

NuFlo® DeScale 433

Technical Data Sheet Patent Pending

NuFlo® DeScale 433

Scale removal solution for calcium sulphate and barium sulphate.

Description:

NuFlo® DeScale 433 is highly concentrated; high strength scale remover. It is effective at removing Barium (BaSO_4), Calcium (CaSO_4), Magnesium (MgSO_4) and Strontium Sulphate (SrSO_4) scale from oil and gas applications including wells, perfs, pumps, rods, tubing, and pipelines.



NuFlo® DeScale 433 operates at a neutral pH and will not harm mild steel or galvanized surfaces, and eliminates other descale options that require extremes in pH to be effective. **NuFlo® DeScale 433** is also used to prevent the build-up of sulphate and other types of scale from forming due to its unique chelation ability keeping the salts soluble in the water phase. **NuFlo® DeScale 433** has been designed to have an extremely high thermal stability allowing for scale removal at temperatures as high as 550 °F, making it an excellent choice for steam flood operations. This one of a kind sulphate scale remover is only available from NuGenTec Oilfield Chemicals.

Product Benefits

- Dissolves scale on contact
- No corrosion issues
- Water based, non-regulated
- Easy disposal
- Little downtime
- No manned-entry
- Economical
- Patent pending

Physical Properties



NuFlo[®] DeScale 433

BULK DENSITY	9.32 #/gal
SPECIFIC GRAVITY @ 20 °C	1.118 g/cm ³
FREEZE/THAW STABLE	YES
THERMAL STABILITY in °F	Up to 550 °F
ODOR	MILD
FLASH POINT (°C)	NONE
SOLUBILITY IN WATER	Complete
MELTING POINT / FREEZING POINT	7 °C (45 °F)
BOILING POINT	>100 °C (212 °F)
pH	7.8
APPEARANCE and COLOR	Clear Colorless Liquid

Availability: 55-gallon, 275-gallon tote-bins, and bulk tankers.

Shipment: Non-Hazardous for transport via DOT, IMDG, and IATA.

Storage: Keep out of direct sunlight. Keep from freezing. Store between 40-120°F.

Disposal: Dispose of in accordance with local, state, and federal regulations.

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EMERGENCY OVERVIEW:

This product may cause serious damage to the eyes.

SAFETY:

Please make sure you have read and understand the product label and SDS before using this product. Use proper chemical hygiene when handling product. Wash thoroughly after handling. Observe label precautions. This product is classified and labeled according to the Globally Harmonized System (GHS).

About the Chemistry



NuFlo[®] DeScale 433 overcomes prior problems of other sulphate scale treatment chemistries by creating an inexpensive, effective metal sulphate scale treatment solution that is incredibly effective at dissolving metal sulphate scales such as barium sulphate, calcium sulphate, strontium sulphate and magnesium sulphate. NuFlo[®] DeScale 433 can be used at dilution and still be highly effective, especially on metal sulphate scales that are coated and/or interspersed with common organic deposits such as paraffins and asphaltenes. By using a proprietary dissolving chemistry with both polar and nonpolar solubility properties, and a synergistic blend of chelating agents, dispersants and wetting agents, NuFlo[®] DeScale 433 performs in the fastest, most efficient, and broadest applications of similar treatment chemistries to date.

NuFlo[®] DeScale 433 versus Traditional Treatment Methods

Product	Conc. (%)	pH	T (°C)	Volume (mls)	CaSO ₄ Dissolved (g)	Reaction Time Required (Mins, Secs.)
NuFlo [®] DeScale 433	20	7.8	80-85	50	6.0	12 minutes, 11 seconds
EDTA Na ₄ , 39%	100	> 11.5	80-85	50	6.0	47 minutes, 48 seconds
GLDA Na ₄ 38%	100	> 11.5	80-85	50	6.0	45 minutes, 12 seconds
K5DPTA, 40%	100	> 11.5	80-85	50	6.0	41 minutes, 33 seconds
HCl, 31%	100	< 1.0	80-85	50	6.0	No reaction in > 336 hours

NuFlo[®] DeScale 433 works to dissolve inorganic scale, while simultaneously penetrating and dissolving scale that is partially covered by organic deposits such as paraffins and asphaltenes. However, NuFlo[®] DeScale 433 works best when used on inorganic scale that has had organic deposits removed from their surfaces by NuGenTec Oilfield Chemicals' paraffin and asphaltene remover, NuFlo[®] 187, allowing for direct attack and dissolution of scale by NuFlo[®] DeScale 433.

Metal Sulphate Scale Treatment Method Using NuFlo[®] 187 and NuFlo[®] DeScale 433

- 1) Pretreatment of paraffin and asphaltene covered scale by NuFlo[®] 187.
 - a) Run NuFlo[®] 187 at dilution in diluent such as Diesel, or up to 100% by volume concentration.
 - b) Heat, recirculation and extended dwell times recommended, if possible.
- 2) Flush with fresh water to clear out dissolved hydrocarbons and to rinse scale surfaces, allowing for maximum effect of sulphate scale dissolution treatment by NuFlo[®] DeScale 433.
- 3) Treatment of metal sulphate scale with NuFlo[®] DeScale 433
 - a) Run NuFlo[®] DeScale 433 at dilution in fresh water diluent, or up to 50% by volume concentration.
 - b) Recommended to maintain temperatures of at least 70 °C, if possible.
 - c) Heat, recirculation, and extended dwell times recommended, if possible.

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