



# PayZone® CleanSeal

## CROSS-LINKED PILLS

### Overview

PayZone CleanSeal is a crosslinked polymer solution designed to control fluid loss. PayZone CleanSeal cross-linked pill is formulated with the PayZone CleanSeal 10 Gel Kit and PayZone CleanSeal XP+.

### Features and Benefits

- Non-hazardous
- Highly shear thinning, allowing placement using normal rig pumps
- Self-healing and non-invasive
- Able to control fluid loss under reservoir temperatures up to 248°F
- Maximum density of 12.5 ppg
- Capable of being engineered to break 'upon demand' or can be broken rapidly by weak acids or oxidizing breakers, if required

### Applicable Information

PayZone CleanSeal cross-linked pill is typically used as a temporary, solids-free perforating pill. The gel pill is spotted above the perforation zone, perforation guns are run through the gel, the gel reforms behind the guns, and the well is perforated. Following the onset of losses, the over-balance pressure pushes the gel pill across the perforated interval, restricting losses almost immediately. The gel then breaks slowly over a time period that can be engineered by changes to the formulation. Break times ranging from days to months can be engineered, depending upon the reservoir temperature and gel formulation.

### Safety and Handling

Avoid skin and eye contact, inhalation or ingestion. For skin contact, wash with soap and large quantities of water. For eye contact, flush with large quantities of water. Use properly designed respirator if adequate ventilation is not available. Refer to the Safety Data Sheet for specific details.

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### Physical Properties

Appearance	Brown liquid
Specific gravity	Custom Formulated
pH	Formulation Dependent
Water Solubility	Soluble

### Packaging Information

PayZone CleanSeal 10 Gel Kit	Pail (13" dia x 15.6"H) 6.6-gal (25-liter) container
PayZone CleanSeal XP+	54.2-gal (205-liter) drum 264.2-gal (1,000-liter drum)

### Recommended Treatment

PayZone CleanSeal cross-linked pill is designed for use in monovalent brine systems. It may be used in divalent systems, but the pill itself must be made using a monovalent brine (KCL, NaCl, or NaBr).

Each cross-linked PayZone CleanSeal pill is developed for a specific application, and the formulation of each component will vary.

Laboratory testing is required to formulate the system for each application. When used as a perforating pill, the volume of gel required should exceed the volume of the perforated interval plus perforation tunnel volume by 50%.

PayZone CleanSeal pill is cross-linked by mixing the contents of the PayZone CleanSeal 10 Gel Kit with base brine and PayZone CleanSeal XP+ immediately prior to pumping it downhole. The products mix readily, and no special mixing equipment is required. Consult a TETRA representative to discuss specific applications.