

PRODUCTS TECHNICAL DATA

1. PRODUCT NAME : ME-DPTA Barium Sulfate Scale Remover

COMPOSITION / INFORMATION ON INGREDIENTS AND APPLICATIONS

ME-DPTA are proprietary manufactured dissolver solutions designed to remove high volumes of solid sulphate and carbonate solids from oil and gas down-hole and surface facilities. are high weight/volume dissolvers of barium and calcium compounds in their scale state whereas ME-DPTA dissolvers are more suitable for dissolving barium, strontium and calcium sulphate ,resulting from oil or water based mud deposition, The products react quicker in warm environments (> 40° C) but are largely not temperature dependent to reach depletion with normal reactions within 24 hours at elevated temperatures.

During the process of scale dissolving, the rock skeleton structure of the reservoir is not damaged, and the radius of scale dissolving can reach 2 ~ 5 meters. The corrosion rate of carbon steel, stainless steel, brass and red copper is less than 0.1g/(m² h). Since H⁺, Cl⁻, F⁻, S²⁻, SO₄²⁻ and PO₄³⁻ are not contained in scale dissolving agent, no secondary pollution will be generated after scale dissolving. 10% ME-DPTA + 2% pre-flush SOLVENT need to be mixed and dissolved before using.

Typical Dissolving Capabilities:

Chemical	BaSO ₄	SrSO ₄	CaSO ₄	CaCO ₃
ME-DPTA	71.5g/l (Raw)	43g/l (scale)	49g/l (scale)	71g/l (pure)

Physical And Chemical Properties

Items	Index
Appearance	White color powder
PH	>12
Boiling point	>100 °C
Melting point	<0 °C
Flashing point	N/A
Solubility (water)	Soluble
Density	1.25 to 1.45 on requirement



Application Case History

Barium Sulfate Scale Remover : ME-DPTA

CNPC Tarim Petroleum-- Tarim Basin, Qiankeshen Gas Field

Operator : CNPC Tarim Petroleum company

Gas well location: Qiankeshen gas Field of Kuqa Mountain in Tarim Basin,Xinjiang Province

Reservoir fractures developed in Qiankeshen gas Field of Kuqa Mountain in Tarim Basin. Due to the high formation pressure coefficient, barite is used to increase the density of the oil-base drilling fluid during the drilling process. Due to the development of fractures in the reservoir, the drill-in-fluid in the target formation was severely lost . The solid particles in the drill-in-fluid was penetrated into the crack under the action of positive differential pressure.After a long time of aging, barite and other solid phases are blocked, resulting in lower flow conductivity. The production of gas wells was pretty lower than the designed target,or even no production of gas Wells. The ME-DPTA was agreed to use trying to recover some of the buried perforations, design was a staged bullhead operation through a cement unit. The job design was based on staged displacements of ME-DPTA over three hour intervals in a “dissolve” – “wash” – “dissolve” sequence to induce removal of barite from the lower perforations and flowing through them as the chemical depleted. The final stage consisted of displacing the entire volumes into the formation and static soaking for 12 hours. The entire operation was completed in 26 hours.Within 24 hours of lifting, the well was producing 4.5 mmscfd, going up to 6 mmscfd within 96 hours and over 7 mmscfd after five days. The result was satisfied.

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