

U S E D I T I O N



# Eastman Coatings Film Technologies

Film Optimization for  
Architectural Coatings

*Optimum Performance.*

*Formulation Flexibility.*

*VOC Solutions.*



**EASTMAN**

## What Can Eastman Coatings Film Technologies Do for You?

Our growing portfolio of coalescents gives you more options to formulate coatings with the balance of performance and regulatory compliance that meet today's needs and tomorrow's challenges.

In the 1960s, Eastman introduced *Texanol* Ester Alcohol, a coalescent that helped revolutionize latex paints. Today, building on our technical expertise and market understanding, we are expanding our portfolio of coalescents to offer you a broader range of performance possibilities.

Whether your challenge is responding to regulatory legislation, retail requirements, or consumer preferences, these premier coalescent technologies give you a competitive edge in today's dynamic architectural coatings industry.

### Your Formula for Success: Optimum Performance, Minimum Compromise!

Our portfolio of coalescents provides maximum formulation flexibility to help you:

■ **Deliver unbeatable performance**

- Application latitude
- Film integrity
- Durability
- Low odor

■ **Meet regional VOC regulations**

- Versatile, efficient coalescents to help meet VOC limits
- Very low VOC coalescent to allow maximum formulation flexibility for even the most stringent regulations

### Architectural Applications Selection Guide

	Texanol Ester Alcohol	Eastman EEH Solvent	Optifilm Enhancer 400
<b>Interior/Exterior</b>			
Flat Wall	●	◐	●
Satin and Semigloss	●	●	◐
High Gloss	◐	●	◐
Primers	●	◐	●

Legend:

- Recommended
- ◐ Suitable

### More Ways to Meet New and Evolving Needs.

Eastman provides formulators a portfolio of coalescents to maximize formulation flexibility to meet VOC requirements throughout the world. You can leverage our coalescents across many applications, including interior and exterior flat and nonflat coatings, as well as most specialty applications.

Our coalescent portfolio lets you deliver more options for existing and potential customers. Whether their focus is on low VOC, low odor, or the highest level of performance, your customers can always get the look they prefer and the durability they expect.

### Build Reliability Into Your Formulations.

Every day, many of the world's leading paint manufacturers rely on Eastman quality and consistency for their raw material requirements. With our stringent manufacturing quality standards, we deliver a consistent, reliable supply across the globe. Plus, our technical support network delivers industry experience and formulation expertise when and where you need it.



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 World-class quality and support you can rely on... that's the Eastman difference.  
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## Product Portfolio

From the industry standard *Texanol* Ester Alcohol to the low-VOC *Optifilm* Enhancer 400, this portfolio of coalescents offers the properties that help you balance paint performance with VOC limits. With all of our products, you can continue to rely on the Eastman quality and consistency that you have come to expect.

### **Texanol Ester Alcohol**

Versatile, efficient, and easy to use, *Texanol* Ester Alcohol remains the industry standard. By carefully balancing *Texanol* and glycol levels, you can formulate VOC-compliant paints with little or no performance compromise. The excellent film integrity obtained with low levels of *Texanol* Ester Alcohol allows for formulation of low-VOC paints.

In regions with the most stringent regulations, *Texanol* Ester Alcohol can be blended with *Optifilm* Enhancer 400 to minimize VOC while maintaining your desired balance of properties.

### **Eastman EEH Solvent**

Highly efficient and performance-oriented, *Eastman* EEH has long been used in specialty coatings applications. It also offers an excellent balance of performance properties when used as a coalescent for architectural coatings. *Eastman* EEH is faster evaporating than many other coalescents, developing film hardness more quickly and improving block resistance in nonflat coatings. The odor is relatively mild and dissipates quickly. A highly efficient coalescent, *Eastman* EEH can, in many cases, offer immediate reductions in VOC.

In regions with the most stringent regulations, *Eastman* EEH Solvent can also be blended with *Optifilm* Enhancer 400, providing yet another approach to balancing VOC and performance.

### **Optifilm Enhancer 400**

Low odor and extremely low VOC, *Optifilm* Enhancer 400 allows you to formulate very low-VOC paints with a minimum of performance compromise. Suitable for all types of architectural paints, *Optifilm* 400 is efficient, nonyellowing, and safe to use. *Optifilm* Enhancer 400 is the perfect choice for niche products targeting low odor, extremely low-VOC applications.

*Optifilm* Enhancer 400 can be blended with *Texanol* Ester Alcohol or *Eastman* EEH to further optimize the balance between VOC and performance properties.

