

# SureBlock™ -104L

Retarder for Water-Control Additive

## Applications

- Delays the crosslinking time to enable accurate system placement to effectively seal off unwanted water or gas production

## Features and Benefits

- Accurately controls crosslinking times
- Easily mixed in water
- Readily available
- Environmentally friendly

## Product Description

SureBlock-104L is a liquid retarder used to control the gelation/crosslinking time of both SureBlock-101 and SureBlock-102 water control additives. Crosslinking time can be accurately controlled from 10 minutes to more than 8 hours.

This product is added to complete liquid volume prior to adding SureBlock-101 or SureBlock-102. Concentration is based on bottomhole static temperature (BHST) and can range from 0 to 100 gal/Mgal (0 to 100 L/m<sup>3</sup>). Optimum dosage, temperature, and extent of mixing should be determined for a cost-effective operation.



# SureBlock™ -104L

## Specifications

Temperature	SureBlock-104L concentration	Time required to yield viscosity of 1200cP @40s-1 using (R1:B2)
100°F (37°C)	0.0 gal/Mgal or L/m <sup>3</sup>	76 minutes
	4.0 gal/Mgal or L/m <sup>3</sup>	200 minutes
	7.2 gal/Mgal or L/m <sup>3</sup>	332 minutes
	14.3 gal/Mgal or L/m <sup>3</sup>	>400 minutes
140°F (60°C)	0.0 gal/Mgal or L/m <sup>3</sup>	15 minutes
	21.6 gal/Mgal or L/m <sup>3</sup>	116 minutes
	28.8 gal/Mgal or L/m <sup>3</sup>	202 minutes
	42.4 gal/Mgal or L/m <sup>3</sup>	376 minutes
180°F (82°C)	0.0 gal/Mgal or L/m <sup>3</sup>	5 minutes
	14.3 gal/Mgal or L/m <sup>3</sup>	15 minutes
	42.4 gal/Mgal or L/m <sup>3</sup>	56 minutes
	56.8 gal/Mgal or L/m <sup>3</sup>	73 minutes
	72.0 gal/Mgal or L/m <sup>3</sup>	212 minutes
220°F (104°C)	72.0 gal/Mgal or L/m <sup>3</sup>	38 minutes
	86.0 gal/Mgal or L/m <sup>3</sup>	136 minutes
	100.4 gal/Mgal or L/m <sup>3</sup>	>150 minutes
250°F (121°C)	100.4 gal/Mgal or L/m <sup>3</sup>	90 minutes

## Physical Properties

Appearance	Clear liquid
Specific gravity	1.05 to 1.10
Density	8.83 to 9.19 lb/gal (1.05 to 1.10 kg/m <sup>3</sup> )
pH	4.45 to 4.55

