

Water quality cooling towers

Maximal values allowed in circulating cooling water:

	Type Fill material	PT12 / X12	PT19 / MA19	NF20	P41
Chloride content Cl ⁻	AISI304	< 200 ppm	Idem	Idem	Idem
	AISI316L	< 1000 ppm	Idem	Idem	Idem
	AISI316Ti	< 1000 ppm	Idem	Idem	Idem
Free Chlorine content Cl ₂		< 3 ppm	Idem	Idem	Idem
Discontinuity Cl ₂ (< 5 ‰ time-based)		< 100 ppm	Idem	Idem	Idem
Sulphate content SO ₄ ⁼		< 600 ppm	Idem	Idem	idem
Suspended solids		< 10 ppm	< 70 ppm	< 300 ppm	< 1000 ppm
Surface tension	mN/m	72 – 73	Idem	Idem	Idem
Conductivity	µS/cm	< 3000	< 3000	< 5000	< 10.000
pH	AISI304	6 – 8,5	Idem	Idem	Idem
	AISI316L	5 – 9	5 – 9	Idem	Idem
Temperature °C	PVC	< 55°C	< 55°C	*****	*****
	PP	< 70°C	< 70°C	< 70°C	< 80°C
Hardness in °d(H)	indicative	< 15	< 30	< 30	< 30
Biological Colony Forming Units	CFU/l	< 10 ⁶	Idem	Idem	Idem
Legionella Colony Forming Units	CFU/l	< 1000	Idem	Idem	Idem
COD Chemical Oxygen Demand	mg/l	< 50	< 100	< 500	< 1000
Water load R	M ³ /m ² h	8 - 30	5 – 30	5 - 30	5 - 50

- In water is 1 ppm = 1 mg/ liter.
- In case of water treatment even higher concentrations are allowable, in accordance with your water treatment company.
- The circulating waterflow should be clean water and therefore free of oil, grease, soap etc.