

Eastman **TETRASHIELD™**  
protective resin systems

**High performance  
resins for industrial  
coatings**

**EASTMAN**



**Eastman Tetrashield™ protective resin systems** provide original equipment manufacturers (OEMs) with superior options for one-component (1K), two-component (2K), and direct-to-metal (DTM) coating systems.

With the ability to enhance durability and flexibility, Tetrashield creates coatings with **superior performance**, **improved weatherability**, and **better chemical resistance**—even in the most rugged environments. In fact, lab and field testing confirm that coatings formulated with Tetrashield show significant improvements in performance, durability, and corrosion resistance when compared to alternate industrial coatings using other resin chemistries. As a result, Tetrashield enables coatings that protect a wide variety of equipment and assets under the toughest conditions, including prolonged exposure to harsh elements such as sun, moisture, chemicals, and fluids.

Tetrashield resins also have excellent solubility properties and can be formulated to higher solids levels while maintaining robust application parameters. This allows consistent film build, faster dry times, and ultimately a more efficient application process without sacrificing durability.

# Tetrashield protective resin chemistry

Tetrashield IC3000 and Tetrashield IC3020 offer superior resin performance through the use of a unique monomer known as TMCD. The monomer structure enables a unique combination of performance characteristics:

- Distinctive resin solubility properties
- Compatibility with common formulation materials
- Hardness development while maintaining coating flexibility

Chemistry	1K topcoat	2K topcoat	DTM
Tetrashield IC3000	+	—	—
Tetrashield IC3020	—	+	+

— Technology is deficient for that performance characteristic.

+ Technology is satisfactory for that performance characteristic.

## Formulation and performance features

Tetrashield resins enable formulators to achieve enhanced industrial coating properties with reduced environmental impact while also providing added protection in the most rugged environments.

Formulating with Tetrashield protective resins enables:

- Extended durability
- Improved chemical and fluids resistance
- Improved scratch/mar resistance and toughness due to higher  $T_g$
- Enhanced long-term weathering performance
- Balance of overall performance compared to other commercial resins

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

— Technology is deficient for that performance characteristic.

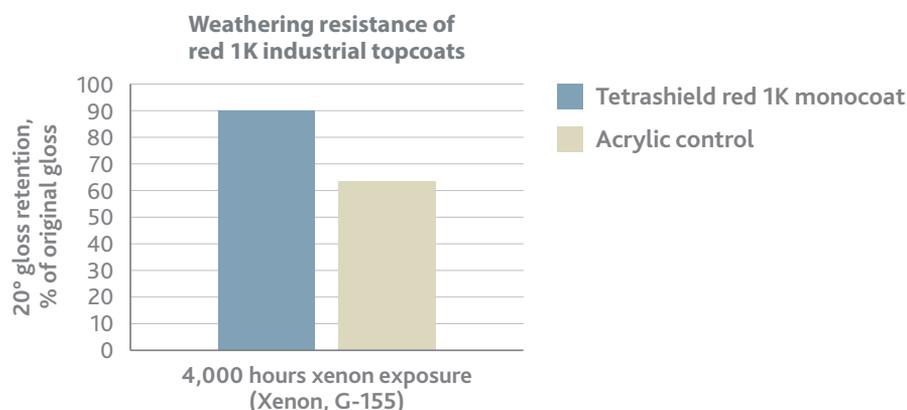
+ Technology is satisfactory for that performance characteristic.

++ Technology is improved over existing technologies for that performance characteristic.

## Advantages of using Tetrashield IC3000 in 1K topcoats

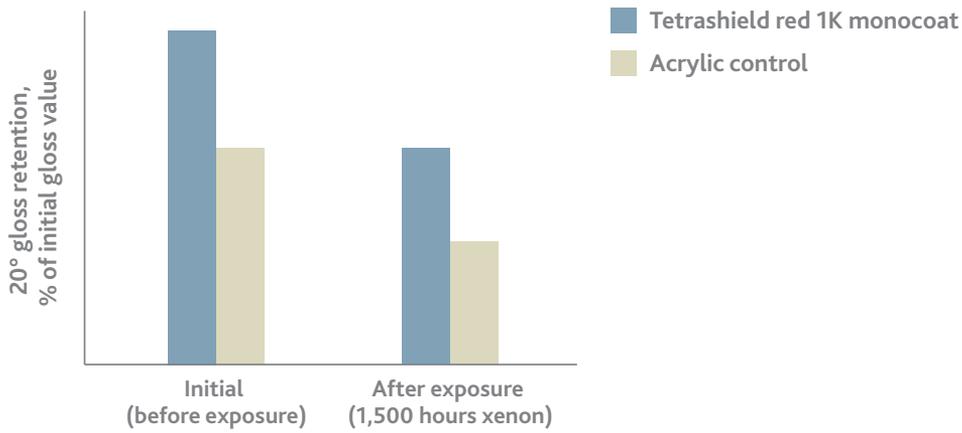
For 1K industrial topcoats, Tetrashield IC3000 enables a set of unique benefits, including:

- Exceptional weathering performance over commercial red 1K topcoat formulations
- Outstanding long-term appearance and asset protection with improved scratch and mar resistance



### Mar resistance of red 1K industrial topcoats

Crockmeter testing



### Benefits of Tetrashield IC3020 in 2K industrial topcoats

For 2K industrial topcoats, Tetrashield IC3020 enables a set of unique benefits, including:

- Reduced moisture vapor transmission rates for improved barrier properties and excellent corrosion resistance

#### Water vapor permeation of 2K clear topcoats



- Corrosion protection and superior chemical resistance, including resistance to aggressive fluids such as brake fluid and Skydrol™ aviation hydraulic fluids



## Advantages of DTM coatings formulated with Tetrashield IC3020

Direct to-metal (DTM) coatings formulated with Tetrashield IC3020 provide excellent corrosion resistance over shot-blasted steel (500 hours of corrosion testing, ASTM B117).



Commercial acrylic 2K topcoat



Tetrashield IC3020 2K topcoat

Formulating with Tetrashield IC3000 (1K) and IC3020 (2K and DTM) improves the performance and long-term durability of industrial coatings while reducing environmental impact and 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 industry-leading service and starting-point formulations to ensure formulators and OEMs get the best performance from Tetrashield protective resins.

In a world that's tough on equipment, protect what's important with Eastman Tetrashield™ protective resin systems.

For more information, visit [Eastman.com/Tetrashield](https://Eastman.com/Tetrashield).



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