



TFL PROTEC PT

Where safety meets comfort

» Protects lives and property –
in transport and buildings



TFL – Great chemicals. Excellent advice.



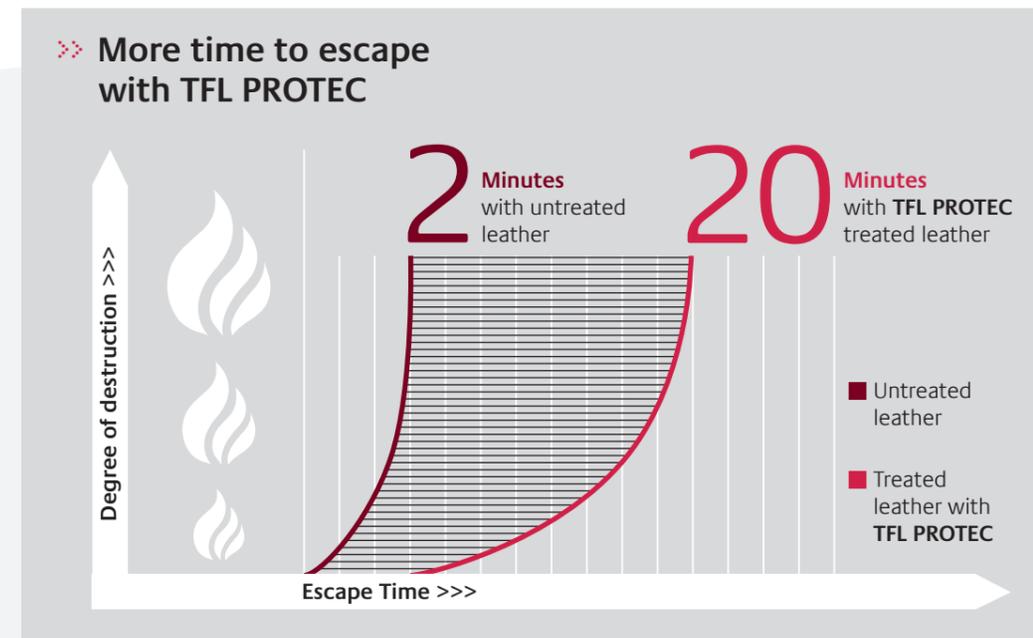
Where safety meets comfort

Protects lives and property

Leather offers a natural flame protection due to its unique insulating structure. Its inherent resistance to burning can be enhanced by the use of selected TFL wet-end and finishing products – the TFL PROTEC technology. Leather treated with this technology protects lives and property by preventing fires from starting or spreading. Furthermore, the TFL technology inhibits the formation of toxic gases which usually occurs during fire.

Increase time to escape fire

Leather treated with specialty chemicals from TFL PROTEC technology ignites less easily and the flame spread is significantly reduced. This adds life-saving minutes to the escape time. Flame retardants can thus make a decisive contribution to the fire safety of buildings, furniture, public transport and cars.

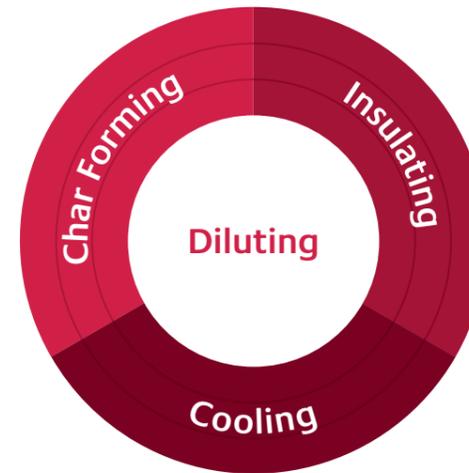


The chart above illustrates how the TFL PROTEC technology works.

It inhibits ignition and reduces combustibility particularly in the early stages of fire. This increases escape time and provides additional time to extinguish the fire.

How do flame retardants work?

Four working mechanisms compliment each other.



Diluting – main effect

SELLA® tec SAFE SD is diluting flammable gas concentration by releasing inert gases, which lowers ignition temperature, minimises heat spread and reduces smoke density.

Insulating – side effect

MAGNOPAL® IPF is providing air insulation throughout the leather cross-section, which minimises the heat spread considerably.

Cooling – side effect

TANNESCO® FC is releasing chemically bound water during decomposition, resulting in minimising heat spread and lowering ignition temperature.

Char forming – side effect

- RODA® tec B 02 in the base coat
 - SELLASOL® SF in the neutralising
 - CORIPOL® ALF in the fatliquoring
 - SELLATAN® GS-B liq. in the retanning
 - SELLASOL® FTF in the filling
- These products act as a protection shield against decomposition, consequently minimising heat spread and loss of weight.

Technology – benefits

- **Fire – Smoke – Toxicity**
- Flammability (Bunsen burner test JAR/FAR 25.853 a) with regards to burn length, flame time and flame time of drips
- Optical Smoke Density (Smoke density test JAR/FAR 25.853 c)
- Toxicity (Flaming & non-flaming mode AITM 3.0005) with regards to gas components of smoke
- **Ecology**
- Free from harmful substances restricted by EC regulations (Annex XIV and XVII of REACH)
- Free from substances of very high concern (candidate list of SVHC)



TFL PROTEC – makes our life safer

