

# ALPINE POLYMER SLURRY



*ALPINE POLYMER SLURRY acrylic copolymer is an extremely high-molecular-weight, anionic polyacrylamide in dry granular powder. This high-molecular-weight synthetic polymer is an economic way to achieve high viscosity and shale stabilization at low dosage rates. It is easy to mix, and dissolves quickly when added to freshwater fluid systems.*

## Typical Physical Properties

Physical appearance .....	White, granular powder
Ionic character.....	Anionic
Density .....	0.8 g/cc
Bulk density .....	50 lb/ft <sup>3</sup> (800 kg/m <sup>3</sup> )
pH (1% Solution).....	6.0–8.0

## Applications

ALPINE POLYMER SLURRY is ideally suited for freshwater construction systems such as slurry wall, shaft drilling, HDD and minerals exploration projects.

ALPINE POLYMER SLURRY can serve different functions depending on application technique and treatment:

**Viscosity & Shale Stabilization:** Adding 0.5 to 1.0 lb/bbl (12 – 24 lb/1,000gal.) of ALPINE POLYMER SLURRY to freshwater fluids is a cost-effective way to generate viscosity. Its shear-thinning properties maximize hydraulic power under high shear while retaining excellent carrying capacity under low-shear conditions. The anionic polymer can encapsulate clays and shales and limit the depth of fluid invasion – stabilizing soils and formations.

**Lubrication:** Adding ALPINE POLYMER SLURRY in low concentrations (0.1 to 0.25 lb/bbl; 2.4 to 6 lb/1,000gal.) reduces friction, at points of high shear. The polymer also helps reduce erosion and enlargements of fragile geologic conditions.

**Flocculant:** ALPINE POLYMER SLURRY can also be used for clear- water or low-solids drilling. Adding a 5% solution of ALPINE POLYMER SLURRY into the flowline or just prior to any mechanical separation can greatly enhance the removal of solids from spoils and waste.

Proper mixing requires adding at a slow and steady rate through a high-shear hopper. Continue to circulate and agitate the slurry until all material is dispersed and dissolved.

Recommended application for soil conditions:

Normal consolidated soils:

1.5 to 2.0 lb (0.7 to 0.9 kg) per 100 gal (378.5 L) water (0.6 to 0.8 lb/bbl)

Unconsolidated soils:

2.5 to 3.5 lb (1.1 to 1.6 kg) per 100 gal (378.5 L) water (1.0 to 1.5 lb/bbl)

### ***Advantages***

- Economic and easy to mix for viscosity and shale stabilization
- Can be used to replace bentonite at a ratio of 1:100 (*e.g.*, one 50-lb bag can replace 2.5 tons of bentonite in a typical geo-construction application)
- Produces very-high-viscosity slurries at low dosage rates
- Lubricates and reduces friction
- Binds loose sand, clay, shale, and gravel in the slurry reducing dispersal and solids buildup in the slurry
- Slows water invasion by viscosifying filtrate, sealing the walls of the excavation without the use of conventional filter cake solutions
- Enhances core recovery in continuous wireline coring operations
- Facilitates the removal of drilled soils from augers
- Non-fermenting synthetic polymer, without petroleum distillates
- Can be easily broken down with household bleach

### ***Cleanup***

ALPINE POLYMER SLURRY acrylic copolymer can be chemically broken down with liquid bleach in regular household concentration (5% sodium hypochlorite). Use 1 gal (3.8 L) of liquid bleach per 100 gal (378.5 L) of fluid formulated with ALPINE POLYMER SLURRY acrylic copolymer. Do not use perfumed liquid bleach or solid calcium hypochlorite.

### ***Toxicity and Handling***

When used in accordance with the manufacturer's published instructions, this product is considered non-hazardous. Drilled cuttings exposed to ALPINE POLYMER SLURRY acrylic copolymer should be washed with calcium hypochlorite to break down the ALPINE POLYMER SLURRY acrylic copolymer before the cuttings can be confined or stored in a sealed container or drum.

### ***Packaging and Storage***

ALPINE POLYMER SLURRY acrylic copolymer is supplied in 5-gal (18.9-L) buckets.

ALPINE POLYMER SLURRY acrylic copolymer should be stored inside under cool, dry conditions. When stored under these conditions, it has a shelf life of at least one year.