

PROBLEM

Although the use of gel-type shaving creams (lubricants) is becoming more common, most consumers still prefer traditional foam-type products because of their rich, moist texture (feel) and their ease of application. Hence, suppliers of shaving products commonly test the relative qualities of new formulations in areas such as texture and ease of application using consumer test panels. However, convening test panels and interpreting the results are time-consuming.

SOLUTION

Controlled stress rheology which measures the deformation and flow of liquids and soft solids under a force (stress) provides the ability to rapidly obtain specific laboratory results which correlate directly with the results of consumer test panels. Figure 1, for example, compares the gross flow properties for two shaving foams (rated good and bad by consumer test panels) and a shaving gel. The higher shear

rate portion of the curves indicated that both the gel and good foam should be easier to apply than the bad foam. This result agreed well with the test panel report that the bad foam felt stiffer on the face. Figure 2 shows the creep curves for the three products. In creep, a constant stress is applied and the material's compliance is monitored with time. All three products exhibited some elastic recoil (recovery), but the good foam and the gel were more compliant. The shape of their curves indicates more viscous character than elastic, indicating that a film of the lubricant can more easily be applied to the skin without compromising the integrity of the lubricant layer. The lower compliance for the bad foam suggests that it should stand-up better on the hand after dispensing, resisting the effects of gravity.

For more information or to place an order, go to <http://www.tainstruments.com/> to locate your local sales office information.

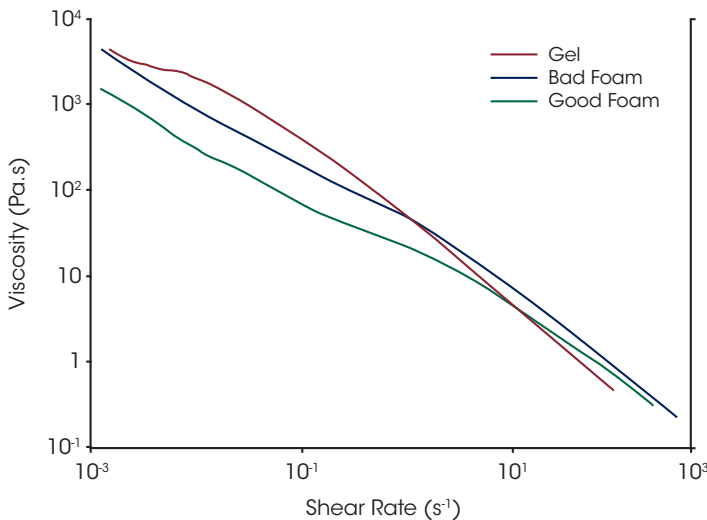


Figure 1: Comparison of Shaving Foams - Flow

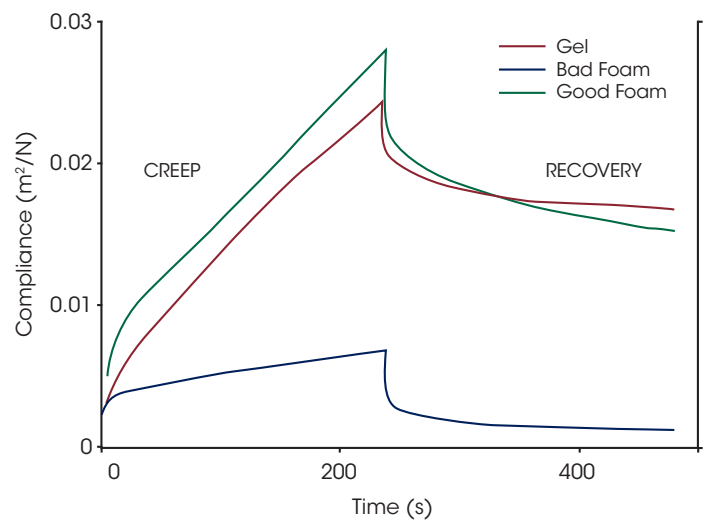


Figure 2: Comparison of Shaving Foams - Creep