

## INFORMATION

# OIL AID-A-29

AMMONIUM BIFLUORIDE/MUD-ACID COMPONENT

### DESCRIPTION

OIL AID-A-29 is added to inhibited hydrochloric acid to form mud-acid. Mud-acid dissolves siliceous material (mud, clays, silt) as well as carbonate material. The properties of OIL AID-A-29 are:

<b>Description</b>	<b>Ammonium Bifluoride</b>
<b>Form</b>	Translucent, white flakes
<b>Specific Gravity</b>	1.5
<b>Bulk Density</b>	0.7
<b>Melting Point</b>	126.2° C
<b>Boiling Point</b>	239.5° C
<b>Solubility at 20° C, in water 60 g/100 ml</b>	
It is slightly hygroscopic.	

### APPLICATION

Some of the uses of mud-acid are:

- for matrix acidizing of sandstone formations,
- ahead of a cement squeeze,
- to loosen stuck drill pipe,
- as a spearhead for fracturing treatments.

In the presence of both siliceous and carbonate materials, mud acid will dissolve all the carbonate material first. If any unspent HF is left, it will then dissolve siliceous material. For this reason, the use of a wash acid of 15% HCl ahead of the mud acid is recommended. This will dissolve all the carbonate material leaving the siliceous material to be dissolved by the mud acid.

### RECOMMENDED TREATMENT

OIL AID-A-29 is added directly to inhibited HCl of the proper concentration. Mixing instructions for two strengths of mud-acid (12% HCl/3% HF and 12% HCl/6% HF) are as follows:

1. Put required amount of water in tank.
2. Add proper amounts of OIL AID inhibitors and other OIL AID additives.
3. Mix thoroughly.
4. Add concentrated HCl.
  - a) enough to make 15% HCl for 12% HCl/3% HF.
  - b) enough to make 18% HCl for 12% HCl/6% HF.
5. Mix thoroughly.
6. Add OIL AID-A-29 to acid mixture.
  - a) 400 lb/1000 gal 15% HCl for 12% HCl/3% HF.
  - b) 800 lb/1000 gal 18% HCl for 12% HCl/6% HF.
7. Mix thoroughly until all OIL AID-A-29 is dissolved.

Note: OIL AID-A-29 will cool water as it dissolves. It may be necessary to use warm water in mixing or apply heat to the mud-acid to dissolve the product completely.

#### **HANDLING**

Rubber gloves and goggles must be worn at all times when handling OIL AID-A-29. Rubber boots and rubber aprons are also recommended. All exposed skin should be washed thoroughly immediately after working with the product. Special attention should be paid to the area around the fingernails. Damage to the eyes, burns on the skin, and internal body injury can be caused by the material's conversion to hydrofluoric acid as it dissolves in sweat or body fluid.

#### **PACKAGING**

OIL AID-A-29 is packaged in 40 kg multi-layer bags.

OIL AID-A-29 is a Messina trademark