

SAFE DRIVE AWAY TIME (SDAT)

DEFINING SDAT

The Australian Standards AS4739:2017 Direct glazed automotive glass replacement—Light vehicles lists that a direct glazing adhesive system shall meet or exceed the frontal impact test requirements of FMVSS 212 to establish safe drive away times.

The current FMVSS 212 standard refers to the windscreen mounting and therefore relates to the direct glazing adhesive.

DETERMINING SDAT

There are some assumptions and considerations that factor into a SDAT recommendation. Ambient temperatures during the application and curing of the one-part direct glazing adhesive can also affect the SDAT. Installers should always check with the adhesive supplier or the technical data sheet for the SDAT on the particular product they are using as not all products are the same. Usually, a direct glazing adhesive is not fully cured when the SDAT is achieved. However, it has developed a level of strength sufficient to meet the particular test standard requirement.

It is also important to note that achieving the required SDAT and weathering performance is reliant on the correct application of the adhesive to achieve an optimum bond.

The use of a properly shaped adhesive bead is critical when installing replacement auto glass.

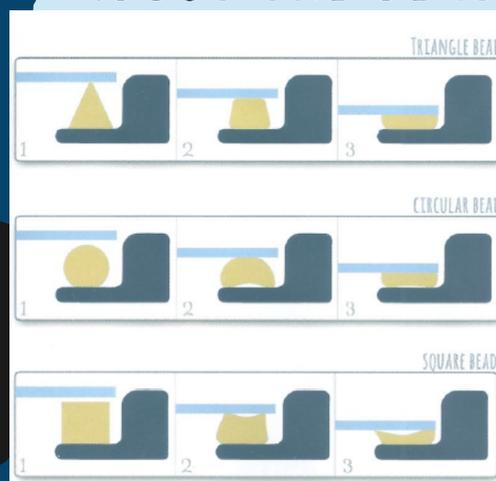
Most direct glazing adhesive manufacturers recommend the use of a triangular (V) bead because it is the only shape that guarantees no air bubbles can get trapped between the fresh adhesive and the glass or pinchweld when the glass is placed into the vehicle. As the glass is installed, the peak of the triangle is the first point of contact. As the glass is lowered into place, the top of the triangle is pushed down into the adhesive bead. This forces the top of the bead to bow out as the glass is lowered further. Since the adhesive is being pushed out from the centre, the contact moves from the centre to the final edge of the bead. Air is forced away from the bead and prevented from becoming trapped.

Also, many direct glazing adhesives are fast skinning and using a triangle (V) bead helps a lightly skinned product to break and optimise “wetting” of the DGA to the other substrate.

Square beads can present problems when the nozzle is cut poorly. If any dip is present in the centre of the bead, the outside edges will make contact with the glass or pinchweld first. This can create an air pocket that can result in leaks or adhesive failure in the event of a crash.

A similar problem exists with round beads. If the bead rolls as the glass is installed, or uneven pressure is placed on it, an outside edge can make contact with the bonding surface before the centre of the bead, creating air pockets.

ABOUT THE BEAD



IT'S IMPORTANT TO USE A RESPECTED DIRECT ADHESIVE SUPPLIERS' PRODUCT AND FOLLOW THEIR APPLICATION PROCEDURES AS THEY WILL HAVE PERFORMED A TREMENDOUS AMOUNT OF LAB TESTING, ENGINEERING AND CRASH TESTING TO VERIFY ITS SDAT RECOMMENDATIONS.

QUESTIONS?

The following questions should be asked and answered by the installer before starting a replacement:

- Do I understand the data that my supplier has provided?
- Am I clear on the airbags installed in the vehicle?
- Will the weather impact my process?
- Do I trust the published test certificate SDAT information that protects the safety of my customers and my business? Is the test certificate from the manufacturer and from an accredited test authority?