

# Technical Data Sheet

## EPIKOTE™ Resin 874L-X-90

### Product Description

EPIKOTE Resin 874L is a Bisphenol-A based epoxy resin solution that has been modified to improve flexibility and to reduce solution viscosity. The standard product is supplied as a 90% wt solution in Xylene (EPIKOTE Resin 874L-X-90). This resin solution is ideally suited to formulate ambient temperature curing systems with significantly lower levels of Volatile Organic Compounds (VOC) when compared to conventional solvent-borne epoxy-polyamide systems.

In ambient cure applications, EPIKOTE 874L-X-90 out-performs standard liquid epoxy resin grades with respect to flexibility of the epoxy coating; as well as, standard solid epoxy resin grades with respect to solvent emissions from the coating formulation. This epoxy resin solution can be combined with the full range of curing agents typically used for liquid epoxy resins. It is recommended for use with high performance types as Mannich bases, cycloaliphatic polyamines and low viscosity polyamides.

### Application Areas/Suggested Uses

EPIKOTE 874L-X-90 is designed for use in high solids, ambient cure epoxy coatings and is suitable for use in either epoxy primers or topcoats in these applications:

- Industrial maