



# BUILDING FIRE CODE

## I. Purpose

The Fire Code regulates the basic principles of securing fire protection in places where activities with an increased fire risk are carried out.

## II. A brief description of the activity performed and the fire hazard characteristics of the business being operated

From a structural point of view, it is a six-story brick building with one underground floor. The supporting structure of the building is a longitudinal three-stroke with side fields 4.2 m wide and a central corridor 1.8 m wide with two symmetrically arranged wings and a central staircase, which is connected to the main entrance on the mezzanine level and the secondary entrance from the parking lot on the 1st floor level.

Violation of the smoking ban, violation of technological discipline during repairs and maintenance of installed equipment, inattention when using electrical appliances by not following their operating instructions can be classified as real risks of fire. Hidden defects in the electrical installation, negligence or intentional ignition by a stranger cannot be ruled out either.

## III. Technical fire characteristics of the materials used, the maximum permissible amount of substances

**Paper:** paper is mainly composed of vegetable fibers (fibrous felt). If it is in a plump state, it can be done very easy to ignite. When processed into bales, bundles and rolls, it is not easily flammable and burns very badly under normal conditions. The danger is dust, which is explosive.

ignition temperature: 350 to 365

calorific value: 18 MJ.kg<sup>-1</sup>

°C bulk density: 0.85 kg.m<sup>-3</sup>

flash point: 240 °C auto-

burning temperature: 850 °C

ignition temperature: 110 °C

**Wood:** solid flammable substance; reaction to fire class E or F (soft wood), C or D (hard wood).

ignition temperature: approx. 375 to 400 °C

standard calorific value: 15 MJ.kg<sup>-1</sup>

bulk density: approx. 414 to 710 kg.m<sup>-3</sup>

auto-ignition temperature: 80 to 120 °C;

speed of fire spread: 1 m.min<sup>-1</sup>

annealing temperature: 295 to 305 °C;

**Plastics:** they are macromolecular organic compounds that were created by the transformation of organics of natural or man-made substances and behave plastically in a certain temperature range. They are materially represented both in the form of products and equipment, and as fibers and in the form of floor coverings. Thermal deformations at temperatures of 100 to 200 °C, melt and drip during burning, toxic combustion products.

**Fabrics, textiles:** combination of natural materials (linen, cotton, wool...) and artificial materials (polyamide, polyester, acetates...), which in the molten state burn intensively to form CO<sub>2</sub>, WHAT, NO<sub>x</sub> and NH<sub>3</sub>.

flash point: 440°C volumetric

calorific value: 22,600 kJ.kg<sup>-1</sup>

weight: 1,380 kg.m<sup>-3</sup>

weight of burnt substance: 1.10 kg.m<sup>-2</sup>.min<sup>-1</sup>

Recommended extinguishing agent: water with wetting agent, CO<sub>2</sub>, powder.

Due to the nature of the building, the limit quantity of substances is exhaustively determined by the normative values of accidental fire load p<sub>n</sub>.

## IV. Determination of fire safety conditions to prevent the occurrence and spread of fire or explosion followed by burning

Everyone is obliged to act in such a way as not to cause a fire, not to endanger the life and health of persons, animals and property; when fighting fires, natural disasters and other extraordinary events, he is obliged to provide adequate personal assistance.

The following principles are established to prevent the occurrence and spread of fire:

1. In the entire school building, smoking, handling open flames, unprofessional interventions in the electrical installation and entry of unauthorized persons are prohibited.
2. It is possible to carry out fire-hazardous activities only after predetermined fire safety conditions (work with an open flame, welding work, etc.).
3. Prohibition of storage of flammable liquids, pressure cylinders and other objects not related to the activity being carried out.
4. Prohibition of setting up spare electrical lines, lighting and removing protective covers from lighting fixtures.
5. Maintain permanently free access to portable fire extinguishers and other material means of fire protection.
6. At the end of the activity, ensure that the lighting and all electrical appliances located in the workplace are turned off.

#### **V. Definition and authorization of persons in ensuring fire safety conditions**

Everyone is obliged to follow the prohibitions and orders in the area of fire protection, in accordance with the provisions of legal standards and this fire code. Immediately remove any detected defect that threatens the fire safety of the building and, if this is not possible, report it immediately to the administrator of the building or the secretary of the institute.

#### **VI. Establishing the conditions for the safe stay and movement of people and the way to secure free escape routes**

Escape routes must not be blocked by material and objects that would hinder the free escape of people in the event of a fire. Portable fire extinguishers are available for initial intervention in case of fire.

#### **VII. Person responsible for fire protection in the building**

The following is responsible for fire protection: **Ing. Ivo Rehberger, Ph.D.**

## **Annex to the fire code**

#### **Name list of members of the preventive fire patrol and instructions for the activity of the preventive fire patrol**

The name list of members of the fire prevention patrol and instructions for the activity of the fire prevention patrol are given in Appendix No. 2 of the document "**Determination of the security organization of fire protection**".

#### **An overview of the location of warning and safety signs, physical means of fire protection and fire safety equipment**

##### **Safety signs:**

- main power switch + secondary switchboards on individual floors
- main water and gas shut-offs
- escape exit including direction of escape

##### **Material means of fire protection and fire safety equipment:**

- portable fire extinguishers, internal fire water supply HS D25/30 m
- emergency lighting, fire shutters, EPS, fire dampers

	<b>Name</b>	<b>Function</b>	<b>Date</b>	<b>Signature</b>
<b>Processed</b>	Ing. Martin Stocék	PPE in PO	1/9/2021	
<b>He approved</b>	prof. PhDr. Vladimíra Dvořáková, CSc.	director of the institute		