Creep Resistance of AURUM®

Within the range of accuracy for practical use, a product of metal can be generally designed on the assumption that they are isotropically elastic bodies. However, since plastics display a viscoelastic behavior even at room temperature in many cases, the creep resistance of the plastics becomes a very important item of evaluation in designing general products as well as products to be used primarily as substitutes for metal products.

AURUM® shows a high glass transition temperature (250°C). In this respect, AURUM® is considered to have an advantage over other engineering plastics, exhibiting excellent creep resistance even at high temperatures.

Fig. 1 shows a comparison of the creep resistance at 150°C of AURUM® and representative engineering plastics U polymer (glass transition temperature: 193°C) and PEEK (glass transition temperature: 143°C).

AURUM® has satisfactory creep resistance even under heavy load.

Furthermore, Fig. 2 shows changes in the creep resistance of fiber-reinforced resins. Fig. 2 suggests that the AURUM® resin reinforced with glass fiber or carbon fiber is suitable for those applications requiring very high creep resistance.
The information contained herein is based on the information and data available at this moment, but none of the data or evaluation results contained herein provide any warranty whatsoever.
Fig. 3  Tensile Creep Proper Resistance of JCN3030

![Tensile Creep Proper Resistance of JCN3030](image)

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