

# SIGRATHERM® foil and sheets

## Product shelf life

Flexible graphite is made from natural graphite. It is produced by SGL Carbon in Germany and the US in the form of foil on rolls or sheets. From the beginning of the 1970s foil and sheets made by SGL Carbon have become well-established in a wide variety of applications. Materials and products for thermal management applications are marketed worldwide under the trademark SIGRATHERM.

Graphite is one modification of carbon. Its crystal structure consists of planar hexagonal layers of carbon atoms. Graphite is the most stable form of carbon under standard conditions. A transformation into any other modification or form of carbon [e. g. diamond, amorphous carbon] could only be achieved with extremely high energy expenditure [temperature, pressure]. For this reason, graphite with a purity of > 95% shows no physical aging effect. Furthermore, due to the absence of any binders or fillers, no additional degradation effects can be observed.



↑ SIGRATHERM graphite foil



↑ SIGRATHERM L graphite lightweight board

SIGRATHERM foil or sheets should be stored in a dry place at a temperature between  $-100\text{ }^{\circ}\text{C}$  to  $+100\text{ }^{\circ}\text{C}$  [ $-150\text{ }^{\circ}\text{F}$  to  $+200\text{ }^{\circ}\text{F}$ ] and protected from dirt and damage. If the material becomes wet during storage, it needs to be dried before use. If stored below  $0\text{ }^{\circ}\text{C}$  [ $32\text{ }^{\circ}\text{F}$ ] the humidity level should be reasonable to avoid the build-up of ice, which could theoretically damage the structure of the material. Conditions that allow the growth of mildew should be avoided. Sunlight has no negative effect on the material properties.

The same is valid for adhesive bonded SIGRATHERM, e. g. if the graphite material was laminated to a fleece (non woven), with the limitation that adhesive bonded material could delaminate depending on temperature or moisture content or after several years due to aging. Therefore we recommend that laminated material should be stored at room temperature at a reasonable humidity.

