

AVEO ABSORA G1

Radar absorbing coating for carbon fibre composites and aluminum substrate

AVEO ABSORA G1 is a radar absorbing coating that enables substrate-driven frequency tuning across 4-18 GHz. The same coating delivers optimized absorption on both carbon fibre composite and metallic substrates, offering a lightweight and cost-effective solution for radar signature reduction.

Key Features

- Frequency tuning
- Single coating system for multiple platforms
- Enhanced microwave attenuation
- Broad applicability across aerospace, defence and industrial sectors
- Easy to apply without complicated set up
- Compatible with composite and metallic structures

Packaging

AVEO ABSORA G1 is available in the following standard pack sizes:

3 kg, 10 kg, 20 kg packs

Custom packaging sizes are available upon request

Process Recommendations

- Application method: Spray, Brush and roller.
- Recommended thickness 2.0-2.2 mm



AVEO ABSORA G1 coating

Reflection Loss Characteristics

Carbon Fibre Composite Substrate

- Enhanced absorption in the X-band region.
- Maximum attenuation of approximately -11 dB at 10.5 GHz.
- Broad absorption response between ~8 and 12 GHz.
- Secondary absorption region around 9.5-11.5 GHz, reflection loss ~ -6 to -10 dB
- Suitable for lightweight microwave-absorbing composite structures.

Aluminium Substrate

- Maximum attenuation of approximately -11 dB at 4.5 GHz.
- Strong substrate interaction at lower frequencies.
- Suitable where conductive backing layers are required.

Absorption Performance

Substrate	Peak RL (dB)	Peak Frequency (GHz)	Absorption (%)
Carbon Fibre	~ -11	~ 10.5	~92
Aluminium	~ -11	~ 4.5	~92

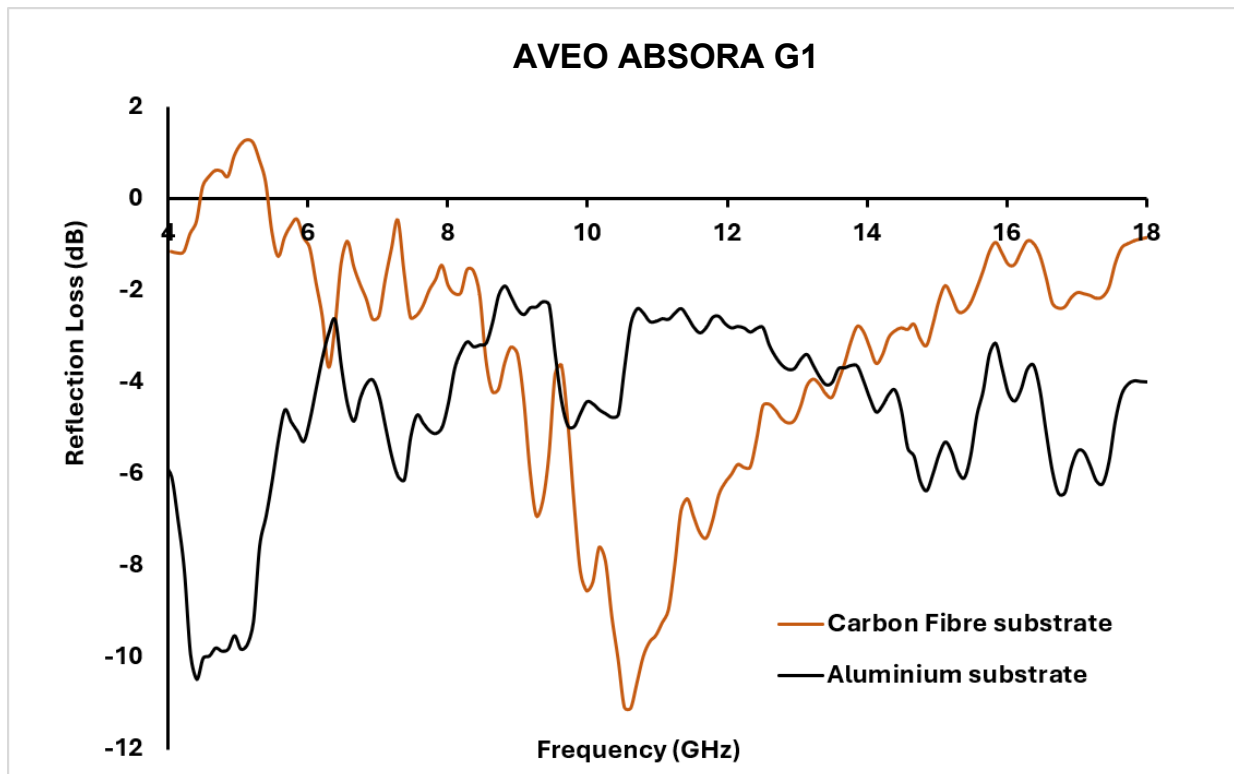


Figure 1. Reflection loss evaluated in C, X and Ku band for 2 mm AVEO ABSORA G1 coating on carbon fibre and Aluminium substrate.

Technical Process

Technical Specifications

Property	Specification
Base paint	Polyurethane + Hardener
Mixing relations Coating: Hardener	5:1
Appearance	Black Coating
Recommended Substrates	Carbon Fibres and metallic substrates
Application temperature	min. 5, max. 35 °C
Usage	10-12 m ² /l
Recommended dilution (If needed)	Thinner no. 3 (Article no. 30-558)
Usage time (After mixed with hardener)	Within 3 hours (20 °C)
Hardening time	3 days (For 2 mm thick coating)

How to Use

1. Stir the base paint thoroughly until homogeneous.
2. Transfer the required amount to a mixing container.
3. Add hardener at a 5:1 (paint: hardener) ratio.
4. Mix thoroughly until uniform.
5. Prime the metal surface for better adhesion
6. Apply by spray, brush or roller to a clean surface.
7. Build up coats to achieve a 2 mm total dry film thickness, checking thickness between coats and allowing recommended drying times.
8. Apply a topcoat if desired.

Note: Technical support will be provided to user on application of coating.