

**VESTANAT®**

M SERIES FOR OUTSTANDING  
SCRATCH AND CHEMICAL RESISTANCE



**vestanat®**

**GO WITH THE ORIGINAL.**

 **EVONIK**  
Leading Beyond Chemistry

## OUR VISION

**CROSSLINKERS IS THE BEST PARTNER FOR A SUCCESSFUL AND SUSTAINABLE FUTURE, PROVIDING PIONEERING TECHNOLOGY AND GLOBAL REACH.**

## ABOUT US

### PIONEER IN ISOPHORONE CHEMISTRY

Since inventing isophorone chemistry during our search for new ways to recycle and reuse acetone, Evonik's Crosslinkers business line has continued to develop high-performance isophorone-based products that improve our customers' applications.

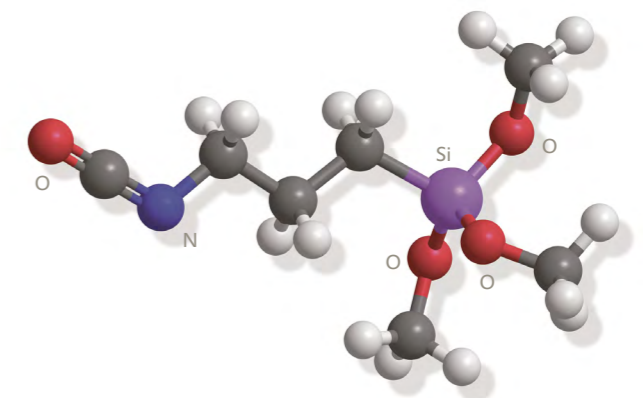
For over 60 years we've been your reliable partner and solution provider. With our global production sites we are uniquely placed to meet your local market demands.

Now, following another important breakthrough we've boosted our broad portfolio of VESTA products with our new reduced emission eCO series for more sustainable solvents, composites and coatings. The VESTANAT® EP-M/MF series is another step towards sustainability.

**THE VESTANAT® EP-M/MF SERIES COMES WITH LOW VOC AND THEREFORE OFFERS ENVIRONMENTAL AND HEALTH SAFETY BENEFITS IN ADDITION TO GREAT PERFORMANCE.**

**M grades** are silane-urethane hybrid crosslinkers based on Isocyanatopropyltrimethoxysilane (IPMS)

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# VESTANAT® EP-M SERIES

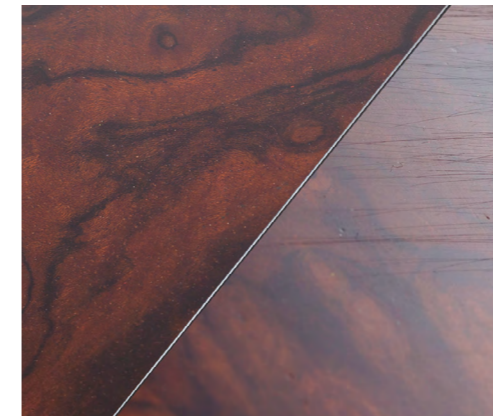
## A toolbox for custom-designed solutions

This technology platform based on IPMS and the corresponding PUR adducts opens up a wide range of possibilities to formulate scratch resistant coatings for a plethora of substrates such as wood, plastic and metals and many more. Depending on the desired process conditions and the required performance of the coating, different options are available that enable tailor-made solutions.



### BENEFITS

- Outstanding scratch resistance
- Up to 100% active matter
- Fast curing cycles
- High chemical resistance
- Room temperature curing



VESTANAT® EP-MF grade based clearcoat (left)  
Standard 2K PUR clearcoat (right)

### VESTANAT® EP-IPMS

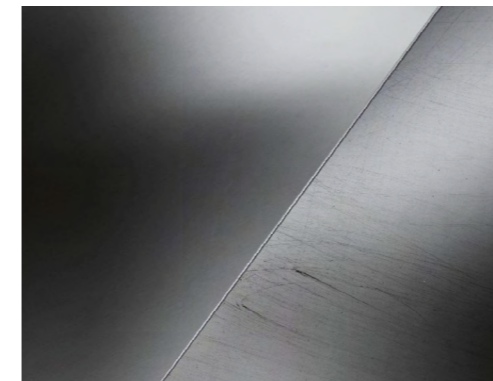
Monomeric IPMS is an isocyanate-functionalized trimethoxysilane for the synthesis of non-isocyanate crosslinkers to combine PUR chemistry with moisture curable silane technology.

### VESTANAT® EP-MF grades

The VESTANAT® EP-MF product range is a ready-to-use solution based on self-crosslinking IPMS-PUR adducts that enable moisture-curable systems for room temperature applications with short drying times. They combine PUR properties with glass-like hardness in a single, isocyanate-free component.

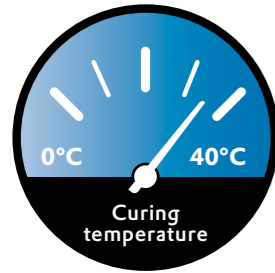
### VESTANAT® EP-M grades

The VESTANAT® EP-M series represents our product range of sole IPMS-PUR adducts that offer a higher flexibility in formulation design to address specific requirements of substrates, process conditions and performance.



