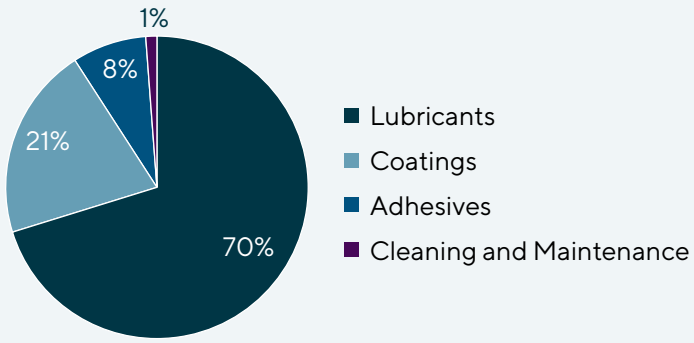
An Under-the-Hood Look at the Specialty Automotive Chemicals Market

Specialty automotive chemicals cover a wide range of applications, which can be separated between lubricants, adhesives, cleaning and maintenance chemicals and automotive coatings. From an application standpoint, specialty automotive chemicals can be further sub-divided between appearance chemicals and under-the-hood products. Specific applications will be more nuanced, though under-the-hood solutions – mostly application-oriented formulations – will typically trade for higher multiples than appearance chemicals (e.g., polishes) due to the risk-reward proposition that consumers and professionals face when applying the respective products. Within the under-the-hood segment there is significant opportunity for differentiation on effectiveness and performance, as well as on branding that, when assembled properly, allows for meaningful margin capture opportunities.

AUTOMOTIVE CHEMICALS ESTIMATED MARKET SHARE



A prominent example of an under-the-hood application within the adhesives segment is sealants. While found across a multitude of applications, sealants play an especially vital role in solving mission-critical engine issues. As a brief refresher, sealants are used to fill (or seal) a gap between multiple substrates. The sealant barrier is formed via the properties of the sealant and through adhesion to the substrate. In the under-the-hood segment, the use of sealants enables consumers and professionals to readily fix radiator, transmission, head gasket and other leak situations efficiently and cost-effectively. Commercial products of this type typically contain sodium silicate and flocculated copper metal. After introduction of the product into the cooling system, the aqueous solution (containing the sodium silicate) flows into the crack as the flocculated copper bridges the crack at its narrowest point. Flow of the aqueous solution through the crack is thereby decreased. Atmospheric oxygen, coupled with the heat transferred through the suspended copper, causes solidification of the sodium silicate in the crack to a hard crystalline material resembling glass; hence, the aqueous solution is often referred to as "liquid glass."

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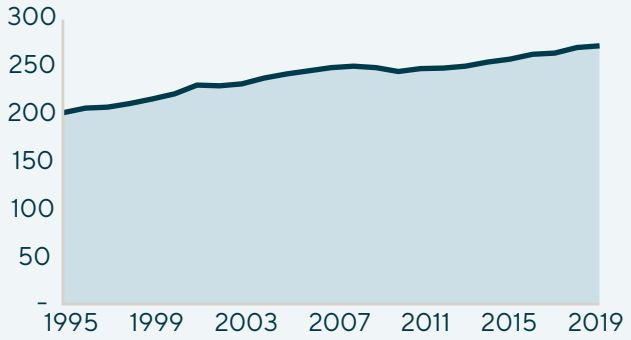
High-reliability, under-the-hood chemical solutions are able to command strong margins within need-now applications. On one hand, these products are comprised of formulations that consist of relatively inexpensive commodity chemicals and require straightforward mixing processes during production. On the other hand, the high cost-of-failure associated with the application places a premium on consistent performance and dependability. The precise formulation for highly reliable, under-the-hood chemical solutions is frequently proprietary in nature and further protected by trade secrets. Given the need-now nature of many under-the- hood chemical applications, an effective approach to marketing is particularly important. There is an opportunity to meaningfully accelerate sales by educating and staying in front of consumers and professionals, across multiple platforms. Oftentimes the final purchasing decision at the consumer level is a day-of decision with emphasis placed on the effectiveness and reliability of the product.

Under-the-hood chemical solutions have broad application to both the do-it-yourself (DIY) and do-it-for-me (DIFM) segments. The solutions can be constructed in a pour-and-go fashion to enable easy administration for everyday consumers, while still being effective and reliable enough to generate sustained demand among professionals. E-commerce growth has been substantive, though a portion of the need-now automotive chemical solutions will still have a long-term home at brick-and-mortar specialty auto retailers. It is important for providers to maintain strong relationships with specialty auto retailers to reach the DIY market in particular and with dealers & distributors who help to facilitate access to the DIFM market. Highly effective and reliable under-the-hood chemical solutions are able to generate meaningful pull demand from consumers and professionals, which helps fuel long-term repeat purchasing cycles.

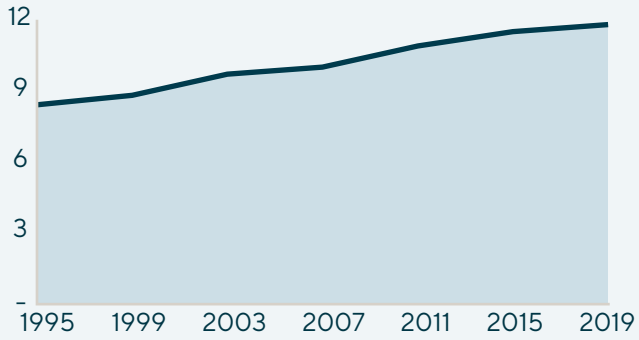
The automotive aftermarket end-market continues to benefit from favorable tailwinds. The number of miles driven, in the U.S., has grown relatively steadily over the last 20 years (from 2.68 trillion in 1999 to 3.27 trillion in 2019). Similarly, the total size of the active U.S. light vehicle fleet has grown from 220 million in 1999 to 278 million in 2019. The under-the-hood chemicals market has been highly resilient to the COVID-19 pandemic, as the decrease in miles driven has been offset by an increase in fleet age as consumers hold onto their existing vehicles longer. The older the age of the vehicle fleet, the higher the under-the-hood chemical solution demand becomes – and the average age of the light vehicle fleet in the U.S. has been increasing fairly steadily for over the last 25 years (from 8.8 years of age in 1999 to 11.8 years of age in 2019).

An additional, important long-horizon shift is the growth in electric vehicle (EV) production, which will have lasting implications for certain sub-segments, though companies with advanced in-house development capabilities will be able to continue on the legacy of innovation to meet future market demands. Furthermore, global EV sales of new vehicles are not expected to become a majority of the total new vehicle sales market until 2040, and it will not be until 2050 and beyond that they comprise a majority of the global vehicle fleet.

U.S. LIGHT VEHICLE FLEET SIZE
(vehicles in millions)



AVERAGE AGE OF U.S. LIGHT VEHICLE FLEET
(years)



Source: U.S. Department of Transportation

The specialty automotive chemicals market is highly fragmented by geography and application coverage, presenting opportunity for meaningful consolidation. Companies should regularly evaluate their market position between appearance chemicals and under-the-hood chemicals, as well as their mix between DIY and DIFM to ensure they maintain a coherent go-to-market approach. With an expanding overall market and continued positive tailwinds, there is a long runway for attractive growth.

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