

## **Effect of Chemical Solution on Creep and Impact Properties of The Polymer Composites Reinforced**

In this study, creep resistance and the impact property of the high-density polyethylene as a matrix reinforced glass fibers (glass fiber short , glass fiber woving roving, and glass fiber short + glass fiber woving roving ) for constant volume fraction 30%. These tests are carried out on samples at room temperature (23+3oC). A comparison was done between woven roven samples, random samples and sandwich composite samples which consist of (woven roven and random). Finally, the results show that the sandwich composite gives higher creep strength, while the composite reinforced with woven roven fiber has maximum impact values; before and after immersion of chemical solution (KOH – HCl - NaCO<sub>3</sub>, normality 0.5 ). Tests showed that the results of the values of each of the creep resistance and impact increases after immersion in chemical solutions, and that the solution KOH is more influential on creep resistance, and that the solution NaCO<sub>3</sub> is more influential impact resistance.