

Reinforced SIGRAFLEX sheets. Characteristic data for 2.0 mm thick sheets

Table 4

Product type		ECONOMY V20010C4	UNIVERSAL V20010C2I	EMAIL V20011Z3E	HOCHDRUCK V20011Z3I
Graphite, bulk density	g/cm <sup>3</sup>	1.0	1.0	1.1	1.1
Graphite, ash content (DIN 51903)	%	≤ 2.0	≤ 2.0	≤ 0.15	≤ 0.15
Chloride content (DIN 28090-2)	ppm	≤ 50	≤ 50	≤ 20	≤ 20
Reinforcing sheet, number		1	1	2	3
Reinforcing sheet, thickness	mm	0.05	0.1	0.05	0.05
Reinforcing sheet, type		smooth foil	perforated sheet steel	smooth foil	smooth foil
Reinforcing sheet, DIN material no.		1.4401	1.4401	1.4401	1.4401
Gasket factors <sup>(1), (2)</sup> (DIN 28091)					
• Compression at 20 °C	ε <sub>KSW</sub> %	40 to 50	35 to 45	30 to 40	30 to 40
• Recovery at 20 °C	ε <sub>KRW</sub> %	5 to 6	5 to 6	4 to 6	4 to 6
• Creep compression at 300 °C	ε <sub>WSW</sub> %	2 to 3	2 to 4	1 to 3	2 to 3
• Recovery at 300 °C	ε <sub>WRW</sub> %	3 to 5	3 to 5	3 to 5	3 to 5
Creep strength under compressive stress <sup>(3)</sup>	N/mm <sup>2</sup>	> 45	> 48	> 48	> 48
Leakage rate (DIN 28090-2 <sup>(4)</sup> , <sup>(5)</sup> )	mg/(s·m)	< 0.1	< 0.1	< 0.1	< 0.1
Gas permeability (DIN 3535 <sup>(6)</sup> )	cm <sup>3</sup> /min	0.17	0.17	0.17	0.10
Compressibility (ASTM F36A-66)	%	40 to 50	30 to 40	30 to 40	30 to 40
Recovery (ASTM F36A-66)	%	10 to 15	15 to 20	15 to 20	15 to 20

- (1) ε<sub>KSW</sub> Gasket compression under a stress of 35 N/mm<sup>2</sup>  
 ε<sub>KRW</sub> Gasket recovery after reduction in stress from 35 N/mm<sup>2</sup> to 1 N/mm<sup>2</sup>  
 ε<sub>WSW</sub> Gasket creep compression under a stress of 50 N/mm<sup>2</sup> at 300 °C after 16 h  
 ε<sub>WRW</sub> Recovery after reduction in stress from 50 N/mm<sup>2</sup> to 1 N/mm<sup>2</sup>  
 The percentage changes in thickness of ε<sub>KSW</sub>, ε<sub>KRW</sub>, ε<sub>WSW</sub> and ε<sub>WRW</sub> are relative to the initial thickness of the gasket

- (2) The requirements of DIN 28091-4 are surpassed by all SIGRAFLEX sheet materials  
 (3) According to DIN 52913, 16 h, 300 °C, 50 N/mm<sup>2</sup>  
 (4) Preconditioning of specimens at 100 °C for one hour  
 (5) The gasket factors for the various sheet materials can be found in the data sheets. Those calculated in accordance with DIN E 2505 (s. data sheets) can be converted into gasket factors as determined by DIN 28090/DIN 28091  
 (6) Measured by the DVGW (German Association of Gas and Water Operatives) on material 1.5 mm thick

