FEA-20
Iron Control Agent
11155-002

General Information:

FEA-20 is a freeze-protected mixture containing a minimum of 80% acetic acid. It can be used in any of the typical applications for acetic acid: as an iron control aid or as a standalone organic acid.

Physical Properties:

Density	8.8 lbs/gal.
pH (1% Solution)	3
Solubility in Water	Soluble
Solubility in Diesel	Soluble
Color	Colorless to Pale Yellow
Odor	Pungent, Vinegar-like
Flash Point	78°F

Chemical Description:

FEA-20 is composed of 80% glacial acid along with co-solvents to give a freeze point below 20 deg F. Unlike “60/40” acetic acid, FEA-20 contains no acetic anhydride, which can cause violent reaction if improperly mixed or contaminated.

Limitations:

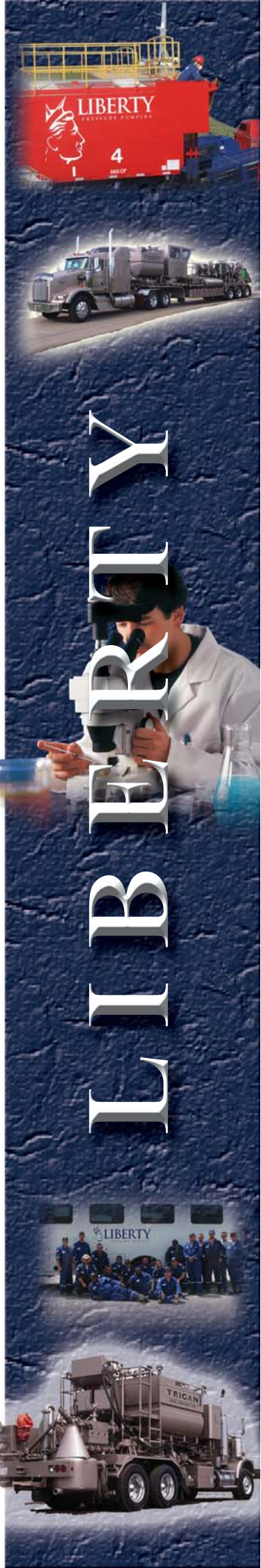
FEA-20 is corrosive to most metals, and should be stored in plastic or fiberglass drums, totes or bulk tanks with plastic or stainless steel piping and valves. Acetic acid, in any form, offers iron control only in that it helps prevent precipitation of iron compounds by buffering the pH of spent acid to fairly low values. If crude oils being contacted by acid are subject to iron-induced sludge formation, use of an iron-reducing agent is suggested.

Recommended Uses:

FEA-20 is recommended for use in any oilfield application requiring acetic acid.

Examples include:

1. As an iron control agent in hydrochloric acid treatments.
2. As a “stand-alone” organic acid for very hot wells or when hydrochloric acid corrosion could be a problem.



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Treating Applications:

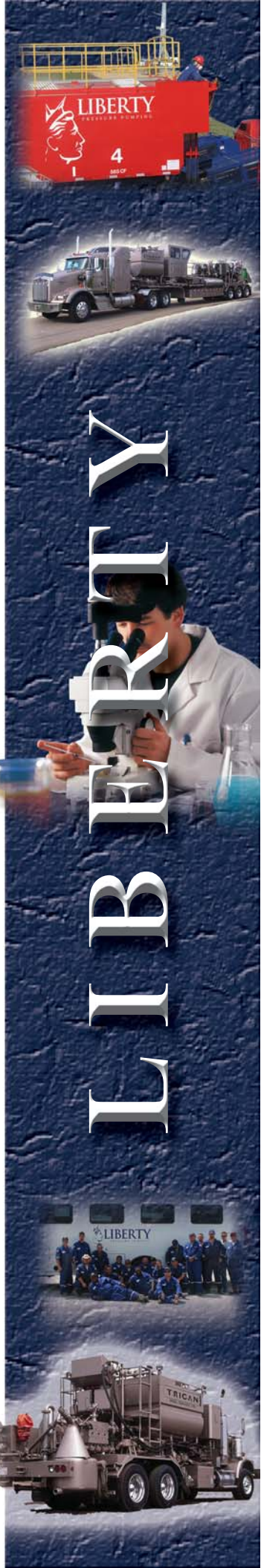
For use as iron control in hydrochloric acid, FEA-20 is typically used at from 5 to 15 gallons per thousand gallons of acid. It may be added at any point in the mixing process. FEA-20 in not known to have incompatibilities with typical acidizing additives. When used as an organic acid, FEA-20 may be diluted into fresh water at loadings up to 150 gallons per 1000 gallons total fluid. These fluids are occasionally used, with appropriate inhibitors, when either high temperature or unusual metals downhole could lead to excessive corrosion with hydrochloric acid. FEA-20 at 150 gallons per thousand will give the same total dissolving power as 7% hydrochloric acid, but will have a much slower rate of action.

Packaging:

FEA-20 is obtainable in 55 gallon poly drums, 330 gallon poly totes and bulk storage.

DOT Information:

CORROSIVE LIQUID, FLAMMABLE, N.O.S., 8, UN 2920, PG II



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