

2005/2006

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Two new SIGRAFLEX® graphite sheet products: Launch of the UNIVERSAL PRO and HOCHDRUCK PRO product variants for TA Luft applications

Since industrialization in the 19th century, the environment has been increasingly burdened - by pollutants and noise. For this reason, regulations on keeping the air and other environmental media clean and protecting against noise were already enacted in Germany, among other countries, at that time. Over the years, these regulations have been continuously developed and supplemented by additional requirements.

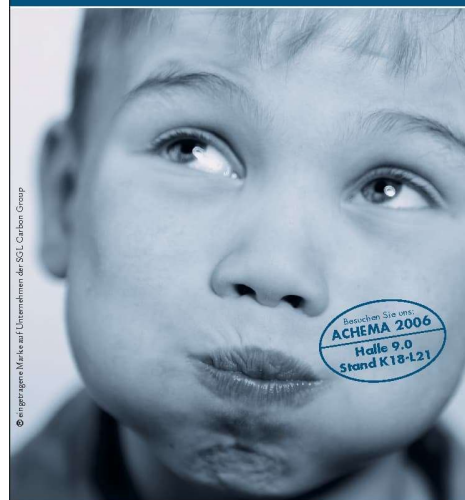
In 1964 e. g. the "First General Administrative Regulation on the Federal Immission Control Act", short Technical Instructions on Air Quality Control or German Clean Air Act (TA Luft), came into force. Currently, the scope of application of the TA Luft covers more than 50,000 facilities in Germany that require a permit.

Since then, the TA Luft has been amended several times, always in connection with a tightening of the immission requirements, i. e. the limit values for pollutants that may be discharged into the air. The new version of TA Luft in 2002 posed a particular challenge to the producers of sealing materials, as the emission limits were significantly reduced.

The SIGRAFLEX Research & Development department in Meitingen worked very intensively on improving the leak tightness of SIGRAFLEX sheet products in order to be able to offer customers materials that also met the requirements of the new TA Luft. And finally with great success: In 2003, SGL Carbon first launched the new adhesive-free and TA Luft-compliant graphite gasket SIGRAFLEX SELECT.

This was followed just two years later by SIGRAFLEX UNIVERSAL PRO, a further development of the proven UNIVERSAL sheet, and finally in 2006 by HOCHDRUCK PRO. "PRO" stands for TA Luft compliance, which is achieved by a special impregnation resin. The development work on the PRO variants had been led by Jürgen Bacher and Oswin Öttinger.

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Advertisement „Under pressure? We keep tight!“,
SIGRAFLEX UNIVERSAL PRO and HOCHDRUCK PRO

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UNIVERSAL PRO was first presented to the general public in 2005 at the ISGATEC trade fair in Nuremberg, both PRO products were then exhibited together at AICHEM 2006.

And it was not only in the reduction of leakage through impregnation that major progress was made during this time: As early as 1998, another major breakthrough was made in improving the properties of SIGRAFLEX gasket sheets. The process developed and patented by SGL Carbon for the overlap-free laser welding of stainless-steel foils made it possible to manufacture flat steel reinforced gasket sheets with dimensions of up to 1,500 mm x 1,500 mm without leakage channels for one-piece gaskets with a maximum diameter of 1,500 mm. Silvia Mechen, Manfred Jung, Hubert Malik, Oswin Öttinger and Bernd Schellenberger played a major role in the development of the process at that time.

This meant that large SIGRAFLEX HOCHDRUCK sheets, which had already been on the market since 1997, could now be offered in the butt-welded version. The 1,500 mm x 1,500 mm sheet portfolio comprising SIGRAFLEX UNIVERSAL and HOCHDRUCK was then joined in the mid-2000s by the PRO variants, because size also matters when it comes to keeping the air clean.

SGL Carbon currently offers a broad portfolio of different graphite gasket sheets that meet the maximum requirements of the German Clean Air Act (TA Luft), even after its revision, which came into force in 2021: In addition to the three products mentioned above, there are SIGRAFLEX MF®, EMAIL and our latest product SIGRAFLEX INXT. In addition, SIGRAFLEX HOCHDRUCK, APX2 HOCHDRUCK and ECONOMY are also suitable for certain TA Luft applications, depending on material thickness and gasket stress.