

Chip Identification Sheet

Standard Library

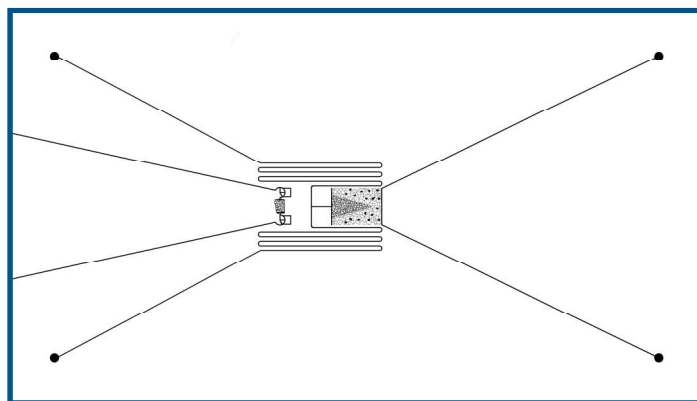


Flowback S100 Chip

Fracture Fluid Performance Flowback Chip with 120 nm Matrix

The patented Flowback S100 Chip powers our industry-leading Flowback test and is designed to represent the pore geometries of shale formations during hydraulic fracturing, and includes four inlets/outlets, a high permeability frac zone, a surrounding nanomatrix, with oil pockets, and oil accumulation channels.

The Flowback test enables visualization and measurement of how surfactants, friction reducers, and fluid packages interact within representative porous media during hydraulic fracturing. The test helps to identify top-performing fluid packages and visually reveal formation damage mechanisms.



Chip Profile

Dimensions	38 x 21 x 2.75 mm
Components	Silicon Base 1.00 mm Glass 1.75 mm

Supports

Chip Holder	Screw Top Liquid Confined
Ports	4

Channels

Inlet Channels	50 μ m wide 25 μ m deep
Outlet Channels	50 μ m wide 25 μ m deep
Accumulation Channels	50 μ m wide 25 μ m deep

Porous Media

Frac Zone

Porosity	34.5%
Pore Throats	5-25 μ m wide x 25 μ m deep
Volume	12 nL
Permeability	40 D calculated

Matrix Oil Pockets

Porosity	5.4%
Size	50-100 μ m wide x 25 μ m deep
Volume	5.3 nL
Permeability	2.5 μ D calculated

Matrix Nanonetwork

Porosity	5.4%
Size	10 μ m wide x 120 nm deep
Volume	0.09 nL
Permeability	2.5 μ D calculated

Fluid Analysis Applications

Fracture Fluid Performance (Screening)

SKU 300005