

THE IMPOSSIBLE MADE POSSIBLE

John Bristow of Deluxe Materials introduces an adhesive that makes previously impossible gluing tasks now possible

words & photos » John Bristow

Epoxy & cyanoacrylate glues are extremely good products for conventional materials such as wood and metal but when it comes to bonding polyester or epoxy GRP and plastics these adhesives don't perform very well. For these materials a different type of product is needed.

Fusion is a unique high strength adhesive for the construction of and repairs to polyester and epoxy GRP, including carbon fibre and many hard plastics. It is tough and sets hard in 10 minutes, delivering extraordinary strength with a useful gap filling ability:



1 The Fusion kit contains powder, liquid, a measuring spoon for the powder and a pipette for dispensing the liquid in equal volumes, along with a mixing beaker and spatula.



2 Here you see 2ml of Fusion powder being dispensed into the beaker.



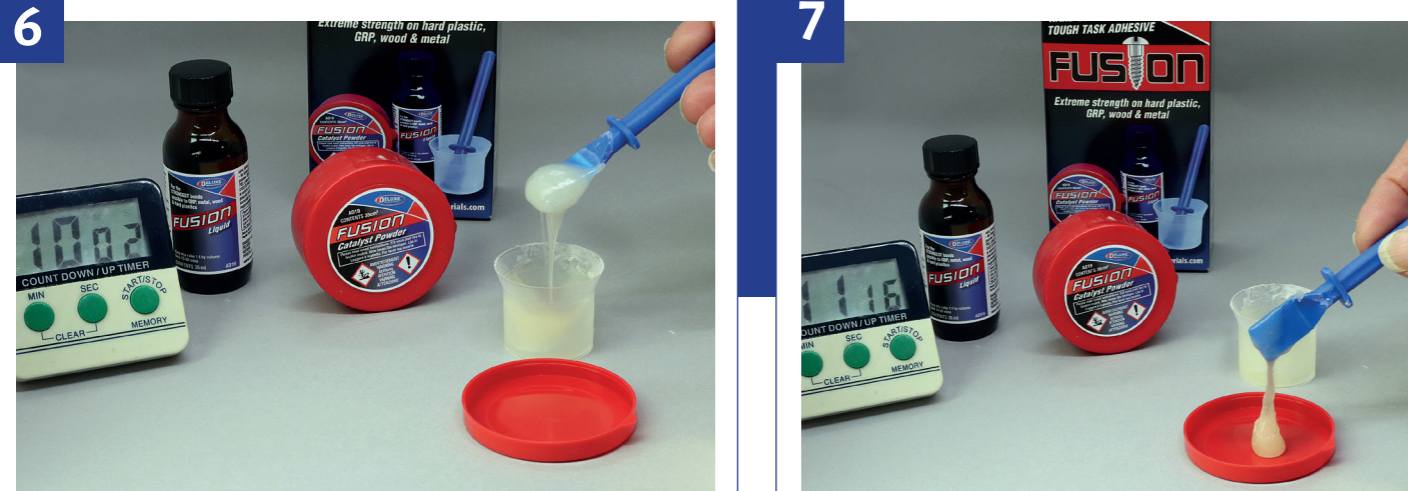
3 2 ml of Fusion liquid is added.



4 The mixture is stirred to wet out all the Fusion powder, which then slowly starts to dissolve into the liquid and catalyse the whole mixture.



5 The mixture then starts to slowly thicken over the next 10 minutes. As you can see here at 5 minutes it is still quite a runny liquid.



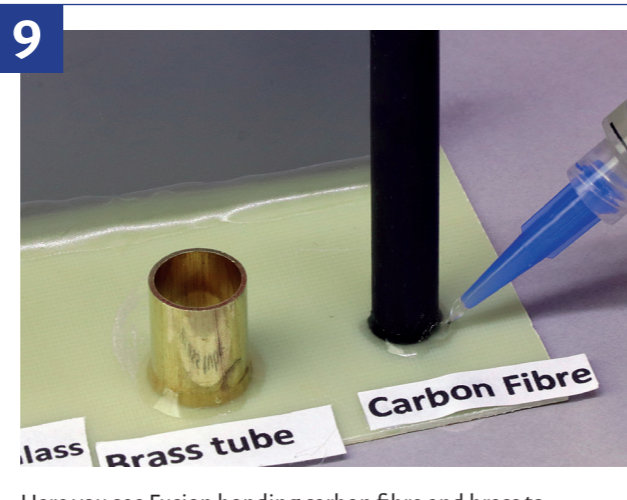
At 10 minutes it has become quite thick and it can be applied at any point.



At 11 minutes it's like soft toffee.



It can be applied to joints neatly using a syringe.



Here you see Fusion bonding carbon fibre and brass to composite epoxy glass fibre board.

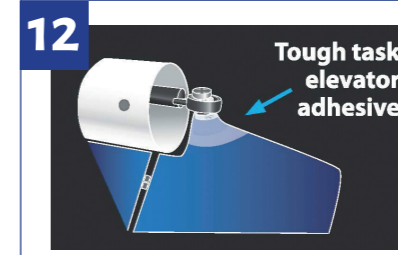


Fusion will bond hard plastics and many difficult to bond materials to both polyester and epoxy.

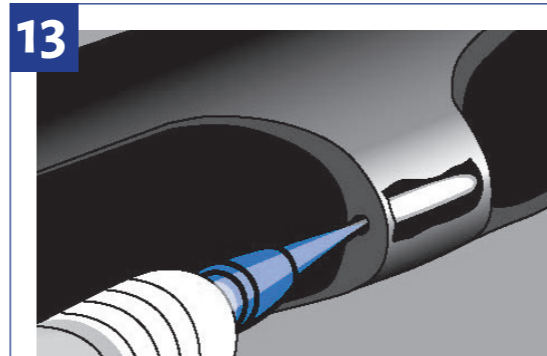
And here are a few ideas for its use where a repair is required:



Fusion to the rescue for a critical high stress engine mount bonded into a polyester GRP fuselage.



Fusion replaces lost material, such as this fractured elevator ball joint linkage.



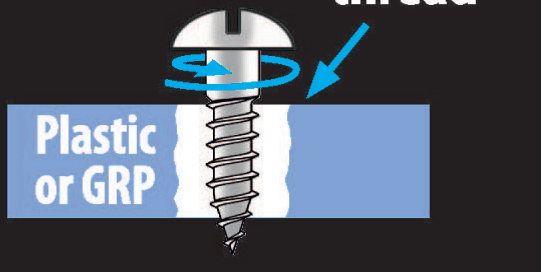
The hard adhesive character of Fusion fills a wrongly placed wing location hole, which can be re-drilled later in the right place. No loss of strength here!



The carbon fibre rod will not part company from the canopy if bonded with Fusion.

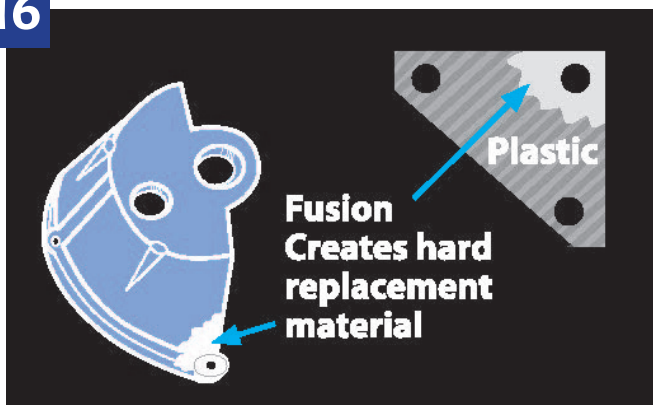
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Fusion repairs stripped thread



Stripped plastic GRP material is easily repaired with Fusion.

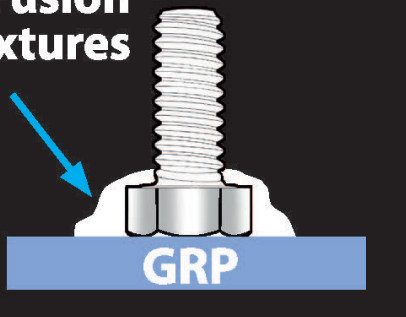
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Creating material that's been lost is also a possibility, especially for an emergency repair.

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Fusion Creates fixtures



Mounting fixtures are easily created too.

USER TIPS

- Support a joint being bonded with Fusion so it does not move as this will weaken the joint.
- Brush a little Fusion liquid onto dry surfaces to improve adhesion e.g., GRP.

Fusion may be a little expensive, but it can save parts that might be unobtainable. Its shelf life is at least 10 years so it will always be there when you need it.

Created by Deluxe Materials Ltd., Fusion costs £19.75 and is distributed by Ripmax Ltd. to all good model shops. In case of difficulty go to www.deluxematerials.com or telephone 01529 455 034. ✈️