

1) Typically resins are soft. However, when we combine resin with a chemical known as a curing agent, however, a lot of heat is generated, and a lot of crosslinks develop between the linear chains of the resin polymer. Cured resin is the final hard product. It's really difficult due to the constant crosslinking.

When the restoring force is removed, the chains coil themselves and van der Waals forces are re-established. That's why they are so adaptable. Both are distinct due to the type of the crosslinking connections.

2) Specimen b doesn't have a yield region or a possible limit. There is just one point at which they will break. So, if we keep tension below the breaking point, they will revert to their previous shape and will not follow Hooke's rule. Specimen c, on the other hand, has a broad yield area and a proportional limit.