



Eastman **TETRASHIELD™**
protective resin systems

**High performance
resins for industrial
maintenance coatings**


EASTMAN



Eastman Tetrashield™ protective resin systems provide asset owners a superior solution for high performance, two-component (2K) exterior topcoats.

With the ability to increase durability and barrier properties, Tetrashield creates coatings with superior weatherability, improved corrosion resistance, and excellent chemical resistance. In fact, lab and field testing confirms that coatings formulated with Tetrashield show up to a 50% improvement in exterior durability when compared to industrial maintenance coatings using other traditional 2K resins. As a result, Tetrashield enables coatings that protect steel structures longer—even in the harshest environments.

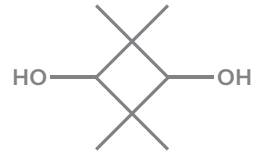
Tetrashield resins can also be formulated to balance pot life and dry time, which means less time mixing and more time painting. That means painters can accomplish more without sacrificing performance.



Tetrashield protective resin chemistry

Tetrashield PC4000 offers superior resin performance through the use of a specialty monomer, which has a unique structure with the following properties:

- **Cycloaliphatic structure** offers high T_g contribution while maintaining low UV absorption.
- **Tetramethyl structure** allows good solubility in organic solvents and compatibility with other monomers.
- **Shielded secondary hydroxyls** protect ester linkages from hydrolysis and chemical attack.



2,2,4,4-tetramethyl-1,3-cyclobutane diol (TMCD)

Incorporation of TMCD enables Tetrashield resins to offer differentiated performance properties, including:

- Compatibility with a wide range of solvents and additives to meet customer-specific requirements
- Increased solubility for higher-solids/lower-VOC formulations
- Increased barrier properties to enhance chemical and corrosion resistance
- A balance of hardness and flexibility that can survive field wear and tear
- Best-in-class UV resistance to extend life cycle

Formulation and performance features

Tetrashield resins help formulators deliver longer-lasting industrial maintenance coatings with lower environmental impact while also increasing protection in the harshest environments. Formulating with Tetrashield protective resins enables:

- Extended UV and corrosion resistance
- Improved chemical and fluids resistance
- Increased mar/scratch resistance and toughness
- Balance of pot life vs. dry time for robust application

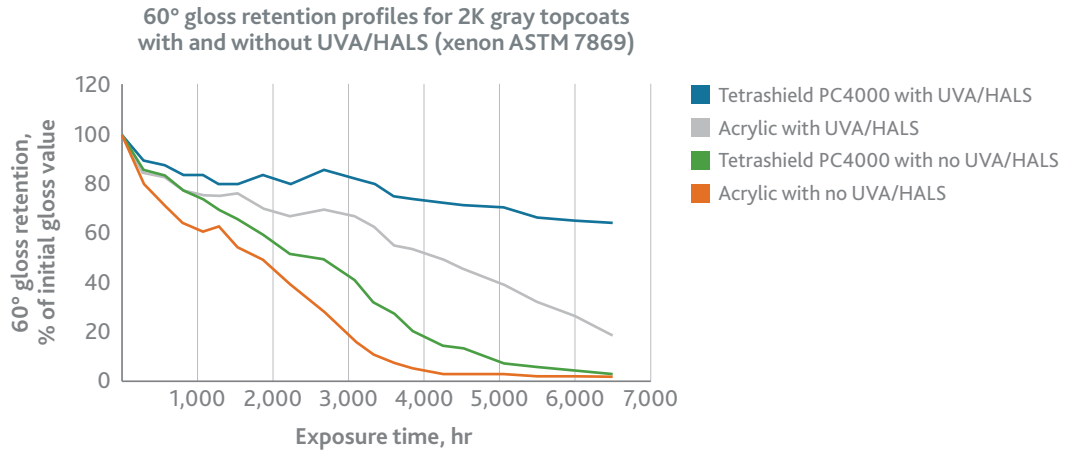
Chemistry	Weathering	Corrosion resistance	Chemical resistance	Scratch/mar resistance
Tetrashield	++	++	++	++
Polyester polyol	—	+	+	++
Acrylic polyol	+	—	+	—

— Technology is deficient for that performance characteristic.
+ Technology is acceptable for that performance characteristic.
++ Technology is excellent for that performance characteristic.

