



Molecular Cabin Air Filter Media

Breathe easy. Protect your passenger's health.

Cabin air filters are designed to improve air quality inside vehicles by filtering particles, microorganisms and gases, protecting the passengers and improving the driving comfort. Additionally, they protect the heating and air conditioning system from dirt and debris.

Ahlstrom Molecular Cabin Air portfolio covers a complete range of gas adsorption preventing Volatile Organic Compounds (VOCs) and inorganic gases (SO₂, NO_x, NH₃) from entering the vehicles' cabin:

SafeCabin® Carbon - our unique single step 3-layer technology allowing the incorporation of activated carbon granulates in the middle layer.

PurXcel™ Cabin - our new dry molecular platform, engineered with high-performance adsorbent materials for premium cabin air filtration application.

Benefits

- ✓ **Optimal gas absorption capacity and reliability** - superior gas capture with optimized carbon loading and minimal pressure drop
- ✓ **Flexible product offering** - wide range of adsorbent types and content to address a broad spectrum of harmful gases
- ✓ **Easy to Convert** - excellent pleatability and media cohesion
- ✓ **Ability to combine gases and particles removal** - delivering a unique 2-in-1 solution
- ✓ **Proven customization capabilities** - backed by extensive expertise and a strong track record

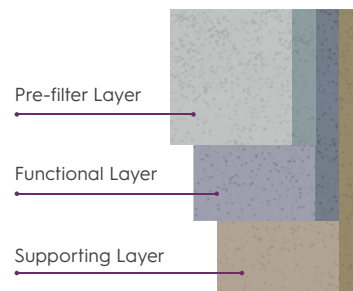
Ahlstrom SafeCabin® Carbon

Based on our proprietary **Trinitex® wetlaid technology**, this 3-layer structure incorporates **granular activated carbon** in the middle layer.

SafeCabin® Carbon filter media offers **excellent pleatability, low carbon dusting, high adsorption capacity and good behavior in all operating conditions.**

SafeCabin® Carbon Charge is an advanced extension of this range, combining the benefits of **SafeCabin® Carbon** media with an **electrostatically charged layer**, enabling up to 90% removal of 0.5 µm particles, in line with most OEM specifications.

This portfolio can be further enhanced with **proprietary anti-bacterial and anti-fungal functionalities**, compliant with AATCC TM100, JIS L 1902:2008, and EN ISO 846:2019 Parts A, B, and C.



Key Grade Characteristics

	Basis Weight	Thickness	Carbon Content	Air Permeability	MD Stiffness	Initial Fractional Efficiency	Initial Break-Through Toluene*
Main Grades	g/m ²	µm	g/m ²	L/m ² /s @200 Pa	mg	% ISO A2 Fine dust @0.5 µm 2 cm/s	%
SafeCabin® Carbon 170	170	1,150	62	2,100	3,400	31	66
SafeCabin® Carbon 250	250	1,250	167	1,900	5,000	18	38
SafeCabin® Carbon 300	300	1,450	200	1,550	7,000	36	26
SafeCabin® Carbon 400	400	1,800	300	1,300	6,100	40	12
SafeCabin® Carbon 500	500	2,200	400	1,200	6,500	20	6
SafeCabin® S Carbon 340 Charge	340	1,900	187	1,000	4,800	>90	43
SafeCabin® S Carbon 440 Charge	440	2,100	310	1,000	3,800	>90	25
SafeCabin® S Carbon 540 Charge	540	2,700	387	900	4,300	>90	6

*According to DIN 71460-2 at 10 cm/s and concentration 80ppmv for toluene with 50% RH.

Ahlstrom PurXcel™ Cabin

Our high-performance **dry molecular filtration platform** is designed to extend protection across a broader spectrum of chemical pollutants, while maintaining excellent fine particle removal for the most demanding requirements.

PurXcel™ enables precise control over adsorbent types, blends, and content, targeting **VOCs, alkaline gases** (e.g., NH₃), and **acid gases** (e.g., SO₂, NO_x). This is achieved through tailored adsorbents such as **ion exchange resins, impregnated activated carbon, and baking soda**, with loadings up to **1000 g/m²**.

The media can be laminated with a full range of **particulate efficiency layers** – including **electrically charged meltblown or needlefelt**, and **electrospun nanofibers** – to deliver optimal protection against the finest particles with **limited pressure drop**.

Key Grade Characteristics

Tailor-made solutions are available on demand.

	Basis Weight	Thickness	Carbon Content	Air Permeability	MD Stiffness	Initial Fractional Efficiency	Initial Breakthrough n-Butane**	Initial Breakthrough SO ₂ **	Initial Breakthrough NO ₂ **	Initial Break-Through Toluene**
Main Grades	g/m ²	µm	g/m ²	L/m ² /s @200 Pa	mg	% NaCl, @0,3µ 5,3 cm/sec	%	%	%	%
A200MD35	400	1,500	200	1,230	2,500	35	15	13	18	N.A.
IA400MD80	620	2,500	400	1,240	6,200	80	4	3	2	N.A.
MAC62 700M65	970	2,500	700	710	9,300	65	1	0.3	2	3

**According to DIN71460-2 at 10 cm/s (concentration 80ppmv for n-Butane and 30 ppmv for SO₂, NO₂ and NH₃).

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