

# SKL-100™

## KCl Substitute

Oil & Gas Drilling Fluids / WBM



**SKL-100™** is a liquid substitute for Potassium Chloride (KCl) for use in clear brine WO and completion fluids.

### BENEFITS & USE

- Prevents clay swelling and migration
- Non-flammable
- Used with water, brines, acids and drilling fluids
- Compatible with most gels, cross linkers, and breakers
- Will not adversely effect fluid pH
- Superior performance at lower costs than KCl
- Minimizes inventory, storage and transportation problems
- Minimizes waste disposal problems
- Can be mixed on-the-fly
- No inorganic chlorides
- Slightly cationic
- Exceeds KCl performance as per CST and reverse permeability testing
- Use in preflush fluids and most completion fluids

### TREATMENT

1/2 gal **SKL-100™** per 1,000 gal water or 2 gal **SKL-100™** per 100 barrels water.

### METHODS OF APPLICATION

**SKL-100™** can be mixed with water or other process and treatment fluids in a tank truck, blend or storage tank or on the fly.

Form & Appearance .....	Dark Amber Liquid
Specific Gravity .....	1.124 @ 77°F
Density @ 77° F .....	9.34 lb/gal
Freeze Point.....	15°F
Boiling Point.....	212°F
Solubility in Water.....	Complete
Acid Absorption .....	Almost Complete
pH .....	3.5 – 5.5

### PACKAGING

- 55 Gal Drums
- 275 Gal Totes
- Bulk

### ADDITIONAL INFORMATION

- Potassium chloride (KCL) is generally used at a two (2)percent concentration although it is common to use much higher concentrations depending on the clay content and the clay characteristics
- A two (2) percent solution requires approximately 700 pounds of KCL per 100 barrels of water (about 14 fifty (50) pound bags or 13 twenty-five (25) kilogram bags).
- In order to obtain the equivalent performance of KCL, two (2) gallons of **SKL-100™** are used per 100 barrels of water or per every 700 pounds of KCL. One drum of **SKL-100™** will replace about 20,000 pounds of KCL or 400 fifty pound bags.
- The amount of KCL used is also dependent (or should be) on the purity of the KCL. This factor is all too often overlooked when mixing KCL to the required concentration.
- Large cost savings can be generated when using **SKL-100™** in replacing KCL in terms of freight savings, warehousing, inventory, blending manpower costs, on-the-fly savings when local water sources are available, maintenance costs savings on equipment such as pumps due to damage caused by the various granular materials in the KCL.

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### ADDITIONAL INFORMATION (CONTINUED)

- As far as savings obtained when using **SKL-100™** in the EXPORT MARKET, the same savings seen in paragraph #5 will be realized but a greater savings due to ocean transport costs will be obtained. Approximately 2 drums of **SKL-100™** will replace a 40-foot container of KCL. These savings sometimes amount to more than the cost of the product.
- In AIR DRILLING (water misting/air mixtures) consumption of surfactants necessary for the required foaming characteristics and stability can be substantially reduced due to the inherent foaming properties built into the **SKL-100™**.
- With a specific gravity close to that of water, heavier brine solutions (using fresh or salt waters) can be formulated using heavier salts without causing precipitation of the salts to include KCL while getting the necessary clay stabilization.
- In general, based on costs in the U.S. and Canada, using **SKL-100™** should result in a savings of approximately 63% up and above the previously described savings in paragraphs #5 and #6.

### SKL-100™ MIXING CHART

	2% KCl	4% KCl	6% KCl	8% KCl	24% KCl
1000 BBLS	20 GAL	40 GAL	60 GAL	80 GAL	240 GAL
750 BBLS	15 GAL	30 GAL	45 GAL	60 GAL	180 GAL
500 BBLS	10 GAL	20 GAL	30 GAL	40 GAL	120 GAL
250 BBLS	5.0 GAL	10 GAL	15 GAL	20 GAL	60 GAL
200 BBLS	4.0 GAL	8 GAL	12 GAL	16 GAL	48 GAL
100 BBLS	2 GAL	4 GAL	6 GAL	8 GAL	24 GAL
75 BBLS	1.5 GAL	3 GAL	4.5 GAL	6 GAL	18 GAL
50 BBLS	1 GAL	2 GAL	3 GAL	4 GAL	12 GAL
40 BBLS	0.8 GAL	1.5 GAL	2.5 GAL	3.2 GAL	9.6 GAL
30 BBLS	0.6 GAL	1.2 GAL	1.8 GAL	2.4 GAL	7 GAL
25 BBLS	0.5 GAL	1 GAL	1.5 GAL	2 GAL	6 GAL
	2% KCl	4% KCl	6% KCl	8% KCl	24% KCl

Mixing Rate = 1/2 Gallon per 1,000 Gallons Water. Gallon per 100 Barrels Water

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