

BRINE - The Ideal Salt Handling Method

Saturated sodium chloride brine, continuously produced in an automated FRP bulk storage brinemaker, is ideal for distributing salt in industrial processes. A consistent NaCl brine concentration over a wide temperature range permits accurate volume metering. In-plant pumping of brine through plastic pipes almost totally eliminates corrosion hazards. Brinemaking technique and filtration eliminates undesirable impurities. Most importantly, capital costs for brine systems are 20-30% of those for dry salt storage and conveying systems, with appreciably lower operating costs.

	Southern			
	Vacuum Granulated Purified	Granulated Common	Coarse Rock	Coarse Solar
	(%)			
Sodium Chloride	99.97	99.8	98.9	99.6
Calcium Sulfate	—	0.15	1.0	0.22
Calcium Carbonate	0.01	—	—	—
Sodium Sulfate	0.02	—	0.01	—
Other Salts	—	0.03	0.02	0.15
Insolubles	0.001	0.01	0.08	0.03

Salt Grade	Down Flow Dissolving		
	Fully Wet	Semi-Wet	Voidance
	(ppm Ca/Mg as Calcium)		
High Purity Vacuum (2)	2-15	—	—
Common Vacuum (3)	75-300	—	—
Coarse Solar	100-600	100-400	—
Southern Coarse Rock	400-1300	250-800	100-400

