

CORNING

Clean Diesel Made Possible

Corning® DuraTrap® AT Filters

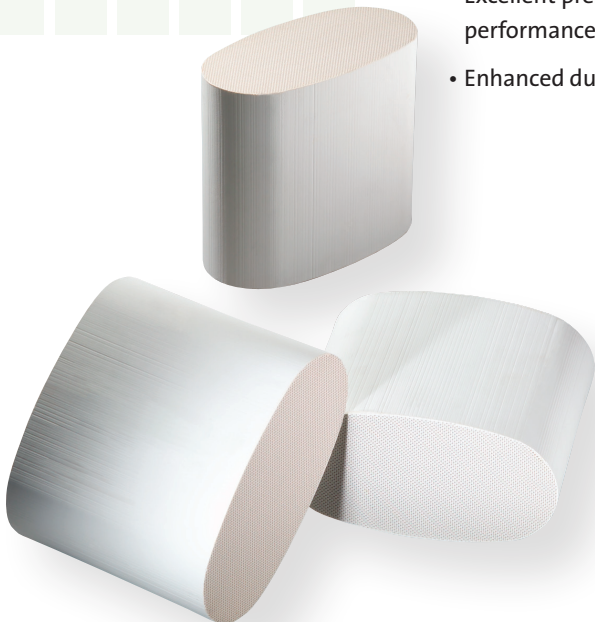
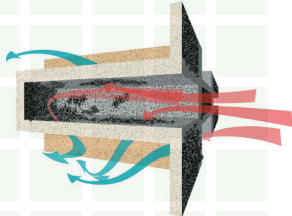
Particulate filters
for diesel emissions
systems



Diesel engines are an increasingly popular choice for fuel-efficient passenger cars and light-duty trucks. Advanced filters support the drive to improve fuel efficiency and meet tighter regulations.

Corning® DuraTrap® AT diesel particulate filters use advanced materials and monolithic design to deliver:

- High filtration efficiency
- Excellent pressure drop performance
- Enhanced durability



| Porous Material* | Aluminum Titanate (TiAl ₂ O ₃) | Silicone Carbide (SiC) |
|--|---|------------------------|
| CTE _c (x10 ⁻⁷ /°C) | 10 | 45 |
| Intrinsic Density (g/cm ³) | 3.40 | 3.24 |
| Volumetric Heat Capacity @ 500°C (J/cm ³ K) | 3.60 | 3.63 |

Corning's aluminum titanate (AT) composition enables high performance light-duty filters by combining low coefficient of thermal expansion (CTE) with high heat capacity.



Corning® DuraTrap® AT Filters

Performance

Corning DuraTrap® AT filters use a stabilized aluminum titanate for outstanding performance and durability. Introduced in 2005, these filters have been proven in millions of vehicles.

Corning's aluminum titanate material provides low thermal expansion to enable durable monolithic construction that allows for:

- Low pressure drop and excellent regeneration efficiency to help improve fuel consumption
- Increased ash storage capacity and larger filtration surface area compared to segmented filters

Additionally, its engineered pore structure enables customers to meet particulate mass and number emissions regulations worldwide.

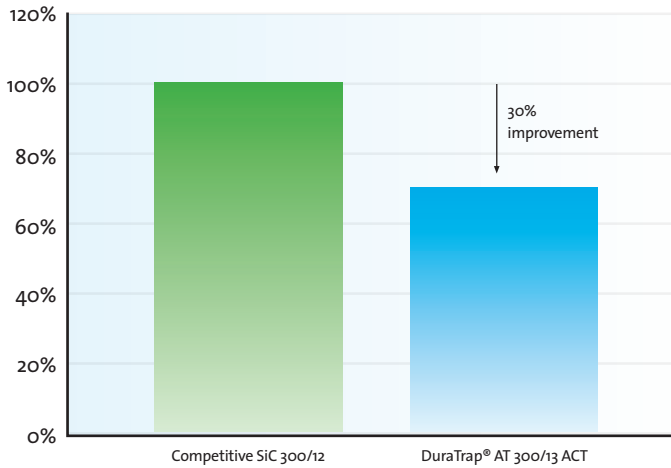
Innovative Design

The extrude to shape monolithic design can be produced in a variety of sizes and optimized for systems with space constraints and diverse configurations.

Corning's innovative asymmetric cell technology (ACT) is an option that helps manage lifetime pressure drop requirements and provides

| Product Benefits* | SiC | DuraTrap® AT |
|---------------------------|-----|--------------|
| Pressure Drop | - | + |
| Soot Mass Limit | + | + |
| Particulate Number & Mass | + | + |
| Regeneration Efficiency | - | + |
| Ash Storage Capacity | - | + |
| Filtration Area | - | + |

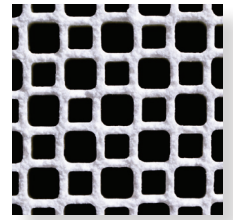
Relative Coated Filter Pressure Drop on Engine Dynamometer at 6g/L Soot Load*



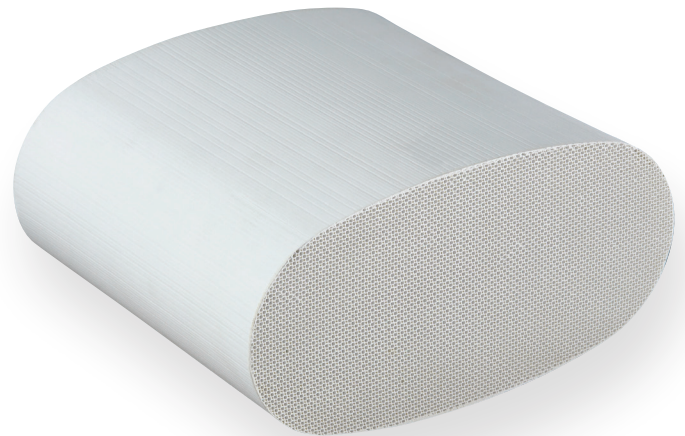
ash storage benefits through larger inlet channels.

Standard Cell Geometry & Sizes

- 300 cells per square inch
- 13 mil wall thickness
- Standard diameter sizes range from 5" to 13"
- Custom sizes may be available upon request



Asymmetric Cell Technology (ACT): larger inlet, smaller outlet**



Corning DuraTrap®
AT 300/13 filter

CORNING

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*Except as otherwise noted, the charts and graphs used in this publication are based on data from experimental and limited tests conducted under controlled laboratory conditions sponsored by Corning Incorporated. Corning can provide additional calculations or test results based on specific operating conditions.

**Unplugged to highlight ACT geometric design. Filters will have alternating plugged channels.

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