

Plugging Agent KWC021

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.

Plugging agent KWC021 is a nano-to-micro sized material used in ChanPlug system together with gelling agent KWC020 to achieve the following technical performance of ChanPlug treatment:

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

2. Physical Properties and Hazards

Additive	Form	S.G.	Water Solubility	Melting/Flash Point (°C)	Health Hazard	Physical Hazard	pH
KWC021	Gray Powder	2.36-2.56	Insoluble	Not Combustible	Eyes, Inhalation	Dust	N/A

3. Chemical Properties and Application

KWC021 is nano-to-micro-sized material that can be added into ChanPlug systems to facilitate squeeze effectiveness and reduce the permeability of the gel matrix significantly. Particle sizing technology is introduced in ChanPlug system to enhance the squeeze and water control treatment effectiveness of ChanPlug system, and KWC021 works as mid-sized particles in the close-packing design.

The application temperature for ChanPlug system containing KWC020 and KWC021 is less than 200°F using low temperature fluid loss control agent and 200-300°F if using KWC030 and stabilizer KWC008.

4. Treatment

Typically, 2-10% by weight of KWC020 is good enough in ChanPlug treatment design. Optimized concentration should be determined by comprehensive lab tests.

5. Packaging

KWC021 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.