

FREUDENBERG GAS DIFFUSION LAYERS

TECHNICAL DATA



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PROPERTIES	UNIT	H14	H23	H23I2	H14C7	H14C9	H14C10	H15C13	H14CX483	H14CX653	H23C2	H23CX653	H23C9	H24CX483	H23C8	H23C3	H24C5
HYDROPHOBIC TREATMENT				•	•	•	•	•	•	•		•	•	•	•	•	
MICROPOROUS LAYER					•	•	•	•	•	•	•	•	•	•	•	•	•
Thickness @ 0.025MPa (Internal*)	µm	150	210	222	175	180	170	195	180	185	255	250	250	250	230	290	270
Thickness @ 1MPa (Internal*)	µm	115	170	187	145	150	141	155	140	145	215	210	210	210	200	230	215
Area Weight (DIN EN ISO 29073-1)	g/m ²	65	95	114	100	100	97	93	87	94	135	130	135	135	135	150	130
Compression Set @ 1MPa (Internal*)	µm	1.5	2	6	8	7	3	10	11	11	8	13	8	11	3	25	15
TP Electrical Resistance @ 1 MPa (Internal*)	mΩ·cm ²	4	4.5	6	6	7	5	9	6	6	10	7	8	8	8	9	9
IP Electrical Resistance (Internal*)	Ω	1.1	0.8	-	1.0	1.0	1.1	1.1	1.1	1.0	0.8	0.7	0.7	0.7	0.8	0.6	0.7
TP Air Permeability** (DIN EN ISO 9237)	l / m ² ·s	570	400	179	-	-	-	-	-	-	-	-	-	-	-	-	-
TP Air Permeability acc. to Gurley (ISO 5636-5)	s	-	-	-	50	30	70	27	1	15	70	10	30	2	90	35	40
IP Air Permeability @ 1 MPa (Internal*)	µm ²	4.0	4.2	2.2	1.0	1.5	1.4	2.7	1.2	1.0	2.5	1.4	2.0	1.5	1.5	1.5	2.5
Tensile Strength (DIN EN ISO 29073-3).	N/50mm	> 20	> 25	> 35	> 70	> 70	> 70	> 70	> 70	> 70	> 80	> 70	> 70	> 70	> 70	> 70	> 70
Dry Diffusion Length (Internal*)	µm	-	-	-	710	640	640	560	540	730	800	950	800	700	770	1,400	1,000

* Freudenberg internal measurement standard

** @ 200 Pa pressure drop

TP = through-plane

IP = in-plane

(Rev. 11 – 30.10.2019)

All values represent averages, which are subject to usual production tolerances. The values do not represent specifications.

Any warranty and liability is subject to Freudenberg Performance Materials SE & Co. KG's General Terms of Delivery and Payment applicable at the date of delivery.

For info, please contact us: sales@fuelcellstore.com

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GDL RECOMMENDATION FOR LT-PEMFC APPLICATIONS

