



SETH NANDRAM DAULATRAM BIYANI INDIA PVT. LTD.

# BROMINE DERIVATIVES

**CALCIUM BROMIDE, ZINC BROMIDE,  
& SODIUM BROMIDE**

*"Creating Chemistry between India and the World"*

# The Power Trio of Calcium, Zinc, & Sodium Bromide

In the ever changing world of oil and gas industry, the use of chemicals such as calcium, zinc, and sodium bromides has revamped the drilling process. These high-density drilling fluids are considered to be a technological leap in deep and high-pressure wells, outshining conventional muds in workover and completion operations.

## Calcium Bromide (CaBr<sub>2</sub>):

- Calcium bromide role is to serve as a thick salt, providing weight to drilling fluids while maintaining wellbore pressure stability.
- It is used during completion and workover operations to manage pressure, reduce clay swelling, and protect against corrosion.
- It is essential for preventing blowouts, ensuring smooth oil flow, and stabilising the wellbore, particularly in high-pressure environments.
- It reacts as a hydrophilic chemical (moisture absorption), exhibiting water solubility, and crystal formation at low temperatures, which improves fluid adaptability to various downhole conditions in the drilling sector.

## **Zinc Bromide( $\text{ZnBr}_2$ ):**

- Zinc bromide plays an important role as a concentrated, acidic salt, increasing fluid weight while providing heat resistance.
- Due to its excellent stability, it is commonly used in deep-sea and high-temperature drilling to seal wells for pressure maintenance and minimising formation damage.
- It plays a crucial part in sustaining and maintaining well safety in hostile environments, and guaranteeing efficient operation at high depths and temperatures.
- It shows corrosive reaction to certain metals, while interacts with strong oxidising agents, and decomposes when heated, all of which have an influence on the chemical dynamics of the drilling process.

## **Sodium Bromide ( $\text{NaBr}$ ):**

- Sodium bromide role is to increase fluid weight and balancing pressure as it is a concentrated and a neutral salt.
- It is Added to drilling fluids for overall density control, used for pressure management, and wellbore stability; and is critical in both the drilling and completion stages.
- It is up most essential for minimising well erosion, increasing drilling efficiency, and improving overall wellbore stability.
- It acts as a highly soluble in water, non-corrosive, with a lower density than calcium and zinc bromide, altering fluid dynamics and interactions inside.

# INDUSTRIAL APPLICATIONS



**OIL & GAS INDUSTRY**

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**WATER TREATMENT INDUSTRY**

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**CHEMICAL SYNTHESIS**

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**METALLURGY**

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**POWER INDUSTRY**

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**MERCURY-REMOVAL TREATMENT**

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# SPECIFICATION OVERVIEW SOLUTION

| PARAMETERS              | SPECIFICATIONS                       |                                      |                                      |
|-------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
|                         | CALCIUM<br>BROMIDE                   | ZINC<br>BROMIDE                      | SODIUM<br>BROMIDE                    |
| Appearance              | Clear transparent<br>Liquid solution | Clear transparent<br>Liquid solution | Clear transparent<br>Liquid solution |
| Assay                   | 52% min                              | 72% min                              | 40-46% min.                          |
| pH. (1% water solution) | 6.5 - 8                              | 5 - 7                                | 6.5 - 8                              |
| Chloride(Cl)            | 0.30% max                            | 1% max                               | 0.05% w/w                            |
| Heavy metals (Pb)       | 5 ppm max                            | 5 ppm max                            | 0.001%                               |
| Specific Gravity        | 1.7 gm/cm <sup>3</sup> min.          | 2.30 gm/cm <sup>3</sup> min.         | 1.50 gm/cm <sup>3</sup> min.         |
| Packing                 | 1700 kg. IBC                         | 1950 kg. IBC                         | 1500 kg. IBC                         |

- PACKING ALSO AVAILABLE IN DRUMS.



# SPECIFICATION OVERVIEW OF POWDER

| PARAMETER               | SPECIFICATIONS                 |                                |                                |
|-------------------------|--------------------------------|--------------------------------|--------------------------------|
|                         | CALCIUM<br>BROMIDE             | ZINC<br>BROMIDE                | SODIUM<br>BROMIDE              |
| Appearance              | White<br>Crystalline<br>Powder | White<br>crystalline<br>powder | White<br>crystalline<br>powder |
| Assay                   | 95% min.                       | 98% min.                       | 98.5% Min.                     |
| pH. (5% water solution) | 6.5 - 8.5                      | 4.0 - 6.0                      | 5.5 - 8.5                      |
| Chloride(Cl)            | 0.2% max.                      | 1.0% max.                      | 0.1% Max                       |
| Heavy metals (Pb)       | 50ppm max.                     | 50ppm max.                     | 50 ppm max.                    |
| Packing                 | 25 kg. Bags / Jumbo Bags       |                                |                                |



# ABOUT US

We are India's top Chemical Exporters and Suppliers of Organic and Inorganic Chemicals. We are well-known for our high-quality products and extremely competitive costs. Our company's products and services adhere to Internationally Accepted Standards. Our company is also ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018 certified.

SNDB targets India's potential as a major global chemical industry player, focusing on exporting and supplying chemicals under the slogan

**"Creating Chemistry between India and the World."**

The company aims to help India realize its potential and dominate 80% of global chemicals traded and utilized.



SNDB delivers Indian chemicals globally, focusing on quality, efficient logistics, and business excellence.



Our excellence is achieved through quality, knowledge, leadership, collaboration, personal development, and recognition.



SNDB values integrity, reliability, and customer-centricity, prioritizing honesty, quality, and meeting customer needs in all departments and operations.

# CONTACT US

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