



Product Used

Pyrogel® 6350

Aerogel Provides Thermal Insulation and Fire Protection for Airplane Firewall

High performance, flame resistance of aerogel ideal for temperature barrier

Fabrication and Installation Partners

Aerogel Slovenia,
Polyformes

Challenges

- The insulation had to resist intensive open flame exposure (1100°C above ambient temperature) for at least 15 minutes.
- The cold side of the insulation could not reach higher than 150°C above ambient temperature.
- The insulation needed to be light weight and install quickly and easily for serial production purposes.

Aerogel Solution

- Pipistrel d.o.o. Ajdovscina developed a solution of encapsulated 6 mm **Pyrogel® 6350** with a self-adhesive cold side.
- The total thickness was just 7 mm.

Benefits

- Pyrogel was a cost-effective solution that met all performance and other challenges.
- The encapsulated solution was much lighter than conventional metal-sheet solutions.
- Its cold side has a much lower temperature than conventional metal-sheet solutions, critical for epoxy-reinforced fiber composite constructions.



Aerogel and firewall section during tests:

- 1100°C flame exposure for 15 minutes



Cold side temperatures (ambient temperature: 10°C):

- 138°C behind aerogel insulation
- 69°C inside firewall section



Thin, light weight encapsulated 6 mm Pyrogel with self-adhesive cold side



Aerogel firewalls were installed on (left to right): Pipistrel Taurus, Sinus, Virus