

# E4C Series

## High Solid Epoxy Topcoat



**Product** E4C Series High Solid Epoxy Topcoat

**Item Class** High Solid Epoxy Topcoat

E4C Series is a two component, chemically cured high solid epoxy topcoat formulated per aerospace and military requirements. It provides excellent resistance to various chemicals including hydraulic fluids, solvents, aerospace fuels, phosphates, and many other corrosion causing agents. It offers good coverage and excellent adhesion.

**Specifications** Product is manufactured to meet the performance requirements of the following specifications:

DHMS C4.11 - EMS 93284 Cl A – GMS 5006 - MIL-PRF-22750G Ty I-II, Cl  
H Gr A & B - MCS 9010 - DEF-STAN-80-161

**Catalyst & Additives** Catalyst/Activator Thinner Additive

530	CF3	CRL25 (Rolling/Brushing)
540 (Semi-Gloss/Flat)		
*AVAILABLE IN VARIOUS KIT SIZES		

**Use of Primers** Contact your local 3Chem representative for a complete list of epoxy primers which may be utilized with this system.

**Surface Preparation** Prepare substrate per OEM requirements. Refer to application guide for detailed instructions or contact your local 3Chem representative for assistance.

**Mixing Instructions**

Base	Catalyst/Activator	Thinner	Mix Ratio
E4C11-XXXX (Gloss)	530	See Chart Below	1:1:.20
E4C12-XXXX (Semi-Gloss)	540	See Chart Below	1:1:.20
E4C13-XXXX (Flat)	540	See Chart Below	1:1:.20

Shake (Base) for 15 minutes to assure no solid settlement remains in can. Add component B catalyst to component A paint first. Then add recommended thinner from chart below. Use of thinner depends on environmental conditions. Refer to thinner option chart below for detailed mixing information. Mix ratio for material is 1-part component A paint, 1-part component B catalyst and .20 parts thinner. (Kit including thinner should yield either 2.20 gallons or 2.20 quarts.

**Induction Time** Although no induction time is needed. Once mixed together, ensure that admixed material is continuously stirred for at least 5 minutes before proceeding.

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**Spraying Viscosity** Gloss Colors: 17-20 Seconds with #2 Zahn cup, Semi-Gloss/Flat Colors: 19-22 Seconds with #2 Zahn cup

**Pot Life** 6 Hours @ 21° Celsius, 70° Fahrenheit

**Film Thickness** 2-3 MILS DFT (2 Coats @ 1-1.5 DFT) Wet film thickness should be 4-6 MILS total between 2 coats

### Application Instructions

Temperature and Humidity	Minimum	Maximum
Temperature Celsius	11°	35°
Temperature Fahrenheit	52°	95°
Humidity	33%	74%

### Spray Equipment

Spray Gun Type	Tip/Nozzle Size	Cap Pressure	Pot Pressure
Conventional Air	1.4 - 1.8 mm	40 to 60 psi	10 to 20 psi
HVLP	1.4 - 1.8mm	10 psi Maximum	10 to 20 psi
Electrostatic	1.3 - 1.6mm	45 to 60 psi	10 to 40 psi

### Dry Times and Thinner Options

Temperature	Thinner	Wet-Edge	Time Between Coats	Dry to Tape	Dry to Handle	Full Cure
52-65°F (11-18°C)	CF3	40 Min	30-50 Min	7-8 Hours	8-10 Hours	6 Days
66-85°F (19-29°C)	CM100	35 Min	30-45 Min	6-7 Hours	7-8 Hours	6 Days
86-95°F (30-35°C)	CS28	30 Min	30-40 Min	6-7 Hours	7-8 Hours	6 Days

Only mix enough material to be applied on initial coat. Always add component B catalyst to component A paint then add recommended reducer based on environmental condition. Refer to thinner option chart above. Complete kit of material will yield 2.20 US Gallons (8.3 liters). 1-gallon component A paint, 1-gallon component B catalyst, 25 US oz. (739 ml) thinner.

Apply one tack coat of material using a uniform spray pattern. Wait recommend time between coats based on chart above. Initial coat should be tacky before applying second coat. Applying second coat too early will lead to possible running of material. Waiting too long will lead to a dull finish. Mix enough material to be applied on second coat. Use same mixing instruction from initial coat above.

Apply a second medium wet coat using a uniform spray pattern. Second coat must appear wet and uniform once complete. Take care not to leave any dry areas or spots. Wet these areas if necessary, to assure a uniform finish. Wait appropriate dry to tape or dry to handle time based on chart above.

**Force Cure:** If deemed necessary oven curing is possible to reduce dry to tape and handle times. After application, allow coating to air dry for 1 hour at room temperature (75° F), then force cure for 2 hours at 120° F.

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<b>Theoretical Coverage</b>	375-575 sq. ft / gallon @ 1 mil    9-11m <sup>2</sup> / liter @1 mil *Coverage based on 100% transfer efficiency rate
<b>Color</b>	Available in all color ranges
<b>Gloss</b>	Gloss colors: 90 minimum @ 60 degrees Semi-Gloss colors: 17-30 @ 60 degrees Flat/Matt Colors: Less than 5 @ 60 degrees
<b>Volatile Organic Compound</b>	340 g/l
<b>Shelf Life</b>	24 Months (When stored in climate-controlled environment between 60-80° F) *Product may be re-certified upon inspection by 3Chem.
<b>Safety Instructions</b>	Always read material safety data sheet (SDS) and product label before utilizing this product. Product SDS is available upon request.

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