

DM – DEMULSIFIER

DM - DEMULSIFIER is a concentrated formulation, which is effective for a wide range of crudes & operations. Raw crude oil carries impurities like salt, bottom sediments, water, solids, etc. These impurities contribute to corrosion, heat exchanger fouling, choking catalyst deactivation and product degradation in refinery and other processes. In order to reduce these impurities in crude to the acceptable level for sale, fresh water is mixed thoroughly in it to form water in oil (W/O) emulsion. One of the most economical ways to separate water from the crude oil is by using **DM - Demulsifier**.

MECHANISM

DM - DEMULSIFIER are organic molecules, when mixed in crude oil at low concentration, they locate and adsorb at the interfaces of droplets in emulsion; Thus it significantly alters the physical properties of the interfaces and allows the dispersed droplets of the emulsion to coalesce into larger drops and settle out of the matrix.

ADVANTAGES

- ✓ Being a concentrated formulation, it is economical for transportation and handling.
- ✓ It can be used in wide range of crude and operation by optimizing its dilution and dosage. This helps in reducing storage of different types of demulsifiers for multiple types of crude and operations.
- ✓ It is easy to apply. Diluted solution can be dosed in pipeline to mix thoroughly in flowing crude. Small dosage in fresh water, which is added in crude for desalting, helps in faster separation of water from crude. .
- ✓ No major modification or installation of expensive operation unit is required to use the product.
- ✓ The requirement of heat and electrostatic fields to separate water can be avoided or minimized.
- ✓ Very low dosage.
- ✓ It is economical to use.
- ✓ Faster settling time helps in improving the production capacity.
- ✓ Due to high flash point of the material, it is safe to handle.

PROPERTIES

Type	:	Mixture of organic compounds
Color	:	Pale yellow
Specific Gravity	:	0.81 +/- 0.02 at 20 °C
Solubility	:	Poor in water, Soluble in organic solvents.
Flash Point	:	Above 100 °C

DIRECTION OF USE

- **DM – DEMULSIFIER is concentrated liquid, it is recommended to dilute** it in organic solvent like naphtha, etc. prior to mixing in crude. This helps to prevent localized concentration. Recommended starting dilution ratio: DM: Solvent = 1: 3. Dilution ratio can be optimized by trails for different types of crude and operations.
- As water in oil emulsion varies due to location, temperature, pH, etc., it is advisable to study bottle and centrifuge tests with **fresh crude sample** in lab to work out effective dosage before undertaking the field trials. Various trials may be required to optimize the effective dosage and dilution.
- It should be mixed thoroughly with crude. It should be ensured that diluted DM-DEMULSIFIER is dosed away from wall of the pipe and the flow of crude is turbulent (Non Laminar). It is recommended to use inline/ static mixer for proper mixing. Avoid high localized concentration, as it may lead to re-emulsion.
- Allow crude oil treated with diluted DM- DEMULSIFIER to settle for water to separate out.
- It is recommended to mix DM- DEMULSIFIER directly to the fresh water, which is added to crude for desalting. Dosage should be optimized by lab trials prior to application on field.

PACKING

DM - DEMULSIFIER is packed 208 Liters (55 gallons) in MS drums.

STORAGE

DM - DEMULSIFIER should be stored away from extreme heat. For best result, use it within 2 years.