

NATIONAL[®] 90

Wyoming Sodium Bentonite

Description	NATIONAL [®] 90 is a treated premium grade sodium bentonite. National 90 is finely ground to aid in dispersion and meets API Specifications 13A, section 9 requirements. It provides viscosity and gelling characteristics to most water-based drilling fluids and also helps fluid loss and filtrate seepage into formations.	
Applications/Functions	<ul style="list-style-type: none">• Viscosify anionic water-based drilling fluids• Reduce water seepage or filtration into permeable formations• Forms a thin filter cake with low permeability• Promotes hole stability in poorly consolidated formations	
Advantages	<ul style="list-style-type: none">• Improves hole-cleaning capacity of drilling fluids• Meets or exceeds API Specifications 13A, section 9 requirements• Can be added directly to fresh water or fresh water drilling fluids	
Screen Analysis	<u>Typical</u>	<u>Specification</u>
	Dry screen, minus 200 mesh	67.5 min
	Wet screen, plus 200 mesh	4.0 max
Properties	<u>Typical</u>	<u>Specification</u>
	Moisture, percent	12% max
	Specific gravity	2.7
	Bulk density (compacted)	73 lbs/ft ³
	Bulk Density (uncompacted)	53 lbs/ft ³
Recommended Treatment	<ol style="list-style-type: none">1. Add National 90 in concentrations of 0-25 lb/bbl (0-70 kg/m³) to any active system.2. Mix slowly through a jet mixer or sift softly into the vortex of a high-speed stirrer. <p>Note: For optimum yield, NATIONAL 90 should be prehydrated in fresh water when the fluid's chlorides exceed 8000 ppm.</p>	
Availability	NATIONAL [®] products are available in a number of packaging configurations and shipped by rail or truck from both of our Wyoming plant locations. To receive information or pricing please contact our Customer Service Department or Sale Team in Houston, Tx either by phone, fax or email below.	

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