## КОН

## pH Control

Product Description	POTASSIUM HYDROXIDE (KOH) is the common name for potassium hydroxide (KOH). It is sometimes used for pH stability and as an inhibitor for swelling shales. It is a strong base that is extremely soluble in water and dissociates into potassium ( $K^+$ ) and hydroxyl (OH <sup>-</sup> ) ions in solution.	
Typical Physical Properties	Physical appearance	White pellet or flake
	Specific gravity	2.04
	Solubility in water	Soluble
Application	KOH is used to maintain or increase pH. Increasing pH with KOH precipitates magnesium ( $Mg^{2+}$ ) and suppresses calcium ( $Ca^{2+}$ ) in high-hardness waters like seawater, reduces corrosion, and neutralizes acid gases such as carbon dioxide ( $CO_2$ ) and hydrogen sulfide ( $H_2S$ ). It is used instead of caustic soda in inhibitive water-base fluids and drill-in fluids to reduce the sodium ion content and avoid dispersion of clays.	
	Typical concentrations range from 0.25 to 4 lb/bbl (0.7 to $11.4 \text{ kg/m}^3$ ) with treatments depending on water chemistry and type of drilling fluid. A higher concentration of KOH is required in seawater and waters containing buffering salts.	
Advantages	•Widely available and economical source of hydroxyl ions to control pH	
	<ul> <li>Concentrated chemical that is very effective at small treatment levels</li> </ul>	
	<ul> <li>Increases pH, which reduces corrosion of steel exposed to drilling fluids</li> </ul>	
	•Can be used in most water-base drilling fluids	
Limitations	In high-hardness brines such brines, KOH cannot be used cations that combine with hydrand Mg(OH) <sub>2</sub> .	as $CaCl_2$ and other naturally occurring mixed-salt to effectively raise the pH due to the high level of droxyl ions to precipitate hydroxides such as $Ca(OH)_2$
Toxicity and Handling	Handle as an industrial chemical, wearing protective equipment and observing the precautions described in the Material Safety Data Sheet (MSDS).	
	WARNING! Avoid exposure and handle only when fully protected.	
	KOH is an extremely alkaline material and can cause severe burns to eyes, skin and respiratory tract and can react violently with water or acids. Considerable heat energy is generated when KOH is mixed with water, and care should be taken when mixing. KOH should be added slowly to the mud system through a properly designed chemical barrel. Do not mix KOH with other chemicals or through the mud hopper. When using the chemical barrel, fill to the desired level with water, then add dry KOH.	
Packaging and Storage	KOH is packaged in multi-wall, paper sacks with plastic liners. Packing container sizes and types vary based on local area of purchase.	

Important Note: These suggestions and data are based on information we believe to be reliable. They are offered in good faith, but without guarantee, as conditions and method of use of our product are beyond our control. We recommend that the prospective user determine the suitability of our material and suggestions before adopting them on a commercial scale.

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Store in a dry area away from water and acids. Keep all containers sealed. Once a container is opened, it should be used immediately because KOH is hygroscopic and absorbs water from the air, which makes it more difficult to handle. KOH is corrosive to certain materials.

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