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Tolerance of sealants with paints

FACTSHEET



GLOBAL LEADER IN ADHESIVE TECHNOLOGIES

Bostik is one of the largest adhesive and sealant companies. Worldwide, we employ some 6,000 people in 50 countries across five continents. Our customers come from diverse markets, most notably the industrial manufacturing, construction and consumer sectors.

SMART INNOVATIONS

Our smart identity is underpinned by innovation. We pursue innovation vigorously, applying the latest technological advances to developing 'smart' adhesives. Our archives are laden with examples of Bostik technologies that have disrupted markets - from potato starch-based wallpaper paste to elastic attachment adhesive for diapers.

Today, our commitment to innovation is as strong as ever. We innovate with our customers through a global R&D network, comprising three international Smart Technology Centres and 8 regional centres. And we differentiate our business through this investment.



Tolerance of sealants with paint

GENERAL INFORMATION

For this subject, tolerance of sealants with paint, we could have two situations.

- A. Sealants applied to a layer of paint
- B. Paint applied to a sealant joint

A. SEALANTS APPLIED TO A LAYER OF PAINT

For optimal results it is important that:

- 1. The paint is cured thoroughly.
- 2. The paint bonded well to the surface.
- 3. The painted layer is clean and dry
- 4. The sealant has bonded well to the paint
- 5. The sealant and the layer of paint tolerate each other

REMARKS

A1. Insufficiently cured paint layers can be weakened by applied sealant).

A2. The bonding of the paint to the surface must be stronger than the tensile strength of the sealant. Curing of freshly applied paint can take up to two weeks before it's fully cured.

A3. The paint surface must be dry. Remove any loose dirt. Degreasers must not affect the layer of paint. Sand with fine sand paper to obtain a clean surface. Sanding is not required for better bonding, and in some instances can have a negative effect.

A4 Layers of paint and coatings can be seen as plastics with varying compositions and properties. This can affect the bonding of sealant to paint. Although the behaviour of sealants to paint bonding is well known, in unknown situations a bonding test must be done before application.

A5. Certain sealants and paints are sensitive to plasticizer migration due to their composition, resulting in a tacky layer between both materials.

B. PAINT APPLIED TO SEALANTS

In this case the elastic sealant joint is painted over with a paint that is much less elastic. This can lead to too much pressure on the layer of paint when the joint deforms, creating cracks in the surface. Technically, it is not recommended to paint sealant joints. This refers to dilatation and movement joints where operation is so heavy that each layer



of paint will break. Glazing joints show cracked paint due to this phenomenon.

In building and construction there are two types of joints normally painted due to aesthetics:

1. Interior connection joints
2. Glazing joints

REMARKS

B1. Interior connection joints

These are mostly sealed with an acrylate dispersion sealant. This sealant can be painted with solvent and water borne paints. Within hours after the joint is sealed it can be painted, depending on product and variables. The sealant is not yet completely cured. While curing water evaporates from the sealant, making it shrink.

A layer of paint could crack, therefore it is recommended to paint only when the sealant is completely cured. Some paints, especially those based on dispersion, are not suitable for application to elastic joints. This is evident by the occurrence of crackle in the paint while curing. (Test before use).

B2. Glazing joints

With glazing joints the goal is to keep glazing windows air- and watertight. Where possible, movement between glass, window frame and glass beads needs to be absorbed by the sealant. These movements can occur due to bending of the glass under wind pressure, or variation of the moisture percentage in the wood. Painting is not required for the sealant to function well. However, for aesthetic reasons these joints are often painted. This always carries the risk of having a layer of paint unable to absorb movement, resulting in cracked paint. When painting the sealant joint the following points should be kept in mind, concerning tolerance of materials:

The overview shows products which tolerate each other:

		ACID SILICONE SEALANTS	NEUTRAL SILICONE SEALANTS	Bostik S950 GLASS' N' SEAL PUTTY SILICONE	Bostik H950 GLASS' N' SEAL PUTTY PREMIUM	ACRYLIC SEALANTS	Bostik H775 GLASS' N' SEAL PREMIUM PAINTABLE
X = Suitable							
0 = Limited suitable							
- = Not suitable							
Sealant applied to paint	Synthetic Paint	X	X	X	X	X	X
	Water Based Paint	X	X	X	X	X	X
Paint applied to sealant	Synthetic Paint	-1	-1	0	X	X	X
	Water Based Paint	-1	-1	-	X	X	X
	No paint	X	X	X	X	X	X

1: Paint flows away from the sealant surface

WARRANTY

Bostik warrants that the product complies, within its shelf life, to its specification. The liability shall in no case exceed the amount fixed in our Condition of Sale. In no event is Bostik liable for any kind of incidental or consequential damages whatsoever.

LIABILITY

All information supplied is the result of our tests and experience and is of general nature. They do not imply any liability. It is the responsibility of the user to verify by testing if the product is suitable for the application.

REMARKS

- Bostik H775 GLASS'N'SEAL PREMIUM PAINTABLE is the most universal of all glazing sealants, supporting both synthetic and water based paints.
- Bostik S950 GLASS'N'SEAL PUTTY SILICONE has limited paintability. When this silicone sealant will be painted, the bonding of the paint can only be judged after 3 to 4 weeks. Pre-testing of tolerance is advised.
- When using Bostik S950 GLASS'N'SEAL PUTTY SILICONE a clean application is required so no thin layers of sealant are smeared over the glass beads or window frame (On these thin layers paints can be sensitive to cracking).
- Elastic paints offer better results here.
- Hard layers of paint cannot cope with the movement of joints, creating cracks. This cracking of paint can also influence the bonding of the sealant itself.



- Certain paints can be released from the sealant surfaces during (forced) curing. No more bonding will take place.
- Bostik H775 GLASS'N'SEAL PREMIUM PAINTABLE is mostly smoothed with soapy water. Soapy residue should be removed with water or spirits if painting afterwards. To create a gooey layer with dispersion paint a minimum temperature of approximately + 7°C is required. At too low temperatures the paint can crack. This can occur in winter, as the surface of the sealants becomes the same temperature as the glass.
- The information in the technical bulletins is based on lab results and real experiences. Due to the wide variation of composition of paints and the development of different systems, no absolute advice can be given. For unknown paint systems we strongly advise a tolerance test before use. Bostik does not take any responsibility for paint ability as this is not part of the sealing process.

MORE INFORMATION

If you need more information, please contact your local Bostik Sales Representative.

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