ISO/TR 24679-3:2015-08 (E)

Fire safety engineering - Performance of structure in fire - Part 3: Example of an open car park

Contents

Page

Foreword iv

Introduction v

1 Scope 1

2 Normative references 1

3 Terms and definitions 2

4 Design strategy for fire safety of structures 2

5 Quantification of the performance of structures in fire 2
5.1 Fire performance of structures -- Design process 2
5.2 Step 1: Scope of the project for fire safety of structures 2
5.2.1 Built environment characteristics 2
5.2.2 Fuel loads 4
5.2.3 Mechanical actions 5
5.3 Step 2: Identify objectives, functional requirements, and performance criteria for fire safety of structures 5
5.4 Step 3: Trial design plan for fire safety of structures 6
5.5 Step 4: Design fire scenarios and design fires 8
5.5.1 Design fire scenarios 8
5.5.2 Design fires (thermal actions) 10
5.6 Step 5: Thermal response of the structure 13
5.7 Step 6: Mechanical response of the structure 17
5.8 Step 7: Assessment against the fire safety objectives 22
5.9 Documentation of the design for fire safety of structures 22
5.10 Factors and influences to be considered in the quantification process 22

6 Guidance on use of engineering methods 22

Annex A (informative) Analysis of structural behaviour of open car parks 23

Annex B (informative) Views and plans of the open car park 38

Bibliography 41