

Continuous Control of CO₂ as RO pretreatment

Clack Corosex® II (MgO) can be mixed with Clack Calcite (CaCO₃) media to treat acidic, low pH waters to remove free carbon dioxide (CO₂). For freebed filters, upflow is recommended with occasional backflushing, to help prevent cementing. A minimum of 50% Calcite is also recommended to prevent cementing.

By neutralizing the free carbon dioxide in water, Corosex® II and Calcite can correct low pH water conditions and render the water non-corrosive and more conducive for CO₂ removal by the RO system. Since this media is passive, it often eliminates the need for caustic injection on acidic waters.

Corosex® II, being a highly reactive magnesium oxide, is used most effectively where pH correction is substantial or high flow conditions are in use. Corosex® II, being soluble to acidity, will have to be replenished periodically. However, under certain low flow conditions MgO may overcorrect and create a basic condition.

It is important to combine Calcite with Corosex® II to mitigate the rapid neutralization properties of Corosex with the slower reacting properties of Calcite, effectively reducing potentially basic (high pH) properties due to overcorrection.

SnowPure recommends a mixture of between 10% and 20% Clack Corosex® II with Clack Calcite media, depending on the pH and CO₂ content of the feedwater. Corosex® II is recommended over plain Corosex® because it is higher in purity and slower reacting.

Since Corosex and Calcite will add some hardness to the water, antiscalant levels may need adjusting or the system may require a softener before the RO.