



R/V DAVID THOMPSON
VESSEL SPECIFIC PROCEDURES & WORK INSTRUCTIONS

Chlorinating & System Testing

After entry to a potable water tank for any purpose, the tank must be cleaned and super chlorinated with bleach to a level of 50 ppm of free chlorine. All taps from this tank should be turned on to supply super chlorinated water to all pipes. The super chlorinated water must be allowed to sit in the tank for a minimum of 4 hours.

CHLORINATION CALCULATIONS

QUANTITY OF WATER TO TREAT (LITRES)	REQUIRED DOSAGE (ppm)	CHLORINE IN BLEACH SOLUTION (%)	BLEACH SOLUTION TO ADD (ml)
1	50 (Super chlorination)	5.25	0.01
1	0.5 (Treatment)	5.25	0.0001

F.W. Tank	Tank Capacity (Litres)	Quantity (Litres) of 5.25% Bleach For 50 ppm Dosage (Super chlorination)	Quantity (ml) of 5.25% Bleach For 0.5 ppm Dosage (Treatment)
#1P	7,890	1.18	118
#1S	7,890	1.18	118
#2P	3,630	5.5	55
#2S	3,630	5.5	55

$\frac{\text{ppm Dosage} \times \text{Litres of Water To Be Treated}}{10,000 \times \% \text{ Sodium Hypochlorite in Bleach}} = \text{Litres of Bleach To Add}$	
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De-Chlorination

1	Super chlorinated water must be de-chlorinated to a free chlorine level below 0.1mg/L for discharge in saltwater commercial harbours, provided that the discharge takes place at least 100 meters from any seawater intake or aquaculture holding area. Chlorinated wastewater may not be discharged to a freshwater body or in any sensitive area.
2	If super chlorinated water cannot be treated for overboard discharge as outlined below, then the water must be removed by tanker truck for disposal in accordance with provincial or territorial regulations.
3	<p>ml of % hydrogen peroxide solution to add, to de-chlorinate tanks is determined by the following formula:</p> $Y \text{ mg of free chlorine} \times 0.479 \left(\frac{\text{gms H}_2\text{O}_2}{\text{gms of free chlorine}} \right) \times \left(\frac{100}{\% \text{ Hydrogen Peroxide Solution}} \right) \times \left(\frac{\text{Litres of Water}}{1,000} \right) \times 1.33$

For fresh water tanks filled to 100% with super chlorinated bleach solution to 50mg/L dosage the following table gives ml of % hydrogen peroxide solution to add.

F.W. Tank	Tank Capacity 100% (Litres)	mg of Free Chlorine at Super chlorination Dosage	% Hydrogen Peroxide Solution	ml of % Hydrogen Peroxide Solution To Add
#1P	7,890	50	35	718
#1S	7,890	50	35	718
#2P	3,630	50	35	330
#2S	3,630	50	35	330