

LP 100TM For Crude Oil

Background

LP 100 Flow Improver is part of ConocoPhillips Specialty Products' range of innovative and technologically superior Flow Improver Solutions. This pioneering suspension product provides the answer to crude petroleum pipeline needs.

Characteristics

LP 100 Flow Improver is an aqueous suspension. Its robust characteristics make it an optimum drag reducer for many pipeline applications. LP 100 Flow Improver can provide greater than 80% drag reduction. This allows companies to strategically reduce pipeline operating costs, increase throughput, decrease pressure or shut down intermediate pump stations.

Benefits

Great performance

- Greater than 80% drag reduction
- Increases flow rates while maintaining current pipeline pressures
- Maintains flow while reducing pipeline pressures
- Allows shutting down of intermediate pump stations

Superior technology

- Improves pipeline capacity without capital investment
- Less polymer required to achieve a given performance
- Lower injection rates than other drag reducers
- Faster dissolution rates than other drag reducers
- Reduces internal corrosion rate by 40%
- Reduces crude heat loss

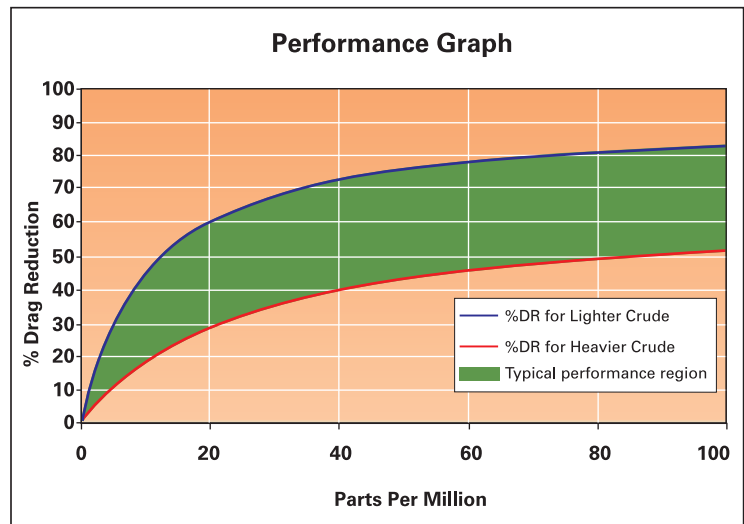
It dissolves into flowing product without coating pipeline walls. It increases throughput while reducing internal corrosion rates.

The polymer technology used by ConocoPhillips allows greater amounts of active polymer to be deployed in a fixed amount of product while improving the dissolution dynamics. The polymer of choice shows excellent hydrocarbon affinity, and is able to attain elevated levels of drag reduction under varied operating scenarios. It also has the strength to effectively endure shear forces.

Handling

LP 100 Flow Improver is easy to handle, store and clean up. It is environmentally friendly and non-flammable. It flows easily and does not require nitrogen pressurized storage tanks.

See back page for product properties



The performance curve shows the performance range in which LP 100 Flow Improver operates, depending on pipeline and crude conditions.

Contact us at www.LiquidPower.com

PRODUCT PROPERTIES

GENERAL	
Designed for use on	Petroleum Crude Oil
Flow Improver type	Suspension
Carrier/Solvent	Water
PERFORMANCE	
Maximum drag reduction	Greater than 80%
Typical concentration	10 to 50 ppm
TYPICAL PROPERTIES	
Color	White
Density	8.0 lbs/gal (0.96 g/cm ³)
Flash Point	Not applicable
Viscosity	350 cP @ 511s ⁻¹ (Non-Newtonian)
Freezing Point	32°F (0°C)
Boiling Point	212°F (100°C)
Vapor Pressure	0.95 lb/in ² (24 mm Hg @ 25°C)
HANDLING	
Operating range	32°F to 110°F (0°C to 43.3°C)
Product stability	Stable suspension Intermittent agitation recommended
Pressure	No nitrogen or pressurized vessels required
Heating	Climate control environment available
INJECTION EQUIPMENT	
Pumps	Various designs available for different injection range and environments
Range	5 to 2,500 gal/day (20 to 9,500 L/day)
Flow meter	Mass (Coriolis)
Automation	Available
SAFETY AND ENVIRONMENTAL (See Material Safety Data Sheet)	
Safety	Non-hazardous, non-flammable
Health	Low toxicity. Conventional protection equipment
Environmental	Very low aquatic toxicity

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