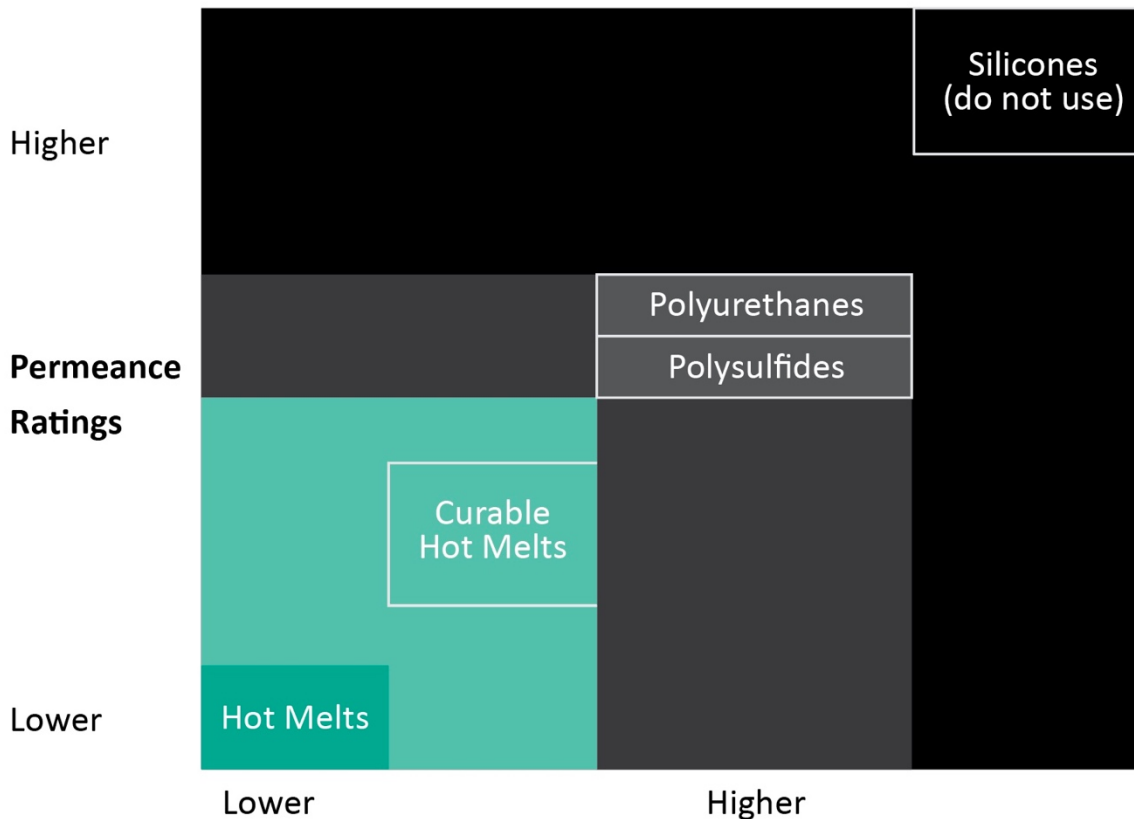


LISTED SECONDARY SEALANTS FOR USE OVER ENEREDGE® SPACER

In general, the applied secondary sealant has at least three major functions that should be considered when selecting a sealant type by polymer family; these functions are as follows:

1. Create a waterproofing barrier for the IG seal to resist contact with unplanned liquid water or waterborne contaminants.
2. Slow the diffusion rate of moisture in and fill-gas out across the secondary sealant depth.
 - a. Sealants with very low permeance ratings should be applied with 3/16" (4.8 mm) as the minimum recommended sealant depth.
 - b. Sealants with permeance ratings above ~3g/m²•24 hr generally demand a thicker inset (at or above 1/4" (6.4 mm) for the applied sealant depth), given higher gas diffusion rates, and may not in economical depths provide the resistance to diffusion as do those well below 3g/m²•24 hr.
3. Provide additional structure to the desiccated foam spacer/PSA/sealant system to resist compression, tension and shear forces that act on the IGU.
 - a. The last two functions of slowing diffusion through low permeability and augmenting the structure through sealant properties can be related and loosely generalized in the graphic below:

Tensile Strength Module




LISTED SECONDARY SEALANTS

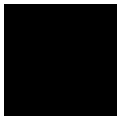
Determine which perimeter secondary sealants best suit your IG design and IG processing requirements:

- Obtain the sealant manufacturer's data sheets of candidate sealants under consideration.
- Verify IG design parameters intended with the sealant manufacturers technical resources.
- Validate through your normal certification testing cycle.
- Sealants certified in parallel use with this class of desiccated cellular spacers:


THERMOPLASTIC HOT MELTS:

- Tremco® EnerSEAL® 332 Hot Melt Butyl
 - Kommerling/Royal 2000, 3070HS & Kodimelt-IG
 - Bostik Edgestik™ 5000 & 5192G/5197B
 - CR Laurence CRL Hot Melt Butyl
 - Delchem D-130 Hot Melt Butyl
 - Fenzi NA Hotver 2000
 - HB Fuller Window HL-5130, 5140, 5145 & 5147; also HM 1081/1081A & 1191® Quanex IG Edgetherm THM 3000, 3100 & 3500
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THERMOSETTING/CURABLE HOT MELTS:

- Tremco® EnerSEAL® 340R
 - Bostik 9190 (reactive urethane single component)
 - Delchem D2000 (reactive hot melt butyl)
 - HB Fuller Window HL-5153 & 5160C (reactive hot melts)
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PLURAL-COMPONENT POLYSULFIDES:

- Kommerling/Royal GD116 & GD116NA
 - Delchem D-80
 - Fenzi NA Thiover®
- 

PLURAL-COMPONENT POLYURETHANES:

- Kommerling/Royal GD677NA
 - Bostik Edgestik™ 3190
 - Delchem D-90
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SILICONES AND OTHER INCOMPATIBLE SEALANTS:

- DO NOT USE: All Silicones, NEDEX PS 998
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Summarizing applied sealant selection, specifying a sealant with a low moisture vapor transmission rate, to be applied reliably and with sufficient depth to resist excessive elongation is our recommendation, and is the responsibility of the IGU fabricator.