

# Dynasytan® MKS

## 1-Pack Binder for Zinc Dust Paints

### Technical data

Properties and test methods	Value	Unit	Method
Density (20 °C)	0.9	g/cm <sup>3</sup>	DIN 51757
Viscosity (20 °C)	135	mPa.s	DIN 53015
Flash Point	2	°C	DIN 51755
Dilution	miscible with aliphatic and aromatic solvents	-	-

### Registrations

#### Dynasytan® MKS

EINECS/ELINCS (EU):	Yes
AICS (Australia):	Yes
DSL (Canada):	Yes
PICCS (Philippines):	Yes
TSCA (USA):	Yes
IECSC (P.R. China):	Yes
MITI (Japan):	Yes
TCCL (South Korea):	Yes
New Zealand	Yes

Dynasytan® MKS is a silicic acid ester based binder, excellent for the formulation of one-pack systems. Zinc dust paints formulated in this manner have an excellent shelf life in the absence of moisture.

Dynasytan® MKS is a binder with superior anti-settling properties. Paints formulated with Dynasytan® MKS can easily be stirred up after longer storage times. After processing, the coating will cure in the presence of atmospheric moisture. Overcoating with conventional topcoat systems is facile. Zinc dust paints based on Dynasytan® MKS provide effective protection of steel against corrosion

- in aggressive industrial and coastal environments
- at elevated temperatures (up to 420 °C)
- in the presence of chemicals.

### Safety and handling

Before considering the use of Dynasytan® products please read its Safety Data sheet (SDS) thoroughly for safety and toxicological data as well as for information on proper transportation, storage and use. The Safety Data Sheet is available after registration on our website [www.dynasytan.com](http://www.dynasytan.com) or upon request from your local representative, customer service or from Evonik Resource Efficiency GmbH, Product Safety Department, E-MAIL [sds-hu@evonik.com](mailto:sds-hu@evonik.com).

### Packaging, storage and shelf life

In order to prevent hydrolysis and consequent condensation, Dynasytan® MKS must be protected against moisture.

In sealed containers Dynasytan® MKS has a shelf life of 12 months.

Dynasytan® MKS is supplied ready-to-use in 180 kg drums.

## Properties and applications

### Indications for Use

Basic media accelerate hydrolysis and condensation of silicates. Such systems can be stored well under exclusion of moisture. Dynasylan® MKS contains an aminic curing agent. The zinc pigment can be added to the binder without a reaction if moisture is rigorously excluded. After application of the ready-made zinc dust paint, hydrolysis and condensation of the binder will then proceed rapidly under action of ambient humidity. The paint will cure to a hard coating. Temperature and humidity are important parameters for the curing process. Appropriate formulation of the paint and careful application this system will lead to outstanding results.

### Application details

Recommendation for the formulation of a 1-pack zinc dust paint (in weight %)	
Dynasylan® MKS	17.1
AEROSIL® R 972 (Evonik Industries)	0.5
Zinc Dust	77.5
Solvesso 100	1.0
Xylol	1.9
Special benzin 100/140	2.0

## Processing

The anti-settling agent and then the zinc dust are added to the Dynasylan® MKS. The components are dispersed using a high-speed mixer. After cooling below 40 °C the solvents are added while the mixer is running at low speeds. The paint is suitable as primer and as single coating. In salt spray test conditions (DIN 50021), with a coating thickness of approx. 80 µm the formation of white rust was within the usual limits after 1000 h. There was no formation of rust.

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**Europe/Middle-East/Africa/RoW**

**Evonik Resource Efficiency GmbH**

Business Line Silanes  
Rodenbacher Chaussee 4  
63457 Hanau-Wolfgang  
Germany  
PHONE +49 6181 59 13636  
FAX +49 6181 59 713915  
dynasytan@evonik.com  
www.dynasytan.com

**Asia / Pacific**

**Evonik (SEA) Pte. Ltd.**

Business Line Silanes  
3 Internatioanl Business Park  
#07-18, Nordic European Centre  
Singapore 609927  
PHONE +65 6809 6576  
FAX +65 6809 6699  
dynasytan@evonik.com  
www.dynasytan.com

**Asia / Pacific**

**Evonik Japan Co. Ltd**

Business Line Silanes  
12th Floor Monolith Building  
2-3-1, Nishi-Shinjuku-ku  
Tokyo 163-0912  
Japan  
PHONE +81 353 23 7446  
FAX +81 353 23 7397  
dynasytan@evonik.com  
www.dynasytan.com

**North America**

**Evonik Corporation**

Business Line Silanes  
299 Jefferson Road  
Parsippany, NJ 07054-0677  
USA  
PHONE (TOLL FREE) +1 800 237 67 45  
PHONE +1 973 929 8513  
FAX +1 973 929 8503  
dynasytan@evonik.com  
www.dynasytan.com

**Asia / Pacific**

**Evonik Specialty  
Chemicals (Shanghai) Co. Ltd.**

Business Line Silanes  
55, Chungdong Road  
Xinzhuang Industry Park  
Shanghai 201108  
P.R. China  
PHONE +86 21 61191-399  
FAX +86 21 61191-648  
dynasytan@evonik.com  
www.dynasytan.com

**Asia / Pacific**

**Evonik India Pvt. Ltd.**

Business Line Silanes  
Krislon House  
Saki Vihar Road, Anderi (E)  
Mumbai - 400 072  
India  
PHONE +91 226 7238 809  
FAX +91 226 7238 811  
dynasytan@evonik.com  
www.dynasytan.com

**North America**

**Silbond Corporation**

9901 Sand Creek Highway  
Weston, MI 49289  
USA  
PHONE +1 517 436 9316  
FAX +1 517 436 3148  
dynasytan@evonik.com  
www.dynasytan.com

**Asia / Pacific**

**Evonik Korea Ltd.**

Business Line Silanes  
94, Galsan 1-dong  
Bupyeong-gu  
Incheon, 403-081  
Korea  
PHONE +82 2320 4773  
FAX +82 2783 2520  
dynasytan@evonik.com  
www.dynasytan.com

**Latin America**

**Evonik Brasil Ltda.**

Business Line Silanes  
Alameda Campinas, 579  
01404-000 São Paulo-SP  
Brazil  
PHONE +55 11 3146 4123  
FAX +55 11 3146 4148  
dynasytan@evonik.com  
www.dynasytan.com

**Asia / Pacific**

**Evonik Taiwan Ltd.**

Business Line Silanes  
Artist Construction Bldg.  
9F, No. 133  
Min Sheng East Road, Sec 3  
Taipei, 105 Taiwan, R.O.C.  
Taiwan 10596  
PHONE +886 227 17 1242  
FAX +886 227 17 2106  
dynasytan@evonik.com  
www.dynasytan.com