

Table 6.4 Recommended CR values in modified Hazen Williams Formula (at 200C)

Sl. No.	Pipe Material	Diameter (mm)		Velocity(m / s)		C <sub>R</sub> value When New	C <sub>R</sub> Value for Design Period of 30 years
		From	To	From	To		
1	RCC	100	2000	0.3	1.8	1.00	1.00
2	AC	100	600	0.3	2.0	1.00	1.00
3	HDPE and PVC	20	100	0.3	1.8	1.00	1.00
4	CI/DI (for water with positive Langelier's index)	100	1000	0.3	1.8	1.00	0.85*
5	CI/DI (for waters with negative Langelier's index)	100	2000	0.3	1.8	1.00	0.53*
6	Metallic pipes lined with cement mortar or epoxy (for water with -ve Langelier's index)	100	2000	0.3	2.1	1.00	1.00
7	SGSW	100	600	0.3	2.1	1.00	1.00
8	GI (for waters with +ve Langeliers index)	15	100	0.3	1.5	0.87*	0.74

\*These are average CR values which result in maximum error of +5% in estimation of surface resistance.