Automotive coatings requirements

Today’s educated consumers demand more from their products, and when it comes to their automobiles, they have set the bar high for appearance and durability. Tetrashield® protective resin systems help create coatings that enhance appearance, improve weatherability, and bolster scratch resistance—impressing critics and car owners in the showroom and well down the road.

But maintaining an immaculate appearance isn’t the only challenge for automotive coatings. Automotive OEMs also need to find new efficiencies in their systems. Up to 50% of the energy spent to build a car in assembly plants is consumed in the paint shop. Coatings leveraging Tetrashield technology can be formulated at higher solids levels, which results in a more efficient process. Simply put, with Tetrashield, OEMs can coat more cars faster with less paint.

Further, automotive OEMs are looking for ways to improve the sustainability of their vehicles and their processes. Lab tests show that coatings formulated with Tetrashield can reduce volatile organic compounds (VOCs) when compared to other coatings. Advantages like that should give any manufacturer’s sustainability message more mileage.

Superior weathering, scratch resistance, and chemical resistance help cars look great over time, enhancing consumer brand experiences.

Applying coatings with higher solids and improved film build can minimize rework and increase throughput.

Higher solids coatings can reduce both VOCs and energy consumption, facilitating regulatory compliance.
Durability
To make a lasting impression, start with an automotive coating that lasts.

Tetrashield can achieve superior weathering in formulated paints. In lab tests, Tetrashield-based monocoats show up to a 100% improvement in weathering and UV stability with a better balance of hardness and flexibility when compared to non-Tetrashield-based coatings. And clear coats formulated with Tetrashield have been proven to improve chemical, scratch, and mar resistance.

Productivity
Extend the life of your coating Not the process.

Tetrashield has excellent solubility properties and can be formulated at higher solids levels while maintaining excellent application parameters. This allows more efficient film build, faster film drying, and ultimately a more proficient coating process. Also, in some applications, the exceptional hardness and UV stability of Tetrashield enable OEMs to reduce the number of layers they apply on vehicles, increasing throughput and reducing cost.

Sustainability
Minimize environmental impact. Maximize durability.

Tetrashield can expand the performance levels of coatings while supporting compliance with environmental regulations. Lab tests show that coatings formulated with Tetrashield protective resin systems enable formulators to maintain performance with lower VOC content. This means coatings can be formulated to higher solids levels, enabling more efficient film build with better mar resistance over the service life of the coating.

Benefits of Eastman Tetrashield™ protective resin systems

Formulator benefits
- Meets emerging regulations without sacrificing performance or durability
- 8%-15% improvement in paint application solids (lower VOC) at equal application viscosity
- Formulation flexibility to customize solutions for performance needs
- Industry-leading technical support

OEM benefits
- Increased productivity and reduced cycle times
- +2x improvement in weatherability
- Up to 2x improvement in scratch and mar resistance

Consumer benefits
- Vehicles look newer longer
- Improved scratch resistance protects against marring
- Peace of mind in a more sustainable product

Tetrashield AC1001 improves the performance of automotive coatings while reducing environmental impact and optimizing the coating process. An automaker’s reputation lasts only as long as the car’s coating. In a world where the environment is tough on automotive coatings—and consumers are tough critics—manufacturers and formulators alike can protect their brands with Tetrashield protective resin systems.

For more information, visit Eastman.com/Tetrashield.

Eastman has a long history of developing innovative solutions to solve the toughest problems. And our latest innovation, Eastman Tetrashield™ protective resin systems, continues this legacy.

With groundbreaking weatherability, chemical resistance, and hardness, Tetrashield makes automotive coatings more durable. By enabling low-VOC formulations and eliminating energy-intensive application steps, it also protects people and our planet.