

Carbonite

Carbonite is a mined hydrocarbon resin, glossy black asphaltic with a low SG (1.05-1.06). It occurs in very pure states compared to other asphalts and has softening points ranging from 360° to 450°F (180° to 232°C). It is produced specifically as an additive for Drilling Fluids and Cementing applications. It is a competitive alternative for U.S. mined gilsonite. **Carbonite** is a product of HydroCarboNite SAS of France.

Carbonite is chemically inert, insoluble in water, providing a deformable solid in drilling fluids and cement. It possesses formidable technical advantages over other products at a significant reduction in cost.

Carbonite is produced in 3 temperature ranges. It is a high molecular weight hydrocarbon resin with a large molecular weight distribution, therefore its softening point is much higher compared to other types of polymers, allowing molecular deformation to occur gradually as it approaches its softening point and instead of completely melting into a low-viscosity liquid, **Carbonite** remains as a high viscosity liquid even after 20 degrees above its softening point.

Carbonite T – a softening point of 180°C or 360°F; 88-95% purity.

Carbonite GP – a softening point of 180°C or 360°F; > 97% purity.

Carbonite HT - a softening point of 205°C or 400°F; > 97% purity.

Carbonite Ultra HT – a softening point 232°C or 450°F; > 97% purity.

Technical characteristics of **Carbonite** in Drilling Fluids:

- a) Reduces HTHP Fluid Loss
- a) Improves Filter Cake Quality
- b) Stabilizes Shales
- c) Helps Prevent Differential Sticking
- d) Reduces Torque and Drag
- e) Effective in a High Temperature Environment
- f) Strengthens the Well Bore

Carbonite is a premium grade shale control and HTHP fluid loss additive tested in major mud labs around the globe validating its superior quality and efficiency compared with other mined gilsonites.

Carbonite is micronized for maximum efficiency in particle size distribution to improve the filter cake quality. Only $\leq 5\%$ is retained on a 200 mesh screen, $\leq 10\%$ on a 230 mesh screen and 0% on a 150 mesh screen.

Carbonite is non-toxic, non-carcinogenic, and non-mutagenic. Under the CEFAS system in the North Sea it is rated as “E”, the highest environmental rating. And in

the US, passes the Gulf of Mexico EPA discharge requirements for deepwater operations.

Recommended Usage:

Carbonite is typically used at 2 – 8 ppb in a drilling fluid.

Carbonite packaging is in 4 ply kraft sacks weighing 50 lb (22.5 kg) with 55 sacks per pallet, shrink wrapped, and capped on a heavy duty **plastic** pallet as standard packaging.