

## **PRODUCT DESCRIPTION**

MAD-1 is a patent pending, biodegradable, thermodynamically stable microemulsion (clear mixture of solvent, cosolvent and surfactant) designed specifically for use as a drilling and stimulation additive. MAD-1 offers superior performance by minimizing invasion, reducing formation damage and maximizing cleanup of drilling fluids and stimulation fluids. MAD-1 can also be used in oil based drilling fluids to cleanup and prevent the formation of water blocks thus improving the relative permeability to hydrocarbon.

## **RECOMMENDED APPLICATION**

Use MAD-1 at 0.7 - 2 ppb in the drilling fluid.

## **COMPATIBILITY**

MAD-1 is generally compatible with cationic, anionic and amphoteric additives. A compatibility test is advised before use with other surfactants.

## **TYPICAL PHYSICAL PROPERTIES**

Form:	Liquid
Chemical Family:	Proprietary
Color:	Clear to opaque
Solubility:	Water and brines
Odor:	Citrusl
Wt. per Gal.:	7.837 lb
Charge:	Nonionic
Flash Point:	77°F (25°C)

## **HANDLING/STORAGE**

MAD-1 is a flammable liquid. Keep away from heat, sparks and open flame. Keep drum tightly sealed to avoid contamination. MAD-1 may cause eye, skin and respiratory tract irritation by contact with the liquid or vapors. Do not breathe vapors, especially in confined areas. Use with adequate ventilation.

Recommend use of splash goggles and rubber gloves. Refer to the Material Safety Data Sheet for more detailed information.

## **PACKAGING**

MAD-1 is shipped in 55 gallon drums and 330 gallon tote tanks.

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