

## MetalTek

### Technical Data Sheet (TDS)

#### Product Description

**MetalTek** is a single component moisture cured polyurethane coating. MetalTek is a self-priming, metallic pigmented, one step finish coat. MetalTek penetrates and seals pores, cracks and voids in the substrate or old paint film and encapsulates surface rust.

##### Product features:

- Low temperature cure
- Rust encapsulation
- Self-priming
- Temperature resistant to 390°F (200°C)

#### Recommended Uses

MetalTek is intended for industrial applications, either new build or maintenance. It is designed and developed for the treatment, encapsulation and coating of structural steel, bridges, and rusted surfaces. As MetalTek cures, it gasses off and expands. The metallic pigment is then pushed into the voids and encapsulates surface rust. This creates an extremely durable, chemical resistant, metal reinforced urethane surface.

MetalTek can be applied below freezing as the moisture cured resin system will provide a satisfactory rate of cure.

##### Industries:

- Oilfield & Energy Services
- Cranes and Construction Equipment
- Waste and Recycling Industry
- Trailers and Rolling Stock

#### Product Characteristics

<b>Finish:</b> Low gloss metallic aluminum	
<b>Volume Solids Mixed: (Unreduced)</b>	63% ± 1%
<b>VOC Mixed (Unreduced):</b> EPA Method 24	314 g/l 2.62 lb /gal
<b>Shelf Life: For unopened product (77°F (25°C))</b>	
<b>MetalTek</b>	1 year

Once opened the product will start reacting with atmospheric moisture. Only remove the amount of material that can be used within 1-2 hours. Reseal the original container once the material needed has been removed.

#### Surface Preparation

Surface must be free of all contaminants such as dust, oil, grease, and salt. MetalTek can be used where conditions are difficult and normal surface preparation is not feasible. Where and when possible – rinse or clean the area to be repaired for visual identification of mechanical damage or existing rust/corrosion.

Grind/power sand or scuff with 80 – 120 grit to remove surface rust or corrosion.

#### Mix Ratio

MetalTek is a single component product.

#### Application Method

MetalTek can be applied using most spray-painting systems. Electrostatic spray is NOT recommended. Apply 1-2 coats as required to achieve the desired film thickness. Allow sufficient flash time between coats especially with higher film builds applied (20-30 minutes).

Spray Gun Setup			
Feed Type	Fluid Tip	Application Pressures (heel of gun)	Fluid Delivery
<b>Siphon Feed</b>	1.6-1.8 mm	40-50 psi	
<b>Gravity Feed</b>	1.6-1.8 mm	30-40 psi	
<b>Pressure Feed</b>	1.4-2.0 mm	50-60 psi	10-14 oz/min
<b>Air Assist Airless</b>	9-17 Thou	1,000-1,800 psi	
<b>Airless</b>	13-17 Thou	1,700-3,000 psi	

Suggested Viscosity Ranges Ford 4 Viscosity Cup at 68°F (20°C)	
<b>Airless</b>	33 - 60+ secs
<b>Air Assist Airless</b>	31 - 34 secs
<b>Conventional</b>	30 - 32 secs

Spraying viscosity and thinning will depend on ambient conditions, spray equipment used, and the desired surface finish.

If required, recommended spraying viscosity is achieved by reducing with xylene.

#### Film Build

MetalTek recommended film thickness:

<b>Wet: WFT Unreduced</b>	9.5 – 11.0 mils	240 – 280 microns
<b>Dry: DFT</b>	6.0 – 7.0 mils	150 – 175 microns

Theoretical coverage at 1.0 mil (25 microns)  
DFT is: 1004 ft<sup>2</sup> per gallon at 100% transfer efficiency.

#### Dry Times

	68°F(20°C)	86°F(30°C)	104°F(40°C)
<b>Handle</b>	1-2 Hours	1 Hour	30 Minutes
<b>Recoat</b>	2 Hours	1 Hour	1 Hour
<b>Full Cure</b>	72 Hours	72 Hours	72 Hours

**Dry Times are subject to ambient conditions (temperature and humidity), good airflow and film build of the topcoat.**

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For best results, surface temperature must be 86°F (30°C) or less before topcoating. Maximum re-coat window without sanding is 3 days at 68°F (20°C).

Contact your Endura Representative for recoat times at lower temperatures.

**Ensure that no more than three coats of paint are applied in a 12-hour shift. This includes primer, mid-coat, topcoats, and clear coat. If more than 3 coats have been applied wait 10-12 hours to allow for proper solvent evaporation.**

For questions about scheduling please contact your Endura Representative.

#### Topcoating Information

MetalTek can be topcoated with the entire range of Endura topcoat products.

#### Clean Up

Clean all equipment immediately after use with Endura High Strength Gun Wash, Endura epoxy reducer or Endura EX-2C thinner.

Follow manufacturer's safety recommendations when using any solvent.

#### Ordering Information (sizing)

Product lead times may apply.  
Please contact your Endura Representative for further information regarding stock availability and lead times.

MetalTek	
1 quart (946ml)	FMI0023-020
1 gallon (3.78l)	FMI0023-030

Other custom sizes may be available.

#### Environmental Conditions

For optimum coating performance, product, substrate and ambient temperature should be between 68°F-77°F (20°C-25°C). To prevent condensation during application the surface temperature must be 5°F (3°C) or more above the dew point at all times.

For use outside this range please contact your Endura Representative.

#### Specifications

Hardness	ASTM D3363	F
Solvent Resistance	ASTM D4752	100 MEK Rubs; No failure
Impact Resistance	ASTM D2794	80 in. lbs; NO failure
Flexibility	ASTM D522	5/16 in. mandrel bend: NO failure

#### Safety Precautions

Please refer to all Safety Data Sheets (SDS) before using this product. SDS sheets can be found on our website at [www.endurapaint.com](http://www.endurapaint.com).