

Questions Answered - Adhesives

Q.1: What is an Adhesive?

An adhesive is a non-metallic substance which is capable, after changing from a liquid into a solid state, to bond materials together by means of adhesive-, and cohesive forces.

Q.2: Why sealant differs from adhesive?

The main difference between adhesives and sealants is that sealants typically have lower strength and higher elongation than do adhesives. Since the main objective of a sealant is to seal assemblies and joints, sealants need to have sufficient adhesion to the substrates and resistance to environmental conditions to remain bonded over the required life of the assembly. When sealants are used between substrates having different thermal coefficients of expansion or differing elongation under stress, they need to have adequate flexibility and elongation. Sealants generally contain inert filler material and are usually formulated with an elastomer to give the required flexibility and elongation. They usually have a paste consistency to allow filling of gaps between substrates. Low shrinkage after application is often required. Many adhesive technologies can be formulated into sealants.

Q.3: What is an ideal storage temperature?

The ideal storage temperature for all most of general type sealants, adhesives and PU foam is 5°C to 25°C.

Q.4: What is an ideal application temperature?

The ideal application temperature for all most of general type of sealants are 10°C to 35°C

Q.5: What is an open time?

The maximum amount of time that an applied adhesive can be exposed to air before joining the both substrates.

Q.6: Is an MS polymer paintable?

MS polymers are well-paintable with water-based paints except alkyd type paints. Remark: Paint is less flexible than a sealant. The paint will crack on joints with large movement.

Q.7: What is an Accelerated Ageing Test?

An Accelerated Ageing Test is a short-term test to simulate the effects of longer term service conditions.

Q.8: What is an adhesion promoter?

An adhesion promoter is a substance used in small proportions to increase the adhesion to specific substrates. Gorilla 696 Surface Activator is a liquid adhesion promoter which is applied with a cloth or tissue. After the evaporation of the solvent, the sealant can be applied within 4 hours.

Q.9: What is Adhesive Tensile Strength?

This is the force per surface unit (N/mm^2) required to bring an adhesive joint to the point of failure by means of an essentially uniform stress at right angles to the bond line.