



Tiam Earth Advanced Materials

Revision No.: 6.2

Revision Date: 20.04.2021

Document Code: TE-101-207

# Technical Datasheet

## OYSTER-SHELL F/M/C



[www.teamchem.co](http://www.teamchem.co)

### Description

Oyster-Shell F/M/C is a drilling fluid which is mostly composed of  $\text{CaCO}_3$ . Oyster-Shell F/M/C are used in drilling fluid industry as loss circulation material which can be used in productive formations due to its high solubility in HCl acid. Oyster-Shell is available in three size grades (fine, medium and coarse) and can be applied in different types of drilling fluids.

### Application

- Lost Circulation Material in Oil-based and Water-based muds
- Applicable in thief zones to minimize downhole loss
- Suitable for both reservoir and non-reservoir formation

### Advantages

- Effective LCM material
- Can be applied as a mixture with other types of LCMs such as CALCIUM CARBONATE F/M/C
- Applicable in fractured and vugular loss zones
- Environmentally benign.
- Compatible with both water-based and oil-based mud systems
- High acid solubility
- Wide particle size for optimizing the fractures with different widths
- Compatible with all salts
- Applicable in different range of pH (7 to 11)

### Limitations

- It has unwanted effects on rheological characteristics when added to the active circulating system, and it is better to be used as LCM pills.
- Medium and Coarse sizes may plug the bit nozzles in high concentrations

### Limitations

Dependent to severity of Losses, normal concentrations for Oyster-Shell F/M/C ranges from 5 to 50 lb/bbl (14-140  $\text{Kg/M}^3$ ) in LCM pills. It should be added slowly through rig hoppers. Treatments must be performed on an incremental basis to prevent any overtreatment and high rheological properties. In special conditions such as work-over wells or cavernous formations, up to 40 lb/bbl of Oyster-Shell F/M/C may be needed. It is better to pumped as LCM pills, and functions more efficiently when it is used with other type of LCMs such as Sized CALCIUM CARBONATE.

Before mixing and pumping any Oyster-Shell F/M/C, mud engineers must check size of material with company representative and MWD specialist to prevent any tool blocking in downhole.



### Typical Properties

Appearance	Off-white to gray granules
Specific Gravity	2.6-2.8
Solubility	Insoluble in water/oil/alcohol
Solubility in 15% HCL	Min 97%

Oyster-Shell F/M/C sizes are given in below table:

Mesh No	mm	Oyster-Shell F	Oyster-Shell M	Oyster-Shell C
		% retained/residue		
4	4.76	-	0	-
8	2.38	-	-	80 +/- 5
10	2	0	Min 75	-
40	0.42	Min 75	Min 98	Min 98
100	0.149	Min 98	-	-

### Packaging

Oyster-Shell F/M/C is available in 25 KG SXS.