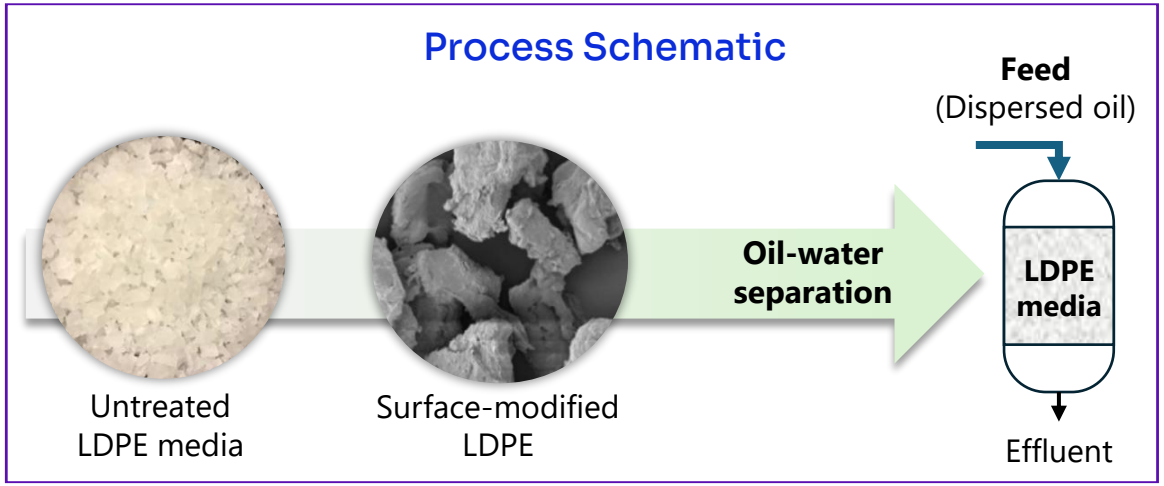
Low Density Polyethylene (LDPE)

Process Description

LDPE is a widely available polymer known for its durability, flexibility, chemical resistance, and low cost.

Traditionally used in packaging and industrial applications, LDPE has gained interest as a sustainable adsorbent material for water treatment and oil-water separation. Its intrinsic hydrophobicity promotes the adsorption of oil droplets, while surface modification can further enhance its affinity for emulsified hydrocarbons.

The beneficial reuse of LDPE for water treatment aligns with circular economy principles by converting a widely available plastic material into a value-added medium for dispersed oil removal.



Publications

Modification of polyethylene for oil-water separation in industrial wastewater treatment (Link)

For further information, please contact us at email: GWSC@conocophillips.com