



Brazed Plate Heat Exchanger; Corrosion guide  
Valid for water at 20°C

Content		Concentration mg/l or ppm	Material	
			AISI 316L	Copper
pH		<6	Yellow	Yellow
		6-7,5	Yellow	Yellow
		7,5-9	Green	Green
		>9	Green	Yellow
Alcalinity	HCO <sub>3</sub> <sup>-</sup>	<70	Green	Green
		70-300	Green	Green
		>300	Green	Yellow
Sulphate	SO <sub>4</sub> <sup>2-</sup>	<70	Green	Green
		70-300	Green	Red
		>300	Green	Red
Alcalinity/Sulphate	HCO <sub>3</sub> <sup>-</sup> /SO <sub>4</sub> <sup>2-</sup>	>1	Green	Green
		<1	Green	Red
Electrical conductivity	µS/cm	<10	Green	Yellow
		10-500	Green	Green
		>500	Green	Yellow
Ammonium	NH <sub>4</sub>	<2	Green	Green
		2-20	Green	Yellow
		>20	Green	Red
Free chlorine	Cl <sub>2</sub>	<1	Green	Green
		1-5	Red	Yellow
		>5	Red	Red
Hydrogen sulfide	H <sub>2</sub> S	<0,05	Green	Green
		>0,05	Green	Red
Free carbon dioxide (aggressive)	CO <sub>2</sub>	<5	Green	Green
		5-20	Green	Yellow
		>20	Green	Red
Nitrate	NO <sub>3</sub> <sup>-</sup>	<100	Green	Green
		>100	Green	Yellow
Iron	Fe	<0,2	Green	Green
		>0,2	Green	Yellow
Aluminium	Al	<0,2	Green	Green
		>0,2	Green	Yellow
Manganese	Mn	<0,1	Green	Green
		>0,1	Green	Yellow

Chloride content (Cl <sup>-</sup> )	Maximum temperature			
	60°C	80°C	120°C	130°C
≤ 10 ppm	AISI 304L	AISI 304L	AISI 304L	AISI 316L
≤ 25 ppm	AISI 304L	AISI 304L	AISI 316L	AISI 316L
≤ 50 ppm	AISI 304L	AISI 316L	AISI 316L	Ti/SMO 254
≤ 80 ppm	AISI 316L	AISI 316L	AISI 316L	Ti/SMO 254
≤ 150 ppm	AISI 316L	AISI 316L	Ti/SMO 254	Ti/SMO 254
≤ 300 ppm	AISI 316L	Ti/SMO 254	Ti/SMO 254	Ti/SMO 254
> 300 ppm	Ti/SMO 254	Ti/SMO 254	Ti/SMO 254	Ti/SMO 254

	Good resistance
	Corrosion may occur when more factors are yellow
	Not recommended to use BPHE/MPHE