

## **PRODUCT DESCRIPTION**

DAP-4A is a concentrated anionic polymer viscosifier and friction reducer for use in freshwater, 2% KCl and freshwater treated with KCl Substitutes. DAP-4A yields extremely rapidly and will reduce friction by as much as 70% or more, depending on the pipe dimensions, pressures and flow rates. DAP-4A is a high molecular weight polymer in a latex base that promotes laminar flow of the fluid at or near the pipe wall, thereby reducing or entirely eliminating turbulent flow. An increase in the laminar flow characteristics of the fluid produces a decrease in the pumping or “friction” pressure. It should not be used in acid due to its’ incompatibility in spent acid and incompatibility with cationic corrosion inhibitors.

## **RECOMMENDED APPLICATION**

Prior to use, stir the container to ensure best results. Over time the product may settle out in the container. This is normal and does not affect product quality. Simply mechanically agitate to re-disperse. Do not air stir as the moisture in the air will hydrate the polymer prematurely and a very viscous or semi-solid mass will result. DAP-4A is manufactured for use in freshwater, 2% KCl and freshwater treated with KCl Substitutes. It may be applied at temperatures up to 300<sup>0</sup>F (148.9<sup>0</sup>C). DAP-4A may be used in higher concentration or other types of brines as well, however compatibility and performance should be confirmed. May be batch mixed or added directly on the fly. Normal use rate to increase aqueous drilling fluid viscosity is 0.4 to 2 ppb. For friction reduction use rate is 0.2 to 0.4 ppb.

## **COMPATIBILITY**

DAP-4A is anionic. It is compatible with nonionic and other anionic additives. It should not be used with cationic additives unless the compatibility is confirmed by testing.

## **TYPICAL PHYSICAL PROPERTIES**

Form:	Liquid
Chemical Family:	Synthetic Polymer
Color:	Off-white, opaque
Solubility:	Water, 2% KCl
Odor:	Hydrocarbon
Wt. per Gal.:	8.35 lbs.
Charge:	Anionic
Flash Point:	>200 <sup>0</sup> F (93.3 <sup>0</sup> C)

## **HANDLING/STORAGE**

Store away from heat sparks and open flame. Keep container tightly sealed to prevent evaporation, contamination, and explosion hazards. Use only with adequate ventilation. Promptly remove any spilled material as it is extremely slippery, especially when wet. Rinse spill with copious amounts of water. It can cause eye, skin and respiratory tract irritation by contact. Do not breathe vapors, especially in a confined area. Recommend use of chemical splash goggles and rubber gloves during handling. Refer to Material Safety Data Sheet (MSDS) for handling and hazard data.

## **PACKAGING**

DAP-4A is available in 5 gallon container, 55 gallon drums and 330 gallon tote tanks.