VESTANAT® EP-M grade based clearcoat (left)  
Standard 2K PUR clearcoat (right)

# VESTANAT® EP-MF grades



**VESTANAT® EP-MF grades** are solvent free, ready-to-use crosslinkers. They can be used as single binder but they are also compatible with a variety of co-binding agents, such as acrylic polyols. The coatings can be cured at ambient temperature and are suitable for all kinds of substrates.

## BENEFITS

- Ready-to-use 1K self crosslinking system
- Fast curing cycles even at room temperature
- 100% active ingredient
- Excellent chemical resistance
- Outstanding scratch performance
- Anti-Graffiti
- Decontaminable

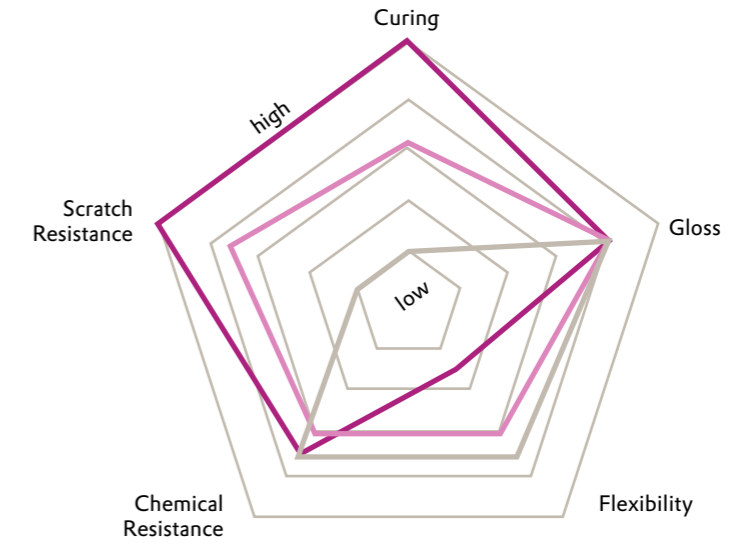
## VESTANAT® EP-MF 203

This low viscosity self-crosslinking binder enables coatings with high scratch resistance and short return-to-service times characterized by a high reactivity and short cycle times particularly at ambient temperature.

## VESTANAT® EP-MF 204

This binder has a higher content of urethane structures offering a more balanced profile between flexibility and scratch resistance while maintaining an enhanced drying behavior.

- MF 203
- MF 204
- 2K PUR



## VESTANAT® EP-MF 203 – High performance grade

- Silane content and crosslinking density are the highest among the MF-range
- Outstanding scratch and also chemical resistance
- Low viscosity
- Solvent-free
- Touch dry within one hour possible

## VESTANAT® EP-MF 204 – Optimum balance between performance and flexibility

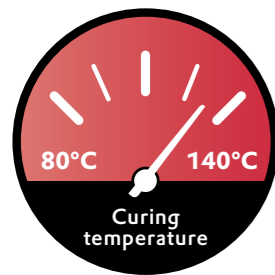
- Increased content of PUR chains
- Carefully adjusted balance between extraordinary mechanical performance and well tuned flexibility
- Solvent-free
- Touch dry times of less than 120 minutes

## Properties

VESTANAT®	EP-MF 203*	EP-MF 204*
Active matter content	100%	100%
Viscosity at 23°C [mPas]	100 - 200	1500 - 2500
Solubility	Aromatics, Solvent naphtha PROGLYDE™ DMM (Dow)	Aromatics, Solvent naphtha
Hardness [König] 1d/final	> 130	> 130
Touch dry at 23°C (approx.)	< 1 hour	1.5 hours
Appearance (distinction of image)	++	+

\* EP = Experimental Product

# VESTANAT® EP-M grades



**VESTANAT® EP-M grades** are PUR-silane hybrids that are suitable for curing at room temperature as well as at elevated temperatures. These grades are used in combination with suitable binders and catalysts to enable the formulation of highly scratch resistant coatings.

## VESTANAT® EP-M 60

This self-crosslinking binder is used to formulate highly scratch resistant coating systems. Suitable catalysts for curing at room temperature or elevated temperatures are recommended on request.

**BENEFITS**

- Suitable for elevated temperature curing
- Outstanding scratch resistance
- Excellent chemical resistance and anti-graffiti effect
- Full performance in combination with appropriate resins
- Decontaminable

## VESTANAT® EP-M 222

This binder has a more flexible structure and allows coatings with a good balance between flexibility and scratch resistance. A combination with VESTANAT® EP-M 60 offers the possibility to adjust the scratch resistance to corresponding requirements.

Properties		
VESTANAT®	EP-M 60*	EP-M 222*
Active matter content	100%	85%
Viscosity at 23°C [mPas]	200 - 400	3000 - 5000
Solubility	Ketones, Esters, Aromatics	Ketones, Esters, Aromatics
Scratch resistance	++	+/o
Chemical resistance	++	+/o
Flexibility	+/o	++

\* EP = Experimental Product

### DISCOVER MORE!

Further useful documents and information are available.  
[www.evonik.com/crosslinkers](http://www.evonik.com/crosslinkers)

### GET IN CONTACT!

Our local sales representatives look forward to serving you.  
[www.evonik.com/crosslinkers-contact](http://www.evonik.com/crosslinkers-contact)



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