.9 (350)	330-360	28-34	5.8 (12.8)			

SMAW  
 SAW  
 GMAW  
 GTAW  
 FCAW  
 Non-FERROUS  
 APPENDIX