Endura Manufacturing Co. Ltd
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www.endura.ca

Fusion 90

Technical Data Sheet (TDS)

Product Description

Endura Fusion 90 is an iso-free two-component polysiloxane coating, providing a high gloss surface finish.

Product features:

- High gloss
- Cures down to 0°C
- Excellent adhesion
- Excellent chemical resistance
- Iso-Free
- Excellent UV resistance
- Easy to clean
- Resists high humidity and moisture
- Wide application window
- VOC Compliant

Recommended Uses

Fusion 90 is intended for industrial applications; either new build or maintenance.

Fusion 90 is suitable for application on all Endura primers. Fusion 90 can be applied Direct-to-Metal topcoat or over a zinc primer where required.

Fusion 90 is recommended as a protective, adhesive coat for new steel structures in severely corrosive atmospheric environments.

Industries:

- Oilfield & Energy Services
  - Well Service Vehicles
  - Drilling
  - Tanks
- Cranes and Construction Equipment
- Waste and Recycling Industry
  - Garbage Trucks
- Trailers and Rolling Stock

Mix Ratio

1 part by volume of component A **[FEAXXXX]**
(Part Number varies with color)
1 part by volume of component B **[FEB0071]**

The recommended temperature when mixed is 68-77°F (20-25°C).

Product Characteristics

Gloss: High Gloss 90+ GU at 60 deg.

Volume Solids Mixed:
84% +/- 4% (Depending on color)

Pot Life: 4-6 Hours at 77°F (25°C) and 50% RH

VOC Mixed (Unreduced): (EPA Method 24):

Plain White FEA0076: 117 g/l (0.978 lb /gal)

Note: All colors are below 420 g/l (3.5 lb/gal)
VOC content will vary with each color.

Shelf Life:
Component A: 3 years at 77°F (25°C)
Component B: 2 years at 77°F (25°C)
Note: For unopened product

Surface Prep

Direct to Metal Application:

Surfaces must be free of all contaminants such as dust, oil, grease and salt. It is recommended that all steel and other ferrous surfaces be sandblasted to a minimum of SSPC- SP6 or mechanically sanded with 80 grit sand paper.

Application over a Primer:

Fusion 90 can be applied over all Endura primer sealers and primer surfacers without sanding during their topcoat window. The topcoat window varies with each primer; see the relevant primer technical data sheet for the specific topcoat window data.

If the primer topcoat window has been surpassed; the primer should be sanded with 240 – 280 grit sandpaper to achieve inter-coat adhesion. All sanding dust must be blown off prior to application of the topcoat.

Round off all rough welds and remove all weld spatter.

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Application Method

Fusion 90 can be applied using most spray painting systems.

Note: Assure that any solvent absorbent primer surfacers are properly sealed with a primer sealer prior to application of the topcoat.

Solid Colors:
Apply one to two single wet coats allowing up to 30 minutes flash time between coats.

Spray Gun Setup

Feed Type	Fluid Tip	Application Pressures (heel of gun)	Fluid Delivery
Siphon Feed	1.6-1.8 mm	40-50 psi	
Gravity Feed	1.3-1.4 mm	30-40 psi	
Pressure Feed	1.0-1.8 mm	55-65 psi	10-14 oz/min
Air Assist Airless	9-13 Thou	1,000-1,800 psi	
Airless	11-13 Thou	1,700-3,000 psi	

Spray Viscosity

Using a Ford 4 Cup (White)

15 Seconds*	Reduce as necessary*
⟷	
Conventional	Airless

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

If required, thin Fusion 90 with a maximum of 18% Xylol to achieve the recommended spraying viscosity .

Film Build

Endura Fusion 90 has a recommended film build thickness of:

Direct to metal Application:

Wet (unreduced): 5.0 – 8.5 mils wet (125 – 210 microns)

Dry: 4.0 – 7.0 DFT (100 – 175 microns)

Application over Primer:

Wet (unreduced): 2.5 – 5.0 mils wet (65 – 125 microns)

Dry: 2.0 – 4.0 DFT (50 – 100 microns)

Note: With poor hiding colors film build may be higher

Theoretical coverage at 1.0 mil (25 microns)
Average DFT: 1350 ft² per gallon at 100% transfer efficiency

Dry Times

	68°F (20°C)	86°F (30°C)	104°F (40°C)
Dust Free	120 Mins.	90Mins.	60 mins
Full Cure	7 Days		

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

For best results surface temperature must be 86°F (30°C) or less before topcoating.

Maximum re-coat window without sanding is 18 hrs at 68°F (20°C). After 18 hours Fusion 90 must be sanded to achieve inter-coat adhesion.

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Sanding with 320-400 grit sandpaper before recoating is recommended.

Important Note: 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.

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)

Available in Pail Kits. Other custom sizes may be available.

2 Gallons		
Comp A Part numbers vary by color	FEAXXXX-030	1 Gal
Comp B	FEB0071-030	1 Gal

10 Gallons		
Comp A Part numbers vary by color	FEAXXXX-050	5 Gal
Comp B	FEB0071-050	5 Gal

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.

Note: For use outside this range please contact your Endura Representative.

Specifications

Hardness	ASTM D3363	H
Impact resistance	ASTM D2794	20 in. lbs; NO failure
Abrasion resistance (1000 cycles CS-17)	ASTM D4060	70 mg loss
Flexibility	ASTM D522	½" mandrel bend: NO failure
Service Temp	-40°C to +93°C -40°F to 200°F	

Safety Precautions

Please refer to all Safety Data Sheets (SDS) before using this product. SDS sheets can be found on our website at www.endura.ca.