

Understanding why bond failures happen is the best way to minimize these occurrences. Many failures can be avoided by giving attention to each step in the bonding procedure. This can help identify if the issue is one of technique, which can be addressed in the practice.

Do you track bond failures? Tracking bond failures by date, bracket type, adhesive, tooth, patient, and staff member can provide information usable in troubleshooting.

If, after analyzing bonding technique, it is suspected that there is a product quality issue, please contact Customer Care immediately. Please include the following information: Bond failure by date, bracket type, adhesive used, primer used, LOT number, tooth, best office contact person.

Ensure that the light guide is clean and clear of residue or debris



Bond Failure Checklist:

- ☒ Have you confirmed your curing light's output?
 - Proper functioning includes light intensity, which can be influenced by cleanliness of any part of the light that allows the blue light to transmit. Regularly ensure that the light guide and its interface with the curing light have clean surfaces, test the light's intensity with a light meter.
- ☒ Is the curing time and light guide positioned consistent with the curing light's instructions?
 - Assuming your light is functioning properly, it is important to review the curing time requirements, light guide angulation and light guide position during curing to ensure the energy is being delivered to the adhesive.
 - Check Expiration Dates of adhesives and other products.
- ☒ Did the failure occur in the first 24 hours?
 - As resin bond strength improves within the first 24 hours, failures after this point are less likely to be errors in the bonding procedure.
- ☒ How many times did you reposition the bracket?
 - Studies show that brackets moved more than three times produce nearly double the bond failure rate.¹

*After eliminating the above variables, it is important to identify **"Where is the adhesive?"**.*

¹Murfitt, P.G., Quick, A.N., Swain, M.V., Herbison, G.P. A Randomised Clinical Trial to Investigate Bond Failure Rates Using a Self-Etching Primer. *European Journal of Orthodontics*. 2006; 28: 444-449.

Light-Cure Bond Failure Troubleshooting Flowchart (continued)