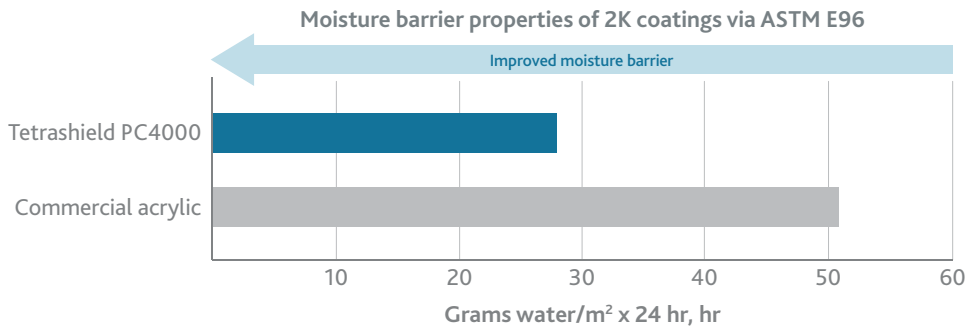
Advantages of using Tetrashield PC4000 in 2K exterior topcoats

For 2K industrial maintenance topcoats, Tetrashield PC4000 enables a set of differentiated benefits.

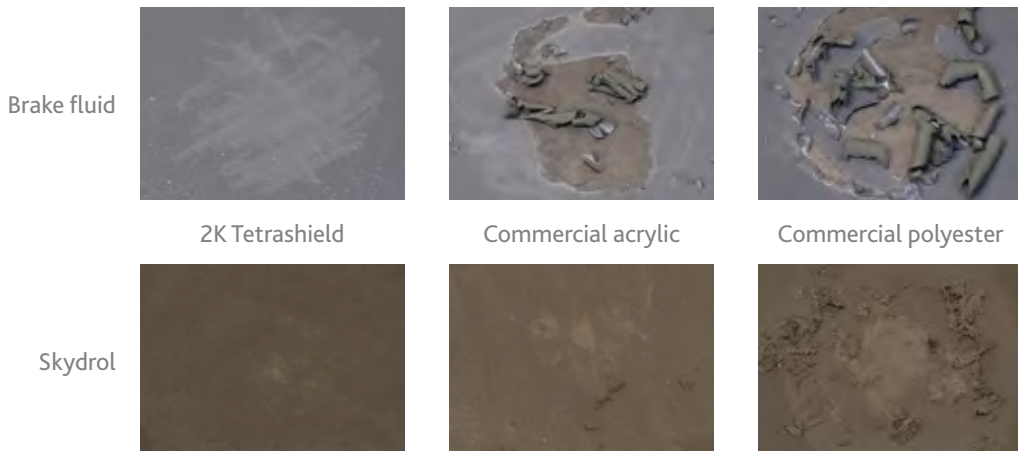
When compared to premium acrylic resins, Tetrashield resins offer exceptional weathering performance.



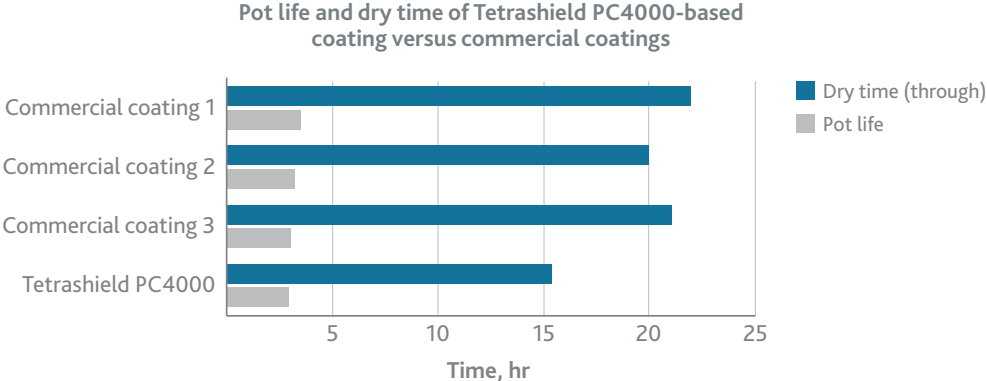
Coatings formulated with Tetrashield show reduced moisture transmission rates for improved barrier properties and excellent corrosion resistance.



Tetrashield creates coatings with superior chemical resistance, including resistance to aggressive fluids such as brake fluid and Skydrol™ aviation hydraulic fluids.



In lab tests, coatings based on Tetrashield show an excellent balance of pot life and dry time for a more efficient painting process.



Tetrashield PC4000 enables the formulation of high performance 2K exterior topcoats with excellent long-term durability while optimizing the coating process.

Eastman has a history of developing innovative products to solve the toughest problems, and our latest innovation—Tetrashield protective resin systems—continues this legacy. The technical service team at Eastman provides technical support and starting-point formulations to ensure formulators and OEMs get the best performance from Tetrashield protective resins.

When your assets are on the line, protection matters. When protection matters, Tetrashield delivers.

For more information, visit Eastman.com/Tetrashield.





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