

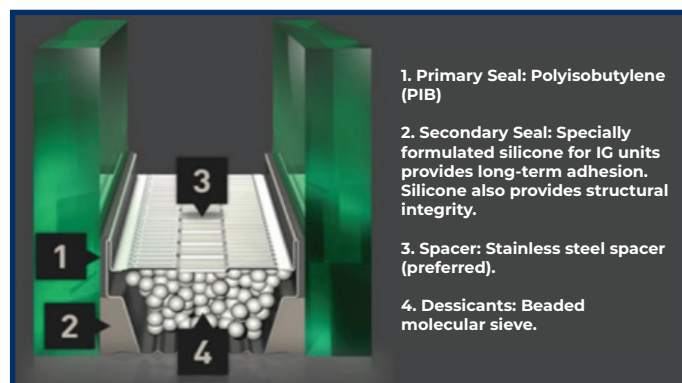


# Technical Bulletin

## Gray PIB Migration

From time to time, risk elements present themselves in the commercial glazing business, and we believe that it is helpful to address them. Litigation over the past several years has alleged significant defects in insulated glass units using gray polyisobutylene (or PIB) and is the subject of this technical bulletin.

Insulated glass units are made up of multiple glass panes, incorporating a combination of PIB and silicone sealant to hermetically seal the inert air or gas between the glazing. The PIB is the primary adhesive used to join the glass to the perimeter spacer.



The litigation has centered on the visible “drip” or “movement” of gray PIB within the airspace, which is visually objectionable, and many times can cause the overall failure of the unit. The PIB movement may occur so slowly over time that the issue will not be apparent until the insulated glass unit has left production and has been installed. Since the PIB is contained inside the insulated glass unit, it cannot be cleaned and therefore must be replaced.

According to research published by the engineering consulting firm of Wiss Janney



Elstner (WJE) Associates, the problems associated with PIB can result solely or primarily from normal exposure to sunlight, UV radiation, and/or heat. WJE also observed that the problems with PIB have occurred in only gray colored PIB.

It has been theorized that if the gray PIB adhesive is formulated improperly and the proper amount of UV stabilizer has not been provided, it could be the cause of this failure. Carbon black is a common UV stabilizer, so in sufficient quantities it maintains the stability of the PIB. The gray PIB is thought to require an additional stabilizer as the formulation has too low of a concentration to be an effective UV stabilizer on its own.

It is also possible that this problem could be created by the introduction of other materials or contaminants that migrate into the PIB. That migration could weaken the PIB and result in movement. That said, it is important to note that you cannot definitively determine the cause of PIB movement visually, as it requires expert analysis and interpretation of data to conclude the root cause.

We recommend that all projects that specify a gray PIB be addressed for these issues with the glass fabricator. We hope that you find this information useful and a tool for avoiding this concern.