

# CHAPTER 1 - VENTILATION AND AIR QUALITY

400

## 401.08 SEALING DOORS AND WINDOWS FRAMES



### INTENT

Prevent air leakages by proper sealing of doors and windows.

### REQUIREMENT

For all new buildings, doors and window frames on the building exteriors must be sealed from any openings. This must be with a nonflammable materials and with materials that prevent the transmission of air and sound that may occur as a result of difference in pressure across the exterior of the building. Insulation materials selected must be approved by the Dubai Municipality.

### SIGNIFICANCE

Doors and windows are critical components in building envelope. Gaps and leaks in door and window frames due to poor installation or improper design, leads to air leakages. Air leakages results in loss of conditioned air and uncomfortable thermal conditions in buildings. Energy consumption in the building also increases due to leakages. Also proper sealing keeps out contaminants and bacteria from the building.

Leakages can be prevented by proper sealing of door and window frames.

### APPLICABILITY

This regulation is applicable to all building types. Refer to Table 101.07(1) in Section One - Administration for detailed applicability levels.

### IMPLEMENTATION

Selection and installation of sealing materials is critical, to ensure proper sealing of door and window frames. Sealing materials must be nonflammable and be approved by Dubai Municipality. Selection of sealing material should be specified in design and installed in construction stage.

Most common types of sealants used for door and window frames are:

- Caulks
- Acrylic Latex
- Butyl Rubber
- Silicone Sealant
- Polyurethanes