

# Durability

## Chemical resistance

GRP is resistant against solvents, plasticisers, fuel, mineral oil, diluted acids and alkalis: moreover against the influence of exhaust gases or aggressive industrial atmosphere.

This is only an extract of the substance table – upon request you can get information about further resistances.

Substances (selection, more upon request)	Concentration	Resistance at 20-30 °C
Acetone		○ ○
Ammoniac		● ● ●
Petrol		● ● ●
Grease		● ● ●
Formaldehyde		○ ○
Ocean water		● ● ●
Lactic acid		○ ○
Mineral oil		● ● ●
Sodium Chloride	saturated	● ● ●
Phosphoric acid	10 % aqueous diluted	● ● ●
Turpentine		○ ○
Citric acid		● ● ●

● ● ● resistant    ○ ○ conditionally resistant

## Further properties

Electrical conductivity	10e -12 S/m
Microbial inertness	certified according to standards VDI 6022
Erosion and emission of particles	certified according to EN 13401

## Temperature resistance

PUR rigid foam is characterized by high mechanical strength and good dimensional stability in the building industry for temperature ranges from -40 to +60°C (long-term capacity). A short-term capacity up to +80°C is possible.

## Organic resistance

PUR rigid foam does not rot, is mould- and decay resistant and physiologically harmless for the applications coming into question. Polyurethane rigid foam reacts chemically neutral.

## Thermal expansion behaviour

Length change = expansion coefficient x initial length x temperature change

Example:

Expansion coefficient Ventaflex duct = 0,00005 1/K  
 Initial length = 1000 mm  
 Temperature change = 20 K  
**0,00005 1/K x 1000 mm x 20 K = 1 mm**

**Expansion 1mm per 1m duct length at 20 °C temperature change**