

# Nonexplosive Oilfield Products

Global Sales & Service



## NeoFlex dump bailer kits yield 5-gallons of Flexible Expanding Cement System (FECS)

NeoFlex is a top performing cement plug-back system. It was developed for CT and dump bailer cementing operations. NeoFlex admixes are unique and ideally selected to provide the very best FECS pressure isolation performance. Its plug-back performance is exceptional. However, constituent costs are too expensive to be used in primary cementing jobs.

The Global Oil Industry recognizes FECS as one of the most effective systems to eliminate Sustained Casing Pressure (SCP). FECS systems abate the occurrence of;

Micro annuli cracking between FECS and csg in primary cementing, conventional plugging, and bailing operations.  
Micro annuli cracking between FECS and the earthen formation in primary cementing and plugging operations.  
De-bonding of cmt with csg caused by thermal transients, extreme pressure surges (frac jobs), and high service stresses.  
FECS have physical properties that are unique among themselves; high fracture toughness, high shear bonds with csg and earthen formation, high solid state expansion, low elastic moduli, unique Poisson's ratio, extremely low permeability, and sustained long-term elasticity. NeoFlex physical properties and attributes equal and sometimes exceed those of FECS presently provided by multinational service companies.

Halliburton, Schlumberger and numerous multi-national service and oil producing companies have published research findings and field operation reports lauding the attributes of FECS and how they thwart the occurrence of gas migration and most importantly eliminate SCP occurrence. A list of references within which FECS is reported to eliminate; gas migration, the occurrence of longitudinal micro annuli and radial micro cracks in cmt sheaths, and de-bonding of cmt from csg and earthen formations. NeoFlex provides these same attributes to CT and WL plug-back operations.

### FECS Eliminating Sustained Casing Pressure

CSUG/SPE 149440

Flexible, Expanding Cement System (FECS) Successfully Provides Zonal Isolation across Marcellus Shale Gas Trends

IADC/SPE 128226

Self-Healing Cement System – A Step Forward in Reducing Long-Term Environmental Impact

SPE/IADC 105781

Self-Healing Cement – Novel Technology to Achieve Leak-Free Wells

SPE-186930-MS

Flexible Cement Extends Wellbore Life with an Integrated Approach to Zonal Isolation

SPE 156501

Nano-engineered Oil Well Cement Improves Flexibility and Increases Compressive Strength: A Laboratory Study

IADC/SPE 112715

Innovative Hydraulic Isolation Material Preserves Well Integrity

SPE 116757

Responsive Cementing Material Prevents Annular Leaks in Gas Wells

## NeoFlex Dump Bailer Cement Kits



NeoProducts Technical Team has developed cement kits that were successfully run in over one hundred thousand wells over the last 30 years.

Our cement kits are Global Benchmarks.

## Export NeoFlex Dump Bailer Cement Kits

Yields 17 ppg high shear bond expanding flexible cmt slurry

Service Temperature Range: 70° - 350° F (21° - 177° C)

P/N E0105-350-017F

## Description

NeoFlex Dump Bailer Cement Kits are delivered in a single pail that contains a dry powder blend of High Sulfate Resistant (HSR) API Cement, para-aramid synthetic fibers, and multiple proprietary admixes that impart cement plug performance unsurpassed by any other dump bailed cement plugs.

NeoFlex Dump Bailer Cement Kits are off-the-shelf ready-to-go dump bailer cement kits that contain all the components needed to build a high-tech high-ΔP cement plug placed via dump bailing operations. Easy to follow mixing instructions on how to make the cement slurry are contained in each kit. NeoFlex Kits are available in 5, 6, and 55 gallon volumes.

## Applications

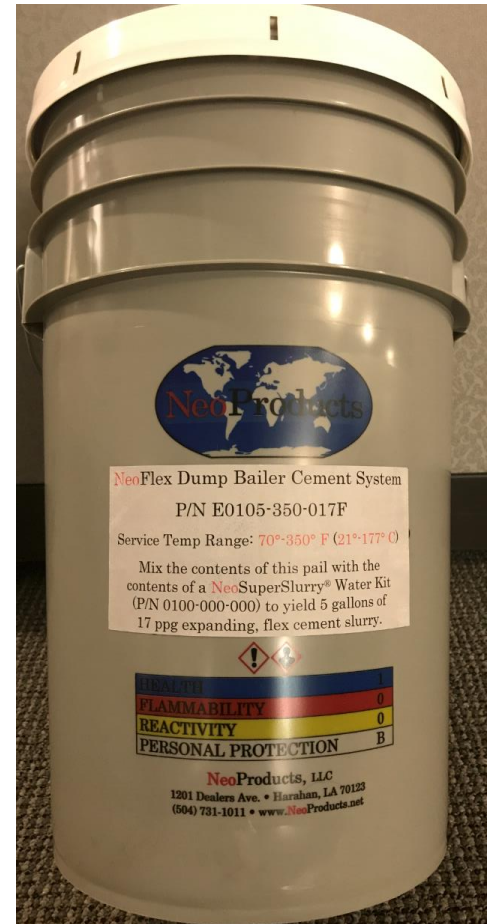
NeoFlex Dump Bailer Cement Kits are used in wells with potential gas migration, casing pressure, and high pressure / high temperature (HPHT) variations.

