Corning Environmental Technologies

Leading the way to a cleaner planet

HOW CORNING PRODUCTS HELP TO ENABLE CLEANER VEHICLE ENGINE PERFORMANCE

REMOVING POLLUTANTS

HEAVY-DUTY VEHICLES

- Hydrocarbons
- Carbon Monoxide
- Nitrogen Oxides
- Particulate Matter (carbon soot)

Much like light-duty systems, heavy-duty emissions control systems use Corning ceramic substrates and Corning® DuraTrap® filters to reduce pollution. Our large-scale products can be up to 13 inches in diameter.

Corning also produces filters for many other heavy-duty applications.

1. Exhaust passes through an oxidation catalyst to convert pollutants.
2. A urea solution is then sprayed into the exhaust, creating the right chemistry to eliminate NOx.
3. Diesel particulate filters capture soot particles through alternating channels.

Corning products are built to filter and minimize a number of harmful pollutants:

- Hydrocarbons
  - A major contributor to smog
- Carbon Monoxide
  - Reduces the blood's ability to carry oxygen
- Nitrogen Oxides
  - Precursor to smog and acid rain
- Particulate Matter (carbon soot)
  - Causes negative health effects

LIGHT-DUTY SYSTEMS FOR GASOLINE VEHICLES

Corning® Celcor® substrates form the heart of the catalytic converter, which turns pollutants into non-toxic gases and water vapor. Corning also produces DuraTrap® GC filters that remove harmful particles from gasoline direct injection (GDI) vehicles and advanced Corning® FLORA™ substrates that activate the catalyst 20% faster than standard substrates.

Catalysts:
- Precious metals that convert noxious emissions into non-toxic gases and water vapor
Washcoat:
- Coating that facilitates the application of precious-metal catalysts onto the surface of the substrate
Advanced Corning® substrates:
- Innovative monolithic design with enhanced durability

LIGHT-DUTY SYSTEMS FOR DIESEL VEHICLES

Available in a variety of material compositions and sizes, Corning® DuraTrap® filters capture trillions of soot particles exiting the engine per second. They work in harmony with other components of the emissions control system.

99% of soot particles.

Corning filters trap more than up to 10,000 BLOCKS can be stacked in a single application

YOU HAVE THE POWER

Banks of ceramic substrates can also be used in catalytic converters for power plants, power generators, chemical processing plants, and other industrial applications. Corning's ceramic material provides the optimal surface for catalysts that help keep emissions clean.

غازولين سيارات، دوجين سيارات، شاحنات كبيرة، وما فوق، كورننج منتجات هي تحسين جودة والنظافة من التلوث. لكي نتمكن جميعاً من التنفس بسهولة.

EXAMPLE DIESEL SYSTEMS

- Lean NOx Trap (LNT)
- Diesel Particulate Filter (DPF)

EXAMPLE GASOLINE SYSTEMS

- Three-Way Catalyst (TWC)
- Gasoline Particulate Filter (GPF)
- Diesel Oxidation Catalyst (DOC)
- Catalyzed Soot Filter (CSF)
- Selective Catalytic Reduction (SCR)
- Selective Catalytic Reduction Filter (SCR F)

YOU HAVE THE POWER

To learn more about Corning Environmental Technologies, go to corning.com/environmentaltechnologies

SO MANY POSSIBILITIES

There is no "one-size-fits-all" configuration for emissions control systems. No matter what regulations need to be met or what goals need to be reached, Corning products can be mixed and matched to optimize volume, efficiency, performance, and durability.