

Microfine Cement KCM053

1. Introduction

ChanPlug is remedial treatment technology for well repairs or other well problems including casing or liner leaks, unsuccessful primary cementing job, top of cement, water production, depleted zones or high fluid loss.

KCM053 microfine cement is used in ChanPlug system to provide cement matrix in cement squeeze jobs. ChanPlug has the following advantages compared to conventional cement squeeze:

1. Low fluid loss and high resistance to dehydration
2. Low viscosity but better slurry stability
3. Low set cement permeability and better gas tightness.

4. Physical Properties and Hazards

Additive	Form	S.G.	Water Solubility	Melting/Flash Point (°C)	Health Hazard	Physical Hazard	pH
KCM053	Gray Powder	3.05-3.25	Hydratable	Not Combustible	Eyes, Inhalation	Dust	N/A

5. Chemical Properties and Application

KCM053 is hydratable matrix in ChanPlug system. It is used together with KCM016L or KCM028 and KCM044 for engineering design of ChanPlug squeeze treatment.

PETCem concept is also introduced in ChanPlug system to provide the particle-sizing advantages. KCM053 and KCM016L or KCM028 work as other particle groups in ChanPlug design.

KCM053 can be used at wide temperature and density ranges. But the application temperature for ChanPlug system is less than 200°F using KCM016L and 200-300°F if using KCM028/KCM044.

KCM053 properties varieties from batch to batch and strongly influence ChanPlug performance. It is critical to control KCM053 properties such as particle size and distribution and chemical composition. In addition, gelling tendency, cost, and availability of KCM053 should also be considered.

KCM002 might NOT be compatible with additives KCM016L/KCM028/KCM053 in ChanPlug systems. Laboratory testing is always required to confirm the compatibility of KCM053 with other additives before using ChanPlug systems.

6. Treatment

KCM053 is the framework material used in ChanPlug systems at concentration of 40-55vol%. For longer thickening time design, KCM029 is used together with KCM053 at VFR (volume fraction ratio) of 20/80.

7. Packaging

KCM053 is supplied in plastic-lining bags with net weight of 25 kg/sack.

It should be stored in shaded areas with good ventilation. Keep it away from high temperature, humidity, and direct sunlight.