

## Mon-DRA

Mon-DRA is a 'Drag Reducing Agent' or 'Flow Enhancer' which substantially increases the flow rate capability of pipelines by reducing the friction loss in the pipeline and subsequently reducing the amount of energy required to move the oil through the pipeline.

Mon-DRA an oil soluble polymer, reduces pumping pressures and proportionally allows more oil to be pumped through the pipe at the same pressure thereby substantially reducing transportation costs.

Mon-DRA is an anti-turbulence polymer which, by reducing the friction loss in the pipeline, allows the Operator to either move more product through the pipeline at the same pressure or reduce the energy requirements to move the same amount of fluid; either way Mon-DRA will immediately increase throughput capability (but does not directly increase the pipeline flow rate as others factors must be present) providing instant cost savings for the Oil Company/Pipeline Operator by reducing pressure, transportation and other related pipeline expenses.

Mon-DRA is a long chain, oil soluble polymer that is injected into the pipeline to extend the laminar flow regime thereby reducing or removing areas of turbulence resulting in reduced friction loss along the length of the pipeline.

Mon-DRA will only work to reduce friction loss where turbulent flow regimes are present and does not coat the pipeline or react with the oil in any chemical way nor does it need to be removed at the refinery.

When Mon-DRA disperses into the pipeline oil the polymers molecules begin to form a complex chain interaction which extends the laminar flow regime thus reducing areas of turbulence and high-pressure loss from forming near the pipeline wall thereby substantially reducing friction loss along the length of the pipeline.

Mon-DRA is recommended to be injected into the pipeline (by a positive pressure displacement pump capable of exceeding the pipeline pressure) at the discharge side of the mainline pump.



Technical Data	Typical Properties
Appearance	Liquid
Color	Light Yellow
Specific Gravity	$0.92 \pm 0.02$
Solubility in water	Not Soluble
Dosage recommendation	10 – 50 ppm

Packaging: 1,000 L Totes

Increase flow capacity. Increase Pipeline throughput. Reduce drag by up to 80%. Reduce Transportation time. Decrease Pipeline Operating Pressure. Increase flow rates up to 100%.