POTASSIUM CHLORIDE (KCl)

Properties based on 20° and 100% purity
Saturation Point: 311.3kg per M³

WEIGHT (%)	DENSITY (KG / L)	DENSITY (LB / GAL)	Cl^- (MG / L)	K^+ (MG / L)	K^+ (%)	KCl (KG / M³)	WATER (M³)
1	1.005	8.38	4,756	5,244	0.52	10.0	0.995
2	1.011	8.43	9,606	10,594	1.06	20.2	0.991
3	1.017	8.49	14,504	15,996	1.60	30.5	0.987
4	1.024	8.54	19,498	21,502	2.15	41.0	0.983
5	1.030	8.59	24,491	27,009	2.70	51.5	0.979
6	1.037	8.65	29,579	32,621	3.26	62.2	0.975
7	1.043	8.70	34,715	38,285	3.83	73.0	0.970
8	1.050	8.76	39,947	44,053	4.41	84.0	0.966
9	1.057	8.81	45,225	49,875	4.99	95.1	0.962
10	1.063	8.87	50,551	55,749	5.57	106.3	0.957
11	1.070	8.92	55,973	61,727	6.17	117.7	0.952
12	1.077	8.98	61,442	67,758	6.78	129.2	0.948
13	1.084	9.04	67,006	73,894	7.39	140.9	0.943
14	1.091	9.09	72,617	80,083	8.01	152.7	0.938
15	1.097	9.15	78,276	86,324	8.63	164.6	0.933
16	1.104	9.21	84,030	92,670	9.27	176.7	0.928
17	1.111	9.27	89,832	99,068	9.91	188.9	0.922
18	1.119	9.33	95,729	105,571	10.56	201.3	0.917
19	1.126	9.39	101,721	112,179	11.22	213.9	0.912
20	1.133	9.45	107,760	118,840	11.88	226.6	0.906
21	1.147	9.57	120,030	132,370	13.24	252.4	0.895
22	1.162	9.69	132,632	146,268	14.63	278.9	0.883
23	1.172	9.78	163,547	106,053	10.61	269.6	0.903
24	1.180	9.84	171,858	111,442	11.14	283.3	0.897
25	1.189	9.91	180,290	116,910	11.69	297.2	0.892
26	1.197	9.98	188,843	122,457	12.25	311.3	0.886

KCl Solubility in Water

281 g/l (0°C)
344 g/l (25°C)
567 g/l (100°C)

When using KCl for clay / shale inhibition, the quantity required as a rule of thumb is between 2 – 5%, depending on the reactivity of the clays. If in highly reactive formations or when required to drill a bore for long periods of time, the potassium that inhibits the clay will be consumed as it inhibits. Maintenance levels of KCL added to the drilling fluid system will be required. Test kits to measure the level of free potassium are available from Mudex.

Using bentonite with a KCl mud system requires the bentonite to be hydrate in fresh water for a minimum of 15 minutes prior to being added to the circulating system. Keep bentonite levels as per the recommended mud system or at 25kg per 1000 litres water.

In a KCl system, bentonite will thin back even if it has been hydrated in fresh water. Use VIS PAC R to increase viscosity when required.

Use of chlorides in certain applications may not be allowed and differs from Australian state to state. Contact your nearest Mudex representative for further details

WA & EMEA
Cameron Fleming
Mobile: +61 456 429 988
Email: cfleming@mudex.com.au

SA, Vic, Tas & NT
Keith Arnett, Area Manager
Mobile: +61 438 832 822
Email: karnett@mudex.com.au

NSW, Qld & SE Asia
Mick Kokins, Area Manager
Mobile: +61 438 839 194
Email: mkokins@mudex.com.au