Fire protection systems for buildings: intumescent coatings and fire rated sealants.
Jacobo Perez Polaino

Sika helps you to protect your assets.

Fire protection is the study and practice of mitigating the unwanted effects of potentially destructive fires. It involves the study of the behaviour, compartmentalisation, suppression and investigation of fire and its related emergencies, as well as the research and development, production, testing and application of mitigating systems.

Fire protection in land-based buildings construction is typically achieved via all of the following:

- *Passive fire protection* - the installationof intumescent coatings, and fire rated sealant to form fire compartments intended to limit the spread of fire, high temperatures, and smoke.
- *Active fire protection* - manual and automatic detection and suppression of fires, such as fire sprinkler systems and (fire alarm) systems.

Sika provides a comprehensive product range of passive fire protection systems for fire resistant construction such us tunnels, commercial and residential buildings and steel structure especially. Intumescent coatings and specially designed sealant and backing material comply with the latest relevant standards. Sika solutions can be for inside and outside applications on various substrates and give the engineers freedom to connect different construction materials, fire proof them and enable interior designers to choose their preferred architectural fit out with on restrictions in regards to safety.

Steel structures are incombustible, but under the fire they can lose their load-bearing capacity. Sika Unitherm, a high performing intumescent coating, provides until 120 minutes of fire resistance against fire allowing active system specifically develop for in-shop application. Thermal energy of fire is absorbed and the thin coating expands into a micro porous foam layer that insulates steel surface from heat. In addition to that, Sika Unitherm protects steel from corrosion; product conforms with ISO 12944 standard.

Smoke and heat resulting from fire penetrates through openings and joints to adjacent rooms. Fire protection solutions from Sika seal penetrations and joints, preventing the spread of dangerous gases, smoke and fire. Sealed walls, floors and ceilings help to contain the fire in a smaller area, allowing longer period of evacuation as well as reducing damages in the building. Sika fire rated sealants comply with the most relevant standards (EN, UTAG, UL, ASTM).

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