

Technical Bulletin

Drag Reducing Agent

Apollo A-1020 M (FLO – 1020 Improved)

DESCRIPTION **A – 1020 M** is a concentrated chemical product, specific to act as a drag reducing agent, in the transport of hydrocarbons (Pemex Magna, Pemex Premium, Pemex Diésel, Diésel UBA), it has an ultra molecular weight, it is a copolymer dispersed in an organic solution. Reduces pressure losses due to frictional and increases flow and/or lowers operating pressures in pipelines. **A – 1020 M** is fully compatible with the distilled hydrocarbons transported in each PEMEX pipeline, it dissolves in petroleum distillates in Magna, Premium, Diesel, UBA Diesel, Alkylated, MTBE, and intermediate products, it does not alter any of the physical properties or chemistry of the same and does not generate any impact on the subsequent chemical processes of the system where the flow improver was used, the friction reducing agent **A – 1020 M** remains in solution with the fluid that is transported, without covering the walls of the duct . Likewise, the friction reducing agent **A – 1020 M** does not alter the mechanical and physical conditions of PEMEX's facilities and instrumentation, such as pipes, valves, connections and measuring instruments, due to clogging or obstruction, which cause failures in the operation.

APPLICATION A – 1020 M is injected into the pipeline by an injection module consisting of:

- A high pressure pump with stroke adjustment
- A positive displacement flow meter
- Instrumentation (Manometers)

BENEFITS The highest and highest friction reduction.- Ultra molecular weight polymer technology allows it to dissolve instantly in petroleum distillates, much faster than common gel-based products. However, friction reduction is a solution phenomenon, rapid dissolution translates into more immediate benefits in the treated pipelines.

High activity, Low Viscosity.- The properties of the ultra molecular weight polymer technology provide a product with a high active content and low viscosity. The low viscosity makes the handling of the product easier and, due to its high content of active ingredients, it minimizes the need to use excess product to obtain the results.

STORAGE It is packaged in 550 and 6,000 gallon containers, which are mounted on tank cars or platforms.
A – 1020 M requires agitation which is provided in the injection module.
A – 1020 M must be handled in compliance with all current safety standards for petroleum products.

PRESENTATION Drag Reducing **Agent A – 1020 M** is delivered in containers with a capacity of 550 to 6,000 gallons.