Filters and Engine Oil Additives, Commonest Nanotechnology Products in Automotive Industry

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According to statistics gathered by Nanotechnology Products Database (NPD), filters, additives, and car wash materials possess the highest share in the market of automotive nanotechnology products. The United States and Germany have produced the highest number of brands in this industrial sector.

Application of nanotechnology in automotive industry brings into the mind self-cleaning glass and anti-scratch paints in the first glance. However, statistics gathered by NPD shows that consuming products such as oil filters and engine oil additives possess the highest share in the market of nanotechnology products in automotive industry.

According to NPD, a number of 452 nanotechnology products have been presented into market in automotive industry by the end of August 2016. These products have been produced by 69 companies in 21 countries.

Industrial Subsector	Product Type
Filters	Air filter, fuel filter, coolant filter
Engine oil additives	Engine oil additive, revitalizant, gearbox oil additive
Fuel additives	Fuel additive, bike cleaner
Anti-freezing additives	Cooling radiator additive
Car body treatments	Polish, aftercare finish, glass polish, rain repellent solution, welding nozzle
Car wash materials	Paint sealant, car wash concrete, glass sealant, cleaning solvent, car wash kit, nano-cleaning solution, car body wax, glass cleaner, wheel sealant, ...

By having 10 producing countries, Europe possesses the highest number of countries that produce nanotechnology products in automotive industry. Asia and Oceania and America rank second and third by having eight and three countries, respectively. Studying data on

NPD shows that about 85% of monitored countries are active in the production of engine oil additives, gearbox oil additives, and revitalizants. Fuel additives, industrial section of filters, cooling radiator additives, anti-freezing agents, paints, and body treatment materials are among other product types presented to the market by the producing countries.

The United States and Germany have produced the highest number of individual brands in automotive nanotechnology products. New Zealand, the United Kingdom, Belgium, and Canada possess the next ranks. The interesting point is the absence of France in the top ranks although it is a huge producer of cars and vehicles. The highest number of individual brands belongs to Donaldson Company, NANOSKIN Car Care, SONAX GmbH, Nanolex Car Care, MARLY S.A, AMSOIL INC, XADO, MAX PROTECT LTD, RVS Master, and Pyro Products. Products of these companies are classified in filters (oil, gas, and air), washing solutions (wheel, glass, and paint), and oil additives.

A big question in this regard is what types of nanostructures are usually used in the production of these products? NPD shows that tungsten disulfide, fluorine, titanium dioxide, silicon, and carbon nanoparticles have the highest share in the production of nanotechnology products in automotive industry. These nanostructures improve properties such as durability, cleaning, protection of objects, lubrication, combustion, hydrophobicity, and antibacterial effect in the products.