

Product Sheet

Freeze Point Depression of 50% Caustic Soda

50% Liquid Caustic Soda begins to crystallize at 54°F and becomes difficult to transfer by pump below 48°F. Often, it is not practical or economically feasible to provide the heat necessary to prevent the product from freezing during storage and handling. For many applications, however, 50% Liquid Caustic Soda is the chemical of choice.

A solution to the freezing point problem is the blending of 45% KOH to the 50% Caustic Soda. The following table shows the recommended blend concentrations and the temperatures at which the solution can be transferred via a pump. Also listed is the percent reduction in active alkalinity of the solution.

45 % Caustic Potash	50% Caustic Soda	Pumpable Temp. °F	% Reduction {OH ⁻ }
0	100	48	0
5	95	30	1.8
10	90	15	3.6
20	80	10	7.2
25	75	5	9.0
30	70	-5	10.8
35	65	-10	12.6
40	60	-13	14.4