

# SILICON IRON ANODES TUBULAR TYPE

A comprehensive range of BAC Silicon Iron Anodes is available in Tubular form to suit impressed current Cathodic Protection of pipelines, tanks and marine structures.

Resistance to corrosion from a wide range of corrosive environments has resulted in the extensive use of standard 14.5% silicon iron alloy with 4.5% added chrome. More than 40 years of experience in the Cathodic Protection industry has given this material a fully proven performance record.

## Alloy Composition

Specification Composition: Typical analysis by ASTM A518-86 Grade 3 and BS. 1591

## Elements Compositions

Chemical Composition:

Silicon (Si)	14.20-15.75%
Manganese (Mn)	1.5% max.
Carbon (C)	0.70-1.10%
Chromium (Cr)	3.25-5.00%
Molybdenum (Mo)	0.20% max.
Copper (Cu)	0.50% max.
Iron (Fe)	balance

## Typical Consumption Rates

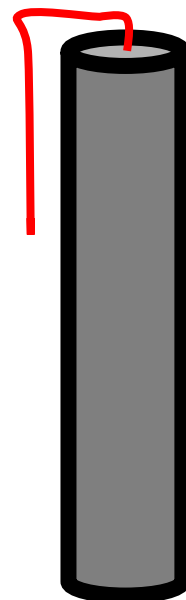
Environment	Current Density (A/m <sup>2</sup> )	Consumption Rate (Kg/A. Year)
Coke Backfill	10-30	0.1
Fresh Water	10-30	0.15
Seawater	10-30	0.5
Soil	10-30	0.3

## Physical Properties

Tensile Strength	103 N/mm <sup>2</sup>
Compressive Strength	689 N/mm <sup>2</sup>
Brinell Hardness	520 HB
Density	7.0 g/cm <sup>3</sup>
Melting Point	1300°C
Coefficient of Linear Expansion	1.86*10 <sup>-5</sup> /0C (0-1000C)

# DATASHEET 1.9

Si/Fe ANODES



**BAC**<sup>®</sup>

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Si/Fe ANODES



Suitable for Installation in :

- Deep ground beds
- Shallow / Horizontal Groundbeds
- Seawater or Brackish water

Standard Sizes of Tubular Anode:

Type	Dimension (mm/inch)			Surface area (m <sup>2</sup> /ft <sup>2</sup> )	Weight (kg/lb)
	O.D	I.D	Length		
BAC-TS-1	56.0 (2.20)	37.0 (1.46)	2134 (84)	0.375 (4.04)	21.0 (46.3)
BAC-TS-2	66.0 (2.60)	42.5 (1.67)	2134 (84)	0.442 (4.76)	28.8 (63.5)
BAC-TS-3	68.6 (2.70)	42.5 (1.67)	2134 (84)	0.460 (4.95)	32.0 (70.5)
BAC-TS-4	96.0 (3.80)	76.0 (3.00)	2134 (84)	0.644 (6.93)	41.0 (90.4)
BAC-TS-5	122.0 (4.80)	88.0 (3.46)	2134 (84)	0.818 (8.80)	80.6 (177.7)
BAC-TS-6	122.0 (4.80)	100.0 (4.0)	2134 (84)	0.818 (8.80)	55.3 (121.8)
BAC-TS-7	56.0 (2.20)	37.0 (1.46)	1524 (60)	0.268 (2.89)	14.3 (31.6)
BAC-TS-8	66.0 (2.60)	42.5 (1.67)	1524 (60)	0.316 (3.40)	20.6 (45.5)
BAC-TS-9	96.0 (3.80)	76.3 (3.00)	1524 (60)	0.460 (4.95)	30.0 (66.1)
BAC-TS-10	122.0 (4.80)	88.0 (3.46)	1524 (60)	0.584 (6.29)	57.7 (127.1)
BAC-TS-11	122.0 (4.80)	100.0 (4.0)	1524 (60)	0.584 (6.29)	39.2 (86.4)