(1) excluding hardness contributed by water

(2) Morton Culinox 999 Salt

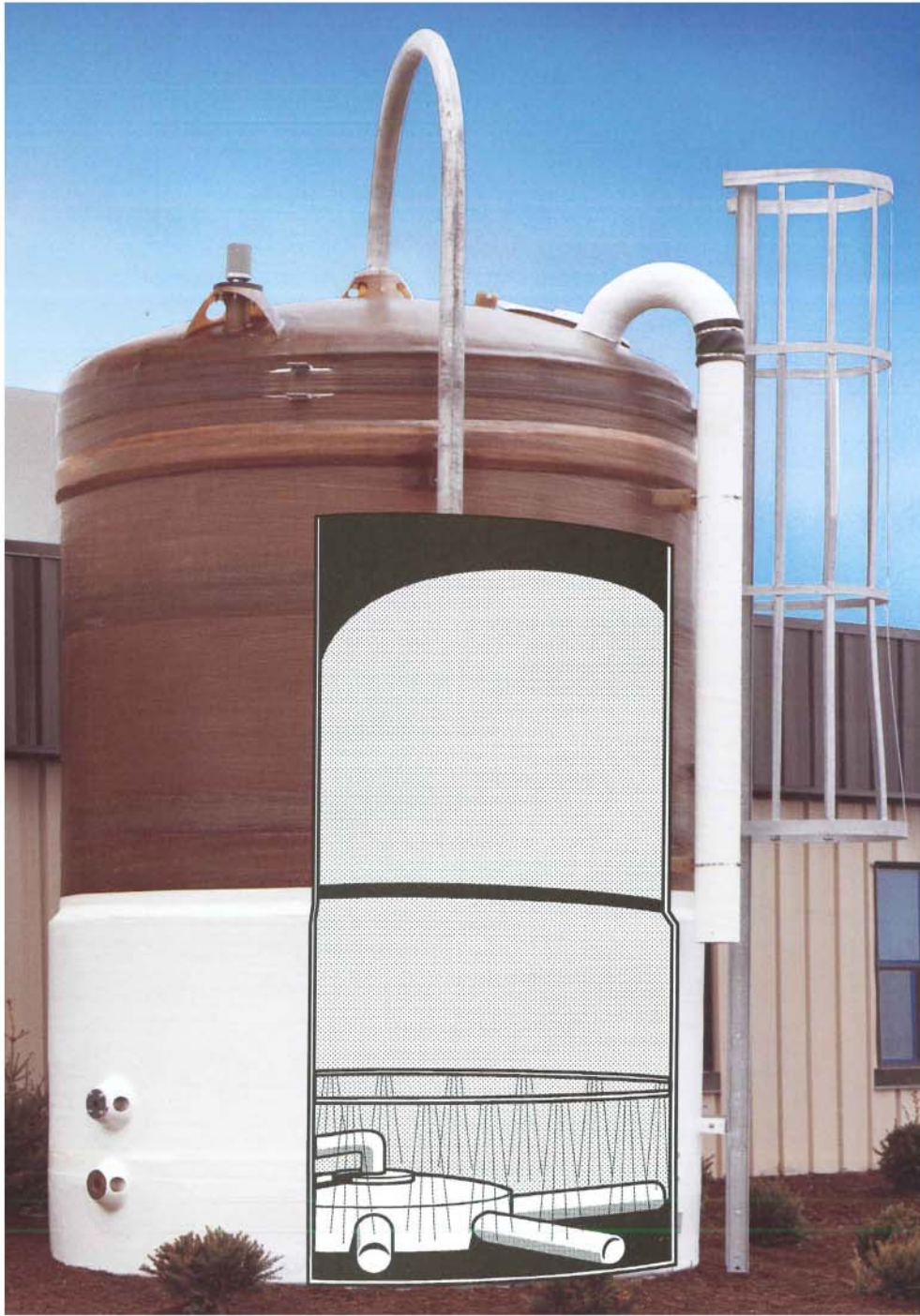
(3) Morton Purex Salt

F	C	Specific Gravity	Sodium Chloride		Brine (lbs/gal)
			(Wt %)	(lbs/gal)	
32	0	1.2093	26.34	2.652	10.07
50	10	1.2044	26.35	2.644	10.03
59	15	1.2040	26.40	2.647	10.03
68	20	1.1999	26.43	2.643	10.00
77	25	1.1978	26.48	2.642	9.98
86	30	1.1957	26.56	2.645	9.96
104	40	1.1914	26.71	2.651	9.92

	Vacuum Granulated	Coarse Rock	Coarse Solar
	Particle Size Range (inch)	0.01-0.03	0.125-0.500
Bulk Density (loose) lbs/ft ³	75	70	68
	26.7	28.5	29.4
Angle of Repose	32 - 35		
Liquid Void Area Under Brine			
Percent	40	44	46
Brine, gal/ft ³ salt	3	3.3	3.33
Brine, gal/ton salt	75	82.5	83.3

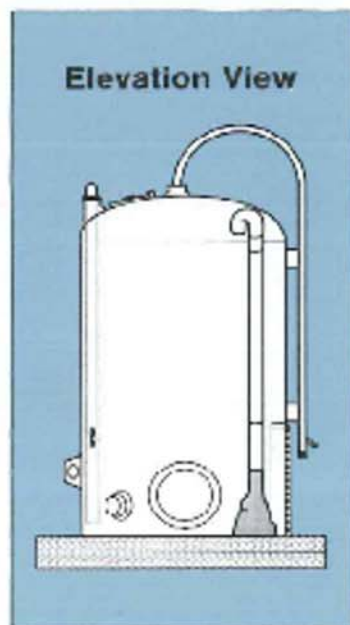
Salt Grade	Down Flow Dissolving		
	Fully Wet	Semi-Wet	Voidance*
	lbs/tons Salt Dissolved		
Vacuum Granulated	Nil	—	—
Coarse Solar	1-3	—	—
Southern Coarse Rock	5-10	10-20	20-35

*Rapid Brining to avoid dissolution of anhydrous CaSO impurity.



BRYNEER SPECIFICATIONS

Model	8-15	10-15	12-15	12-20
Diameter	8' 0"	10' 0"	12' 0"	12' 0"
Straight Shell Height	15' 0"	15' 0"	15' 0"	20' 0"
Overall Height Not Including Salt Pipe	17' 0"	17' 6"	17' 10"	22' 10"
Empty Weight (lbs)	2,200	3,000	3,500	4,200
Max. Gross (filled) Weight (lbs)	54,900	85,500	112,500	170,000
Usable Dry Salt Storage (tons)	23	36	47	72
Recommended Max. Delivery (tons)	15	25	36	61
Dry Salt/Foot of Vertical Rise (tons approx.)	1.8	2.9	4.2	4.2
Max. Continuous Brine Draw (GPM) Granulated Salt	30	30	40	40
Rock & Solar Salt	20	20	25	25
Quartz Rock for Filter Bed 1/8" x 1/4" (ft ³)	21	33	47	47
1/4" x 1/2" (ft ³)	29	46	66	66
Lbs of Quartz Rock	5,000	7,800	11,300	11,300
Liquid Capacity (gal)	5,638	8,520	12,683	16,911



Optional Thermal Retention System

Outside installations exposed to long periods of freezing temperatures below 30° F require exterior insulation for the lower six feet of the vessel to maintain functional brining operation and prevent expansion damage to internal pipes and other components.

For ultimate protection and maximum brining efficiency, additional Plasta-Therm™ heating elements sealed in the side wall bottom of the vessel, when combined with the exterior insulation will maintain brine temperatures at near 60° F. When sealed in FRP, Plasta-Therm elements are virtually damage-free.

For more information on Plasta-Therm see our #1578 free color brochure.

Other Options

- Flow meter and gauges
- Access ladder with cage enclosure and/or roof turn
- Built-in sump for flushing sludge
- Brine holding and dry tanks
- Drain nozzle
- Top mounted handrail
- Level control output signals to your PLC
- Salt level monitoring system
- Pumps