



中国石油

EP-A instruction

Background

EP-A Drag Reduction Agent (DRA) is part of Pipeline Scientific and Technical Center of PetroChina Pipeline Company Specialty Products' range of innovative and technologically superior chemical additives. As part of the portfolio, EP-A DRA provides the answer to pipelines with very specific flow dynamic needs.

Characteristics

EP-A DRA has been designed for large volume customers at the lower end of the performance curve. The nature of the long-chain polymer provides uplift earlier on, specifically in tune with pipeline operators' needs. It can provide more than 80% drag reduction depending on pipeline or crude conditions.

EP-A DRA is an aqueous suspension with higher polymer content. Like our other EP series DRA, it dissolves into flowing product without coating pipeline walls. It increases throughput while reducing internal corrosion rates.

The polymer technology used by Pipeline Scientific and Technical Center of PetroChina Pipeline Company 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. The nature of the polymer provides some additional buffering from shear affects, but will shear degrade in places where abnormally high shear forces are exerted, eliminating concerns to downstream processing.

Benefits

Great performance

- High achievable drag reduction of more than 80% depending on pipeline and crude conditions
- Provides additional buffering from shear effects
- Increases flow rates while maintaining current pipeline pressures
- Maintains flow while reducing pipeline pressures

Superior Technology

- Improves pipeline capacity without capital investment
- Less polymer required to achieve a given performance
- Lower injection rates than traditional drag reducers
- Faster dissolution rates than traditional drag reducers
- Reduces temperature loss

Handling

EP-A DRA 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.



EP-A Product Properties

General	
Designed for use on	Petroleum Crude Oil & Refined Products
DRA type	White slurry
Performance	
Maximum drag reduction	More than 80% depending on pipeline/ crude conditions
Typical concentration	5 to 50 ppm
Typical Performance	
Color	White
Density	0.80-0.90
Open Flash Point	> 48
Viscosity	< 750 mPa.s
PH	5.0-9.0
Ash Content	< 0.5%
Handling	
Operating Range	-50 -25
Product Stability	Stable suspension Intermittent agitation recommended
Injection Equipment	
Pumps	Various designs available for different injection range and environments
Flow Meter	Mass
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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