



Enhanced Oil Recovery

The problem of water cut of produced fluids and the growth of costs for the utilization of produced waters become the most acute at the late development of mature fields. The existence of effective solutions for water shut-off, for redirection of filtration flows and for conformance control (i.e. changing the profile of the injectivity of wells) can extend significantly the period of cost-effective operation of oil and gas wells.

However, in conditions of rapid depletion of hydrocarbon reserves, the value of technologies aimed at improving the HC recovery factor. Active implementation of polymer flooding, surfactant-polymer flooding and alkali-surfactant-polymer flooding technologies both at the stage of applying tertiary oil recovery enhancement methods and from the very beginning of field development can improve significantly oil recovery factor.

The use of polymers in flooding technologies allows increasing the sweep efficiency and changing the water/oil mobility ratio.



Chemicals and technologies for decreasing the water cut of produced fluids for conformance control in injection wells and for redirecting of filtration flows:

1. Technologies of water shut-off, water cut decrease in production wells and conformance control in injection wells with the help of **TAMOLEX®**.
2. Technologies of conformance control in injection wells with hydrocarbon emulsions based on **EKS-EM** or **EMITRIT®**.
3. Polymers of **EXPOL** brand manufactured by Polyex allow to select solutions both for polymer systems capable of crosslinking and intended for the use in the treatment of bottomhole zone in order to block areas with increased permeability, and for reducing of water /oil mobility ratio which contribute to the increasing of sweep efficiency and displacement efficiency.



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Chemical	Description	Purpose of Application	Area of Application		Comments	
			Reservoir Type	Type of wells to be treated		
TAMOLEX®	Sediment forming composition, flow diverting chemical	Conformance control in injection wells	C, T	Injection wells with intake capacity up to 800 m³ per day and with permeability up to 0.5D	Granulated product	
		Water shut-off	C, T	Production wells with water cut up to 98%		
EKS-EM grade A grade B grade V	Emulsifier for hydrocarbon emulsions	Conformance control in injection wells	C, T	Injection wells with intake capacity up to 600 m³ per day and with permeability up to 0.5D	Liquid. Ready hydrocarbon phase (grades A, V)	
		Water shut-off	C, T	Formation temperature up to 70°C	Concentrated product for preparing the emulsion composition (grade B)	
EMITRIT®	High temperature emulsifier for hydrocarbon emulsions	Conformance control in injection wells	C, T	Injection wells with intake capacity up to 600 m³ per day and with permeability up to 0.5D	Liquid. Concentrated composition	
EXPOL	Modified polyacrilamides	Creation of polymeric slugs while implementing polymer flooding, surfactant-polymer flooding and alkali-surfactant-polymer flooding	C, T	Injection wells	Granulated product	
POLIPAV81 grade V	Oil wash-off complex surfactant	Lowering of pumping pressure for viscous polymeric systems injected into injection wells at conformance control operations	C, T	Injection wells	Liquid. Complex chemical, mixture of concentrated surfactants. Winterized product	

To select the optimal consumption of chemicals and application technologies please contact POLYEX specialists.



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