



Journal of Applicable Chemistry

2013, 2 (3): 605-613

(International Peer Reviewed Journal)



Preparation of Cross Linker Liquid Frac Concentration (XLFC-1B) with Different Hydrocarbons like Petrol, Diesel, Kerosene compatibility & Breaker Test by using oxidiser, breakers

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Received on 5th April and finalized on 20th April 2013.

ABSTRACT

We have been studied different hydrocarbons solvents like petrol, diesel and kerosene. The solute is a gumming agent, agro material while preparation of frac concentration need to mix suspending agents and the concentration should be in basic nature. Sodium bicarbonate is mixed in the concentration to maintain the pH. These frac concentrations are conformed with API standards. After the preparation of concentration we can prepare Gel with 7.5gpt (Gallon per thousand). The initial viscosity should be 26cp according API standards. The oxidative & breaker are used in this research project with the main objective to study on breaking pattern of fracturing fluid(i.e. guar gum polymer gel) as a function of time temperature and breaker concentration itself. Usually the gelling agents in fracturing fluids are guar gum derivatives such as hydroxyl propyl guar and carboxy methyl hydroxyl propyl guar (or) cellulose derivatives such as carboxyl methyl guar, hydroxyl ethyl cellulose, hydroxy propyl cellulose, xanthangum. So this study provides focuses on the way to mix the fracturing fluid, compositions of fracturing fluid and how to conduct Linear (gel) and breaker test the Linear gel that indicates the optimum linear gel concentration to produce good viscosity Linear gel and the break test gave the characteristics of the gel during degradation process and also the breaking time. Ammonium per sulphate (Ammonium peroxodisulphate) & J-134 used as oxidation purpose to break the gel gradually at particular static temperature. Degradation pattern observed from the break test showed that reduction in gel viscosity depends on time, temperature & breaker concentration. In this experiment used different types of hydrocarbon solvents. Observations from experiments revealed that small concentration of breaker provides rapid break compared to oxidative breakers.

Keywords: Degradation, Fracturing fluids, breaker powder, guarpolymergel, oxidative solid.
