



# PETROLITE Copolymers

Specialty polymers and waxes to meet your needs

## Chemical nature and physical properties

The PETROLITE™ copolymers are copolymers of propylene and ethylene. The addition of propylene results in short chain branching, which reduces the polymer's crystallinity as compared to our POLYWAX™ polyethylenes. The copolymers have the narrow molecular weight distributions offered by the POLYWAX polyethylene line, but the branching provides a more flexible and softer polymer with improved solvent solubility.

## Typical properties

Product	Melting Point	Viscosity (cps)	Penetration @ 77°F (25°C)	Branches Per Molecule (calculated)
Test Method	ASTM D-127	ASTM D-3236	ASTM D-1321	
PETROLITE™ EP-700 copolymer	205°F (96°C)	12 at 210°F (99°C)	6.0 (dmm)	<1
PETROLITE™ EP-1100 copolymer	230°F (110°C)	15 at 300°F (149°C)	3.5 (dmm)	1 to 2

## Solubility characteristics

Additional branching provides increased solubility of the PETROLITE copolymers as compared to POLYWAX polyethylenes of the same weight. These products are most soluble in cyclic and bicyclic saturated hydrocarbons (decalin), tri- and tetra-chloro substituted methanes and ethanes (carbon tetrachloride) and aromatics (benzene, xylene, and toluene).

## Product benefits

The combination of controlled branching and low MW distribution and low melt point distribution inherent to the PETROLITE copolymers provides many attractive benefits for formulators.

### Features

Controlled branching

Controlled/narrow molecular  
weight distribution

## Applications

### Plastic applications

- PETROLITE copolymers are used to enhance slip, anti-block and mold release properties in plastics processing, especially in applications involving thermoplastic elastomers
- Because of their ability to be finely dispersed in aliphatic solvents, PETROLITE copolymers are a performance ingredient in release agents

### Hot melt adhesive applications

- In hot melt adhesive applications, PETROLITE copolymers provide improved flexibility while maintaining low viscosity and high set point

### Standard product form and packaging:

Form: Prills and mini-prills

Packaging: 25 KG bags/40 bags per pallet

### FDA status:

Please refer to Baker Hughes polymers FDA Guide 31648

For more specific information, please contact your Baker Hughes representative.

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Because it has become common for purchasers of our products to file patents for specific end uses of our polymer products, Baker Hughes advises its customers to research their particular end use for possible intellectual property issues with respect to third party patents.

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