



# OIL AID-WX-32

## HIGH-TEMPERATURE CROSSLINKER

### DESCRIPTION

OIL AID-WX-32 is an aqueous solution blend of organometallics and other chemicals. The product is stable over a broad range of temperatures, to 250° C (482° F) and above. OIL AID-WX-32 is functional over a pH range of 6.0 - 11.0, and can be used as a delayed-action crosslinker. This is accomplished by either lowering the temperature of the base gel, or by chemical means, such as the use of OIL AID-WXA-40. The crosslinking mechanism can be accelerated by use of a chemical accelerator--OIL AID-WXA-20. Modifying the pH slightly within the applicable range can also effect crosslink time.

### APPLICATION

OIL AID-WX-32 is used as a crosslinker for aqueous gelled fluids in hydraulic fracturing. The product can crosslink several water-soluble polymers, and is especially useful in conjunction with OIL AID-WG-41, 43, 49, and 50.

The crosslink time is dictated by pipe pumping time, as well as viscosity requirements of a particular application. Some operators prefer to have the system fully crosslinked as soon as possible near the surface. Others like the viscosity to build slowly as the fluid goes down the tubing. This second approach allows greatly reduced friction pressures, and therefore, reduced pumping horsepower requirements. Whichever approach is chosen, strict control of the water source, chemicals, and fluid temperature should be maintained to ensure smooth operating conditions. This is best optimized in the laboratory prior to use in the field. It is mandatory that the exact mixing water is used in the pilot tests to avoid any problems in the field application.

### RECOMMENDED TREATMENT

Typical dosage of OIL AID-WX-32 for crosslinking aqueous frac gels: 0.5 to 1.2 gal per 1000 gal, depending on concentration of gellant in the fluid. Consult a Messina technical service representative for specific recommendations.

OIL AID-WX-32 is usually added on-the-fly, as the frac fluid is being pumped downhole. Variation in pH can be used to retard or accelerate crosslink time.

### PACKAGING

OIL AID-WX-32 is normally packaged in 55 gal (208 litre) polyethylene resin drums containing approximately 523 lb (237 kg) of product. Alternative forms of packaging are available on request.

OIL AID-WX-32 is a Messina trademark