## Benefits

- Abates occurrence of Sustained Casing Pressure,
- Low permeability prevents gas migration and ensures long-term well integrity,
- Flexibility eliminates occurrence of micro cracking and micro annuli,
- Abates de-bonding between cement and casing, and
- Expands during curing and continues expanding for years.

## Features

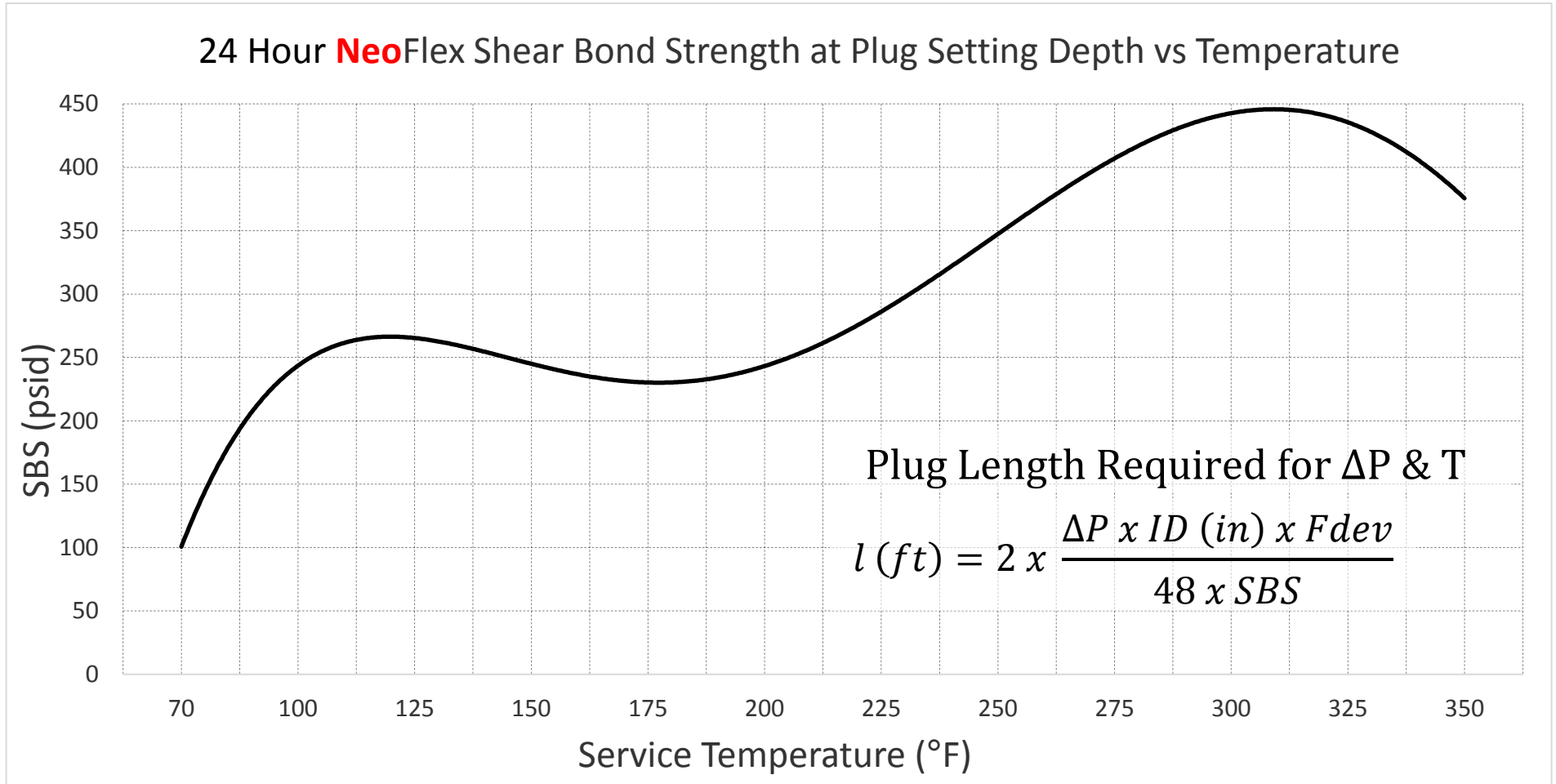
- Admixes in the dry powder blend assure; repeatable thixotropic dumping performance, minimal dilution/contamination of the slurry by wellbore fluids, rapid strength development, exceptionally high shear bond with casing and earthen formation, and repeatable/reliable gel, tag and set times at temperatures between 70° - 350° F.
- NeoFlex Dump Bailer Cement Kits continue expanding after the setting process, conform to and resist common downhole HPHT stresses, block hydrocarbon migration, and incorporate enhanced bonding properties for lifelong zonal isolation.
- NeoFlex Dump Bailer Cement Kits contain a QC/QA report listing; cmt grind number, production date, the API neat cmt compressive strengths, 24 hr cmt slurry compressive strengths and the shear bond strength for the NeoFlex Dump Bailer Cement blend in the kit.



NeoFlex Dump Bailer Cement Kits yield plugs that anchor and seal for the lifetime of the well.

# Nonexplosive Oilfield Products

Global Sales & Service



**NeoFlex** plugs may be pressure tested 18 – 24 hrs after the last bailer run.

The double hump SBS curve is related to the complex interactions of transient cement silicate phases and retarder concentrations.

**NeoProducts** prudently recommends “never dump less than 10 ft of cmt slurry when a long-term high  $\Delta P$  plug is desired”.