

## Cladding train carriages with SIMONA® PVC-CAW-FR



Top: carriages cladded inside with SIMONA® PVC-CAW-FR sheets; bottom left: manufacturing the coverings; bottom right: wall elements and dashboard in the driver's cab

On behalf of its customer MDC Research and Production Association, LLC, the Ukrainian company Factorial Ltd. was looking for a suitable material for the interior finish of passenger trains. Local regulations required this to have a long service life, be easy to work with and have a low level of flammability. Developed by SIMONA specifically for this field of application, SIMONA® PVC-CAW-FR sheets met all these requirements.

### The project at a glance

#### Project

Cladding the interior of locomotives and carriages with SIMONA® PVC-CAW-FR sheets

#### Requirements

- low flammability in accordance with GOST 12.1.044-89
- flame-retardant/low flame propagation index
- anti-smoke < 500 kg/m<sup>2</sup>
- good thermoforming properties and dimensional stability
- useful life > 12 years
- usable at temperatures between -40 and +60 °C
- high chemical resistance

#### Client

MDC Research and Production Association, LLC, Dnipro, Ukraine

#### Contractor

Factorial Ltd., Kharkiv, Ukraine

#### Technical support

SIMONA AG, Technical Service Centre

#### Products used

Embossed SIMONA® PVC-CAW-FR sheets, 3,000 x 1,500 x 3 and 4 mm, light grey and ivory

#### Project duration

6 months



SIMONA® PVC-CAW-FR sheets in situ: wall and surface coverings as well as cover elements in the locomotive and around the entrance to a carriage

## SIMONA® PVC-CAW-FR – Maximum safety for passenger services

### Initial situation

The increasing awareness of environmental and sustainability issues in society is also having an impact on modern passenger services. Taking the train, for instance, is becoming a genuine alternative to driving for more and more people. The number of person-kilometres travelled on the railways of the European Union has increased by over 10 per cent in total since 2005.

High-quality locomotives and carriages are needed in order to provide the growing number of passengers with a good service over the long term. These have to boast a winning design while also meeting all current safety requirements.

### Task

MDC Research and Production Association, LLC, from Ukraine commissioned the commercial enterprise Factorial Ltd. to source a suitable product for covering the walls and surfaces of new modular cabins for rail vehicles.

The main focus was on the safety properties of the material to be used. For instance, it had to comply with the low flammability requirements of Ukraine's GOST standard before it could be used in a passenger train. The product also had to be highly resistant and easy to thermoform and would ideally have a useful life of at least twelve years.

### Solution

Developed by SIMONA AG specially for this project, SIMONA® PVC-CAW-FR was identified as the perfect product solution.

Alongside outstanding thermoforming properties and long-lasting dimensional stability, the embossed sheets also offer excellent protection against scratches as well as being highly acid- and alkali-resistant. In addition, the products' durability means that it has the minimum useful life needed for the project, while the GOST approval for rail applications guarantees the material's low flammability.

In other words, SIMONA® PVC-CAW-FR is ideally suited for use in passenger trains and has already played a part in numerous projects in Eastern Europe since its launch.

#### SIMONA® PVC-CAW-FR

##### Properties

- low flammability in accordance with GOST 12.1.044-89
- flame-retardant
- good thermoforming properties and dimensional stability
- durable
- can be used at temperatures between -40 and +60 °C
- acid- and alkali-resistant
- easy to work with

##### Fields of application

- locomotive cabs
- carriages
- trams and metro carriages
- shipbuilding

##### Product range

- extruded sheets

### Further information

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