For more information on blends, please refer to technical tip *Optimizing VOC and Performance in Architectural Paints* online at [www.eastman.com/filmtechnologies](http://www.eastman.com/filmtechnologies).

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For VOC compliance without performance  
compromise—Innovate with Eastman!  
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## Texanol Ester Alcohol

Texanol Ester Alcohol is the foundation of the Eastman Coatings Film Technologies coalescent portfolio. For more than 40 years, *Texanol* has been the name you trust for architectural coatings. In the vast majority of situations, *Texanol* still delivers the right balance of performance and regulatory compliance to meet today's needs and tomorrow's challenges.

Versatile, efficient, and easy to use, *Texanol* Ester Alcohol remains the industry standard. It is compatible with a variety of latex types and is appropriate for use in all architectural applications. Paints with *Texanol* Ester Alcohol have consistent performance over a wider range of application conditions and substrates.

*Texanol* Ester Alcohol performs well in all types of latex paints, providing the highest level of film integrity at low levels of coalescent. It improves the performance properties of the paint including low temperature coalescence, touch-up, scrub resistance, washability, color development, and resistance to mudcracking. *Texanol* also enhances thickening efficiency when used with associative thickeners.

In the United States, when tested as a neat material by EPA Federal Reference Method 24, *Texanol* Ester Alcohol is considered a VOC. *Texanol* is not listed on HAP or SARA 313.

*Texanol* is easy to use in the manufacturing environment. It has a low risk of shocking the paint formulation, is safe to use, and has a very high flash point.

TYPICAL PROPERTIES	TYPICAL VALUE, UNITS
Specific Gravity @ 20°C/20°C	0.95
Solubility/In Water @ 20°C	0.1 wt %
Solubility/Water In @ 20°C	3.0 wt %
Evaporation Rate (n-butyl acetate = 1)	0.002
Refractive Index @ 20°C	1.4423
Boiling Point @ 760 mm Hg	254°C
Vapor Pressure @ 20°C	0.01 mm Hg (0.0013 kPa)
Freezing Point	-50°C
Flash Point, Cleveland Open Cup	120°C
Autoignition Temperature	393°C
Liquid Viscosity @ 20°C	13.5 cP

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*Texanol* Ester Alcohol—  
The trusted industry standard!  
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## Eastman EEH Solvent

Highly efficient and performance-oriented, *Eastman* EEH Solvent has long been used in specialty coatings applications. A unique balance of water insolubility and quick evaporation rate allows *Eastman* EEH to provide an excellent balance of properties in architectural coatings. A highly efficient coalescent, *Eastman* EEH can also, in many cases, offer immediate reductions in VOC.

*Eastman* EEH Solvent is compatible with a variety of latex types and offers a good balance of performance in architectural coatings. Appropriate for all types of architectural coatings, *Eastman* EEH performs especially well in nonflat applications. Faster evaporating than many coalescents, *Eastman* EEH offers earlier development of film hardness and improves the block resistance of gloss paints. The low surface tension of *Eastman* EEH can offer improvements in substrate wetting. The odor of EEH is relatively low and, because of the evaporation rate, dissipates quickly. Low levels of *Eastman* EEH allow good film integrity, proper color formation, good touch-up properties, and excellent scrub resistance. The low water solubility of EEH helps maintain performance over a range of application conditions and substrates. In many cases, *Eastman* EEH can replace coalescent systems containing both fast and slow evaporating coalescents.

In the United States, when tested as a neat material by EPA Federal Reference Method 24, *Eastman* EEH is considered a VOC. *Eastman* EEH is not listed on HAP or SARA 313.

*Eastman* EEH is easy to use in the manufacturing environment. It has a low risk of shocking the paint formulation, is safe to use, and has a high flash point.

TYPICAL PROPERTIES	TYPICAL VALUE, UNITS
Specific Gravity @ 20°C/20°C	0.892
Solubility/In Water @ 20°C	<0.2 wt %
Solubility/Water In @ 20°C	5.1 wt %
Evaporation Rate (n-butyl acetate = 1)	0.003
Refractive Index @ 20°C	1.4370
Boiling Point @ 760 mm Hg	226°C
Vapor Pressure @ 20°C	0.021 mm Hg (0.003 kPa)
Freezing Point	<-100°C
Flash Point, Setaflash Closed Cup	106°C
Autoignition Temperature	227°C
Liquid Viscosity @ 20°C	7 cP

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*Eastman* EEH Solvent—  
Performance you can count on!  
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## Optifilm Enhancer 400

A recent addition to the coalescent portfolio, *Optifilm* Enhancer 400 is part of Eastman's *Optifilm* family. The *Optifilm* products are efficient coalescents with extremely low VOC, low odor, and nonyellowing characteristics.

