

	Service Letter SL 72 R3	DO - No. EASA.21J.020
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Application of epoxy filler on natural composite blades

Background:

MT-Propeller's consumables CM-1 and CM-2 is used to

- fill porosities on the blade surface,
- fill trailing edge,
- fill tip edge and
- fill and smooth the transition between steel erosion protection sheath and blade surface.

Note: No filler is required for transition on blades with Nickel sheath, see E-1290

1 Scope:

This Service Letter describes the applicability of the **CM-1 and CM-2** and alternate materials on the blade. See also blade overhaul manual E-1290 for reference

2 Procedure:

The applicability of filler material is dependent from the blade location:

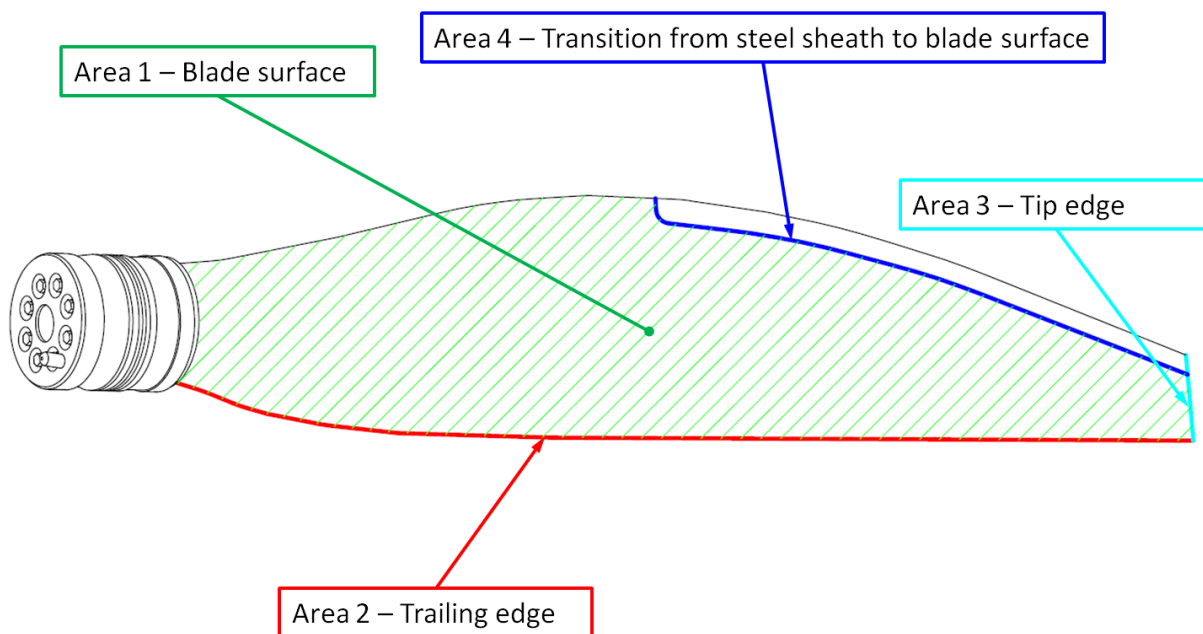
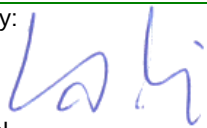
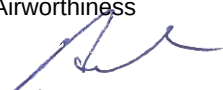


Figure 1: Definition of blade areas for filler epoxy material

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Application of filler material is dependent of blade area:

Area 1 (Blade surface):

- For filling air bubbles in the composite material up to 25 mm² (0.039 in²) in size:

Approved materials and process:

Cut the air bubble open and fill with one of the following materials:

CM 17-1 / CM 18-1 (Henkel Loctite EA 9359.3 AERO) or

CM 17-2 / 18-2 (3M EC 9323)

CM 1-1 / CM 2-1 (Henkel Loctite EA 9377 AERO) or 3M EC-7272

CM 3-1 / CM 4-1 (Henkel Loctite EA 9330 AERO)

- For filling air bubbles in the composite material over 25 mm² (0.039 in²) in size:

Approved materials and process:

Cut the air bubble open and sand the cut edges smooth, see Figure 2.

Spread CM 17-1 / CM 18-1 into the cut-out air bubble and place a ply of composite on top.

Ensure good saturation of the ply. Again apply CM 17-1 / CM 18-1 into the cut-open bubble and place a second ply on top.

If necessary a third ply can be applied the same way. Respect fiber orientation.

Take care not to embed additional air bubbles.

Ensure the filler material remains fixed in place until fully cured, e.g. with a strip of tape.

Let cure over night.

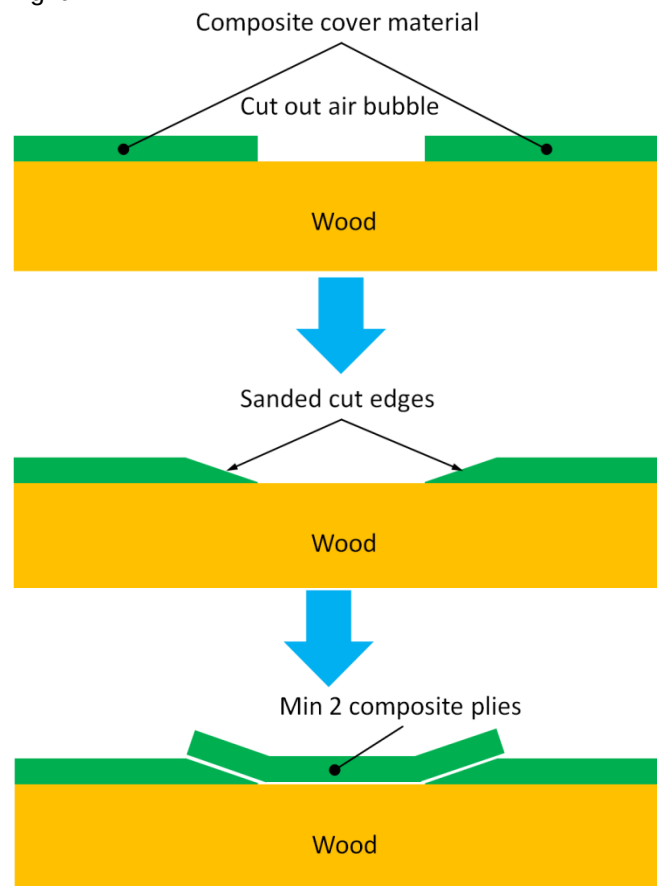


Figure 2: Filling air bubbles over 5mm size



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Area 2 (Trailing edge), Area 3 (Tip edge), Area 4 (Transition sheath to blade surface)

Approved materials:

CM 1 / 2, replaced by CM 1-2 / CM 2-2 respectively CM 1-3 / 2-3:

CM 1-2 / CM 2-2 (resoltech 3350 ECO (WHITE) + resoltech 3358T ECO (BLACK))

CM 1-3 / CM 1-3 (EPIKOTE™ MGSBPR135G3 + EPIKOTE™ MGSBPH1340G)

CM 1-1 / CM 2-1 (Henkel Loctite EA 9377 AERO) or
3M EC-7272

See blade overhaul manual E-1290 for reference

Note:

No application of filler is required for the transition from sheath to blade surface for blades with Nickel sheath.

Attention:

In order to avoid paint erosion, apply as less filler epoxy as possible on the steel erosion protection sheath.

3 Affected publications

E-1290 – Composite Blade Overhaul Manual