

Fire Protection EN 45545

EN 45545 is a European standard mandatory for materials used in the manufacturing of rail vehicles. The goal of the standard is to protect rail travelers from fire on railway vehicles.

Operation Category	Description	Running Time	Minimum Average Speed
1	Vehicles for operation on infrastructure where railway vehicles may be stopped with minimum delay and where a safe area can always be reached immediately.	Vehicles may stop with minimum delay	Not Applicable
2	Vehicles for operation on underground sections, tunnels and/or elevated structures with side evacuation available and where there are stations or rescue stations that offer a place of safety to passengers reachable within a short running time.	4 min	80 km/h
3	Vehicles for operation on underground sections, tunnels and/or elevated structures with side evacuation available and where there are stations or rescue stations that offer a place of safety to passengers reachable within a long running time.	15 min	80 km/h
4	Vehicles for operation on underground sections, tunnels and/or elevated structures without side evacuation available and where there are stations or rescue stations that offer a place of safety to passengers reachable within a short running time.	4 min	No requirement

Operational Category

A: Vehicles forming part of an automatic train having no emergency trained staff on board

D: Double decked vehicles

S: Sleeping and couchette vehicles

N: All other vehicles (standard vehicles)

The operation category along with the design category gives the hazard level (HL1, HL2, HL3) which determines which of the material testing requirements set out in EN 45545-2 are applicable.

Operation Category	Design Category			
	N	A	D	S
	Standard Vehicles	Auto Vehicles	Double Decked Vehicles	Sleeping Vehicles
1	HL1	HL1	HL1	HL2
2	HL2	HL2	HL2	HL2
3	HL2	HL2	HL2	HL3
4	HL3	HL3	HL3	HL3