

Manufacturing & Quality Control

AeroMAX carbons are produced under controlled process and quality discipline aligned with international air and gas adsorption requirements.

Manufacturing Highlights

- Selection of high-density coconut shell charcoal
- Controlled steam activation in rotary kilns for micropore development
- Multi-stage screening, de-dusting and particle size control
- Batch-wise monitoring for activity, density, moisture and ash
- Optional grading / customisation for OEM filter requirements

Quality Control & Testing

Each batch is tested for:

- Particle size distribution (ASTM D2862)
- CTC / iodine activity
- Density & hardness
- Ash, moisture, and pH
- Mechanical strength and attrition resistance

Handling, Packing & Logistics

25 kg PP woven bags with PE inner liner

25 kg PE valve sacks for pellet grades, where required

500 kg FIBC / jumbo bags with liner

Palletised export packing available on request

Custom OEM and private-label packing available on request

Technical Support & Customisation

Carbonmax offers technical support for:

- Carbon grade selection
- Filter design optimisation
- Service life optimisation
- Custom pellet sizes, mesh ranges, and activity levels
- OEM and private-label supply programs

Disclaimer

Specifications shown are typical values and may be customised based on application and contract requirements.

Actual performance depends on contaminant type, concentration, humidity, temperature, airflow, contact time and

filter design. Users should conduct trials to confirm suitability.



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Air & Gas Purification Activated Carbon

Advanced Coconut Shell
Activated Carbon for Air Filtration & Purification

AeroMAX™

www.carbonmaxtech.com

Overview

The AeroMAX Series from Carbonmax Advantech is a range of high-performance coconut shell based activated carbons engineered for air filtration, odour control and gas-phase adsorption applications. Manufactured through controlled activation and precision sizing, AeroMAX carbons deliver high adsorption performance, low dusting and dependable service life in airflow and gas treatment systems.

AeroMAX carbons are designed to support:

VOC and solvent vapour adsorption

Odour control in commercial and industrial environments

HVAC, AHU and indoor air quality systems

Industrial ventilation and exhaust air treatment

Gas polishing and specialty gas purification applications

Carbonmax air-grade carbons are developed to meet the performance expectations of global filtration OEMs while offering customisation flexibility, consistent quality and competitive cost positioning.



Why Coconut Shell Activated Carbon for Air Purification

Coconut shell-based activated carbon is universally preferred for air purification due to its unique pore structure and physical robustness:

- Predominantly microporous structure → superior adsorption of low-molecular-weight gases
- High hardness & abrasion resistance → minimal dusting in airflow systems
- Low ash content → reduced secondary contamination
- Excellent performance for VOCs, solvents, odours, smoke, and chemical vapours
- Superior regeneration potential compared to coal-based carbons

Carbonmax leverages South India's premium coconut shell resources and advanced rotary kiln technology to produce consistent, mine-grade activated carbon with repeatable performance.

Key Performance Advantages

High VOC & Odour Adsorption

Optimised pore size distribution ensures efficient capture of:

- Volatile Organic Compounds (VOCs)
- Industrial odours
- Solvent vapours
- Chemical fumes

Long Service Life

High iodine and CTC activity values translate into extended operational life and reduced replacement frequency.

Low Dust & Attrition

High hardness and controlled post-processing reduce:

- Pressure drop increase
- Filter clogging
- Carbon carry-over in air streams

OEM-Friendly Consistency

Tight control on particle size, density, and activity ensures predictable behaviour in:

- Fixed beds
- Carbon trays
- Cartridge filters
- Carbon blocks

Typical Applications

AeroMax Series carbons are suitable for a wide range of air filtration and gas-phase purification applications:

- Indoor Air Quality (IAQ) systems
- Residential & commercial air purifiers
- HVAC and AHU units
- Industrial exhaust air treatment
- Solvent vapour removal
- Chemical & pharmaceutical plant ventilation
- Odour control in food processing, waste treatment, and utilities
- Cleanrooms and controlled environments

Used successfully in gold mining operations across Africa, Australia, CIS countries, Asia and South America.

Product Range – AeroMax Series

Carbonmax offers air purification carbons in pelletised and granular forms, aligned with global air-filtration standards.

AeroMax-P (Pelletised Carbon Series)

(For HVAC, air purifiers, industrial ventilation systems)

Available Grades

Custom pellet sizes and higher activity levels available on request, subject to technical confirmation.

Typical Specifications

Parameter	Test Method	AeroMax-P
Pellet Diameter (mm)	Internal / CGP TM	3.0 ± 0.5 / 4.0 ± 0.5
Moisture Content (%)	ASTM D2867	≤ 5
Apparent Density (g/cc)	ASTM D2854	>= 0.40 - 0.50
CTC Activity (%)	ASTM D3467	≥ 55
Iodine Number (mg/g)	ASTM D4607	≥ 1050
Ball Pan Hardness (%)	ASTM D3802	>=98
Pellet Crushing Strength (kg/pcs)	ASTM D4179	≥ 6.0
Ash Content (%)	ASTM D2866	≤ 10
Extractable pH	ASTM D3838	9.0 – 11.0

Performance Benefits -

- Uniform airflow distribution
- Low pressure drop
- Excellent mechanical integrity
- Long operational life in continuous air streams

AeroMax-G (Granular Carbon Series)

For tray filters, deep beds, and industrial gas adsorption

Available Grades

- AeroMax-G 4×8 (USS Mesh)
- Custom mesh sizes available on request

Typical Specifications

Parameter	Test Method	Specification
Particle Size	ASTM D2862	4×8 USS
Oversize (+4) (%)	ASTM D2862	≤ 5
Undersize (–8) (%)	ASTM D2862	≤ 5
Moisture Content (%)	ASTM D2867	≤ 5
Apparent Density (g/cc)	ASTM D2854	≥ 0.49
CTC Activity (%)	ASTM D3467	≥ 55
Iodine Number (mg/g)	ASTM D4607	≥ 1100
Ash Content (%)	ASTM D2866	≤ 3
Extractable pH	ASTM D3838	9.0 – 11.0

Performance Benefits

- High adsorption efficiency
- Low ash and fines
- Stable performance in deep-bed applications