

Drilling-Grade vs Production-Grade Corrosion Inhibitor: Matching the Formulation to the Service

Petriz corrosion inhibitors ship in two formulations, PZT-COR-O (drilling) and PZT-COR-OG (production), both film-forming and both rated for CO₂, H₂S, oxygen, and chloride environments up to 90°C and 250,000 ppm TDS. The right choice depends on where in the well's life the protection is needed, and how the treatment will be delivered.

Formulation	Product Code	Service	Typical Application
Drilling-Grade	PZT-COR-O	Active drilling operations	Tubular and equipment protection during drilling
Production-Grade	PZT-COR-OG	Long-term production service	Continuous or batch treatment of flowlines, gathering pipelines, and production tubing

Drilling-side protection

During active drilling, PZT-COR-O protects tubulars and rig equipment against the corrosive conditions encountered while a well is being drilled, including sour (H₂S) or CO₂-rich ("sweet corrosion") environments. This is shorter-duration, higher-intensity protection tied to the drilling program itself rather than to years of ongoing production service.

Production-side protection

Once a well is producing, PZT-COR-OG protects flowlines, gathering pipelines, and production tubing across months or years of continuous or batch treatment. Corrosion inhibition is consistently the single largest oilfield-chemical category by revenue, reflecting how central this ongoing protection is to overall asset integrity.

Continuous injection vs batch treatment

Continuous injection, typically metered at 50-200 ppm, can be automated precisely and is the standard choice wherever injection infrastructure already exists. Batch treatment instead relies on the inhibitor film's persistency: a single treatment can protect a pipeline for weeks, reducing labor on remote or low-traffic lines where continuous metering isn't practical. Either approach requires ongoing corrosion-rate monitoring (coupons, ER probes) to confirm the protective film is actually being maintained, and effectiveness drops sharply if the film is mechanically stripped by high flow velocity, turbulence, or solids erosion.

Frequently Asked

What is the difference between drilling-grade and production-grade corrosion inhibitor?

PZT-COR-O (drilling-grade) and PZT-COR-OG (production-grade) are both film-forming corrosion inhibitors protecting against CO₂, H₂S, oxygen, and chloride attack, stable to 90°C and tolerant to 250,000 ppm TDS. The drilling-grade formulation is tuned for shorter-duration tubular and equipment protection during active drilling operations, while the production-grade formulation is tuned for long-term, continuous or batch protection of flowlines, gathering pipelines, and production tubing over months or years of service.

Should I use continuous injection or batch treatment?

Continuous injection (typically 50-200 ppm) can be metered and automated precisely, making it the standard choice for facilities with injection infrastructure already in place. Batch treatment relies on film persistency to protect a pipeline for weeks between treatments, reducing labor where continuous metering equipment is not practical, for example on remote or low-traffic flowlines.

Source: <https://petriz.co/insights/corrosion-inhibitor-use-cases/> | Full TDS and SDS documentation for every product referenced here is available on request from sales@petriz.co, in English, Spanish, and Portuguese. This brief is general technical guidance, not a substitute for product-specific TDS data or well-specific engineering judgement. Confirm dosing and compatibility against the current TDS and your own testing before field application.