

Technical Data Sheet (TDS)

1. Product Overview

- Product Name: Calcium Bromide
- English Name: Calcium Bromide
- CAS Number: 7789-41-5
- Formula: $\text{CaBr}_2 \cdot 2\text{H}_2\text{O}$
- Molecular Weight: 235.98 g/mol
- Product Characteristics: High-purity white crystalline granules, highly soluble in water, stable under normal conditions. Excellent performance as drilling fluid additive and refrigeration brine. Non-toxic in proper use.

2. Technical Specifications

Item	Specification
Appearance	White crystalline powder/granules
Purity ($\text{CaBr}_2 \cdot 2\text{H}_2\text{O}$)	$\geq 98.0\%$
Ca Content	17.0-18.0%
Br^- Content	79.0-80.0%
Moisture Content	$\leq 0.5\%$
Heavy Metals (Pb)	$\leq 0.001\%$
Iron (Fe)	$\leq 0.005\%$
Chloride (Cl^-)	$\leq 0.1\%$
Insoluble Matter in Water	$\leq 0.1\%$
pH Value (5% solution, 25°C)	6.0-8.0
Solubility (20°C)	≥ 120 g/100 mL (water)

3. Product Advantages

- High purity and consistent quality.
- Excellent solubility in water and brines.
- Stable thermal performance for high-temperature applications.
- Corrosion-inhibiting properties in drilling fluids.
- Cost-effective for industrial use.

4. Application Fields

- Oilfield Industry: Drilling fluid additive (density regulator, shale stabilizer).
- Refrigeration: Brine for industrial refrigeration systems (low freezing point).
- Pharmaceutical: Intermediate for sedatives and analgesics.
- Photography: Component of photographic emulsions.
- Other: Fire retardant, metalworking fluid additive, chemical synthesis.

5. Usage Methods

- Drilling Fluid: Add 10-50% (mass ratio) to drilling fluid; adjust density as needed.



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- Refrigeration Brine: Prepare 30-50% aqueous solution; circulate in refrigeration systems.
- Pharmaceutical Intermediate: Use in specified molar ratios for chemical synthesis.
- Optimal Conditions: Apply at -20°C to 100°C; avoid strong acids.

6. Packaging & Storage

- Packaging: 25 kg/bag (plastic-lined kraft bag), 50 kg/drum (HDPE), 1000 kg/IBC totes.
- Storage: Cool, dry, well-ventilated warehouse ($\leq 30^{\circ}\text{C}$); keep sealed.
- Shelf Life: 36 months (unopened).
- Transportation: Non-dangerous goods; avoid moisture, collision.

7. Safety & Protection

- Wear protective gloves and safety goggles during handling.
- Avoid skin/eye contact; rinse immediately if contact occurs.
- Do not ingest; seek medical advice if accidentally swallowed.
- Prevent release to waterways.

8. Quality Assurance

- Manufactured under ISO 9001 quality management system.
- Each batch accompanied by COA.
- Provide technical support for application and formulation.



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