Windows

Windows are an important category in ecological product selection. Prompted by the harmful environmental characteristics of PVC, the City of Vienna is steering clear of PVC windows. In life-cycle assessments, wooden windows come off best (followed by wood-aluminium windows).

When installing windows, care must be taken to avoid foams containing HFCs. The sealants used must not be oxime cure silicones or phthalate-containing acrylic or MS polymer sealants; moreover, care must be taken to ensure that the maximum permissible (S)VOC values are complied with.

Windows — requirements

The following notes are based on the position paper on the avoidance of organochlorine compounds and on Criteria Lists 08008 Wood and metal coatings and 08009 Flexible sealants; they also make reference to the services listed in Service Groups LG51 to LG55, as set out in the specifications for building construction. Service Group LG53 (Windows and French doors made of plastic) is not applicable, since PVC windows are currently the only windows available on the market.

Window materials

Assuming identical service life including maintenance work, comparisons of the life cycle analyses of generally available window materials (wood, wood-aluminium and PVC) show that wooden windows clearly come out top ahead of wood-aluminium windows. This is primarily due to the use of wood, which is a renewable resource. Thanks to the aluminium skin, the external surface of wood-aluminium windows is largely maintenance-free, which makes for an extra-long useful life. The key factor in ecological terms is to forego tropical timber as a window material. Only sustainable forestry products that have been awarded the FSC (Forest Stewardship Council) seal are exempt from this rule.

For both ecological and technical reasons, PVC avoidance also applies to sealants: the (noxious) plasticisers contained in soft PVC can migrate into the coating, softening it and rendering it permanently sticky.

Window installation — use of chemicals

The use of PU bonding foams must be limited to HFC-free products. When using sealants (silicones, acrylic sealants, MS polymer (modified silane polymer — “MS hybrid”) sealants, care must be taken to avoid solvents and to rule out noxious plasticisers (especially phthalates) as well as other substances harmful to human health and the environment.

When choosing a coating system, compatibility with the base should be ensured by opting for a suitable product (block-resistant water-based paint) or by mounting a sealing lip. Two painted surfaces are block-resistant if they do not stick together when tightly compressed. This is a crucial point when choosing window paints. Coats of paint and priming coats need to conform to the requirements of Criteria List 08016 for surface coatings (especially as regards maximum permissible VOC and SVOC content). Anti-corrosion coatings that contain lead or chromium are not acceptable.

→ For further information, see “ÖkoKauf Wien” information sheets “Window Renovation”, “VOCs”, “PVC”, “Tropical Timber”, “HFCs”, “Heavy metals”, and “Biocides”