

Sealant Compatibility with Sputtered LoE[®] Coatings

Certain sealants, as well as other components used in the fabrication of insulating glass units, have the potential to liberate semi-volatile compounds that can attack the silver layer(s) in sputtered LoE[®] coatings. This chemical attack can cause corrosion or spotting of the silver layers, even though the silver layers are protected with chemical and abrasion resistant coatings. Scratches and pinholes caused by normal handling, shipping, improper storage, and glass washing can reduce the effectiveness of the protective coatings which may result in LoE[®] coating corrosion.

Cardinal has successfully been producing LoE[®] IG products with a butyl primary seal, bent corners, and a silicone secondary seal without showing any

evidence of LoE[®] corrosion due to sealant incompatibility. However, if argon fill holes are in the spacer, unsealed corner keys are used without butyl coverage, or voids are present in the primary seal, there is the potential for having secondary sealant volatiles enter the airspace. Single seal systems, which liberate sulfur or chlorine, have been known to create LoE[®] spotting or corrosion failures within seal systems.

Cardinal will assist our coated glass customers with information concerning material compatibility, handling, washing, storage, and IG unit construction to help avoid sealant incompatibility. Material compatibility is the responsibility of the window manufacturer and is not covered by Cardinal's limited warranty.

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