

# **NK Windows - Health Benefits of PVC Systems**

Date: August 2016

Your choice of window frame material and glazing affect the health of you and your family.

#### There are many variables

Health aspects to be aware of when considering an investment in windows and doors are: behavioural properties of frame material; profile design; thermal spacers; glazing and ability to ventilate.

#### Modern uPVC

NK Windows partner with German-based Aluplast GmbH for uPVC profile systems. They are world-leaders in the field and focus solely on uPVC for window and door systems. Their products are used around the globe. We design and manufacture windows and doors to your exact specifications in Christchurch.



uPVC is hygienic, does not emit gases and its natural thermal resistance out performs all aluminium options by a considerable margin. EECA state that uPVC windows provide twice as much thermal resistance compared to thermally broken aluminium frames<sup>1</sup>.

Other thermal resistance characteristics of our window and door systems, such as: 5-chamber profiles; use of warm

edge spacers as standard; argon gas; Low E glass options and twin seals all contribute to a warmer, dryer and therefore healthier home.

## A warm home is a healthy home

The World Health Organization (WHO) recommends a room temperature of 18 deg C, or 20 deg C if children, older people, or people who are unwell are in the home. Keeping bedrooms warm at night (minimum 18 deg C) is particularly important to protect lung health and prevent hospital admissions for illnesses such as asthma, bronchitis, pneumonia and rheumatic fever. uPVC systems from NK Windows fitted with optimal glazing will unquestionably provide a warmer and healthier home. With market-leading R-values of 0.77, not only does internally generated warmth stay in the house but energy costs decrease and the feeling of comfort increases greatly.

## Help eliminate condensation

Warmer internal window frame and glass surface temperatures mean condensation is much less likely to form. Given good ventilation practices and smart glazing choices, condensation will not form on uPVC windows. This in turn eliminates the opportunity for mould to grow and release dangerous spores. uPVC provides a healthier and safer home.

# Smart ventilation provides fresh air

Tilt and turn windows and doors in tilt-position provide the opportunity for secure street-level gentle ventilation to provide fresh healthy air. Additionally, tilt and turn windows and doors provide the opportunity for quick ventilation in the turn-position.

l Source: www.energywise.govt.nz/at-home/windows/double-glazing/



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#### Non-toxic uPVC

uPVC profiles are not composed of chemicals considered harmful to the environment, do not emit any gases, are easy to clean, hygienic and non-porous. Additionally, our PVC profile partner, Aluplast, is compliant with the latest Environmental Product Declaration (EPD) according to the DIN ISO 14025.

## Health of the planet

Viewed across its life cycle, PVC is highly competitive in terms of its environmental impact. Several recent ecoefficiency and Life Cycle Assessment (LCA) studies on the most common applications show that, in terms of energy requirements and GWP (Global Warming Potential), PVC is at least equal to alternative products. In many cases, it shows advantages both in terms of total energy consumption and lower  $CO_2$  emissions.

uPVC does not contribute to deforestation or habitat destruction unlike timber windows and nor do they require regular maintenance using very environmentally unfriendly chemicals.

PVC is highly recyclable and our German partner Aluplast uses recycled material in the internal chambers of the profiles we source from them.



Tilt and turn windows are great for secure gentle ventilation