Building construction

In the context of building construction special attention needs to be paid to —

- avoiding plastics containing organochlorines (especially PVC)
- excluding HFCs (XPS boards, PU installation foams, PUR hard foams)
- avoiding materials harmful to health (especially in flexible sealants)
- and minimising the use of solvents (bituminous primers, paints, etc.)

Avoiding PVC

Owing to its numerous negative effects on the environment, organochlorine plastic has been declared undesirable under the “ÖkoKauf Wien” programme, whenever technical alternatives are available.

Main fields of application of PVC in building construction:
- Hard PVC: plastic pipes, electric ducts, spacers, etc.
- Soft PVC: coverings, foils and films, gaskets, vinyl wallpaper

Excluding HFCs

HFCs (partly fluorinated hydrocarbons) with their toxic effects on the climate are subject to a wholesale ban on “ÖkoKauf Wien” building sites. Austria has banned these substances in PUR hard-foam panels, flexible PU foams and XPS boards up to a thickness of 8 cm, though licensed exceptions may be granted. There are practically no restrictions on aerosol cans; the only exception are PU installation foams, which rarely contain HFCs. HFCs are still admissible in XPS boards of more than 8 cm thickness. EPS and vacuum insulation panels (= EPS panels with the characteristics of XPS boards) are HFC-free on principle — and hence need not be tested.

Avoiding materials that are harmful to health

While curing, silicones invariably release substances that are more or less injurious to health. Whereas acetic acid (especially from sanitary silicone — handle with care: do not inhale; thoroughly ventilate rooms!) and alcohols (alkoxy cure silicones) are relatively harmless, the substances released from (neutral) oxime cure or (base) amine cure silicones have a pronounced injurious effect on human health.

While acrylic sealants do not release any substances, they contain relatively high amounts of extender oils (plasticiser). Phthalates, which are frequently used, are pseudo-hormones that even in low concentrations can seriously compromise the fertility of both humans and water organisms and, being high-boiling substances, contaminate the indoor air for long periods of time, putting users at risk.

Avoiding solvents

Volatile organic substances are contained in a large number of construction materials. Foremost among them are

- bitumen and other waterproofing coatings
- coatings of all types
- formwork oil

The minimisation requirement applies as a matter of principle: This implies that a product containing markedly less VOC (solvent) must invariably be preferred to a product with a markedly higher VOC content. In addition there are mandatory “ÖkoKauf Wien” criteria regarding the maximum permissible VOC content of a whole range of product groups (paints, varnishes, concrete and screed coatings, intumescent paints, etc.).