Efficient and effective, *Optifilm* Enhancer 400 coalesces a variety of latex types while maintaining a good balance of performance properties. *Optifilm* 400 is appropriate for all types of architectural coatings, and can be blended with other coalescents such as *Texanol* Ester Alcohol or *Eastman* EEH Solvent to further optimize the balance of VOC and paint performance. *Optifilm* Enhancer 400 can be used as the sole coalescent in products such as low odor, very low-VOC interior flat paints.

*Optifilm* Enhancer 400 delivers excellent film integrity, touch-up properties, and scrub resistance, even at the lowest VOCs. Paints with *Optifilm* 400 have also demonstrated good exterior durability after one year exposure.

In the United States, when tested as a neat material by EPA Method 24, *Optifilm* Enhancer 400 is less than 1% VOC. *Optifilm* 400 is not listed on HAP or SARA 313.

*Optifilm* Enhancer 400 is easy to use in the manufacturing environment. It has a low risk of shocking the paint formulation, is safe to use, and has a very high flash point.

TYPICAL PROPERTIES	TYPICAL VALUE, UNITS
Specific Gravity @ 20°C/20°C	0.967
Solubility/In Water @ 20°C	0.0 wt %
Solubility/Water In @ 20°C	0.9 wt %
Evaporation Rate (n-butyl acetate = 1)	0.000017
Refractive Index @ 20°C	1.4436
Boiling Point @ 760 mm Hg	344°C
Vapor Pressure @ 20°C	<0.0001 mm Hg (kPa)
Freezing Point	-50°C
Flash Point, Cleveland Open Cup	199°C
Autoignition Temperature	385°C
Liquid Viscosity @ 20°C	15.8 cP

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*Optifilm* Enhancer 400—  
Maximum performance, minimum VOC!  
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## More Choices, Delivering Performance.

### Eastman Coatings Film Technologies At-a-Glance

	Texanol Ester Alcohol	Eastman EEH Solvent	Optifilm Enhancer 400
MFFT Reduction			
% VOC	100	100	<1
Odor			
Low Temperature Coalescence			
Scrub Resistance			
Block Resistance			
Hydrolytic Stability			
Weatherability			
Rheology Modifier Efficiency			
Latex Compatibility			

Legend:

Excellent   Good   Average   Fair

In addition to the products highlighted in this brochure, Eastman offers a variety of glycol ethers, such as *Eastman* DB Solvent and *Eastman* EB Solvent, and glycol ether esters.

Delivering formulation flexibility to optimize performance, minimize odor, and meet VOC regulations in architectural coatings.

*Let us help you balance VOC compliance and paint performance. Call Eastman today!*

# EASTMAN

## ■ NORTH AMERICA

### **Eastman Chemical Company Corporate Headquarters**

P.O. Box 431

Kingsport, TN 37662-5280 U.S.A.

Telephone:

U.S.A. and Canada, 800-EASTMAN (800-327-8626)

Other Locations, (1) 423-229-2000

Fax: (1) 423-229-1193

www.eastman.com

## ■ LATIN AMERICA

### **Eastman Chemical Latin America**

9155 South Dadeland Blvd.

Suite 1116

Miami, FL 33156 U.S.A.

Telephone: (1) 305-671-2800

Fax: (1) 305-671-2805

## ■ EUROPE / MIDDLE EAST / AFRICA

### **Eastman Chemical B.V.**

Fascinatio Boulevard 602-614

2909 VA Capelle aan den IJssel

The Netherlands

Telephone: (31) 10 2402 111

Fax: (31) 10 2402 100

## ■ ASIA PACIFIC

### **Eastman Chemical Japan Ltd.**

AIG Aoyama Building 5F

2-11-16 Minami Aoyama

Minato-ku, Tokyo 107-0062 Japan

Telephone: (81) 3-3475-9510

Fax: (81) 3-3475-9515

### **Eastman Chemical Asia Pacific Pte. Ltd.**

#05-04 Winsland House

3 Killiney Road

Singapore 239519

Telephone: (65) 6831-3100

Fax: (65) 6732-4930

Material Safety Data Sheets providing safety precautions, that should be observed when handling and storing Eastman products, are available online or by request. You should obtain and review the available material safety information before handling any of these products. If any materials mentioned are not Eastman products, appropriate industrial hygiene and other safety precautions recommended by their manufacturers should be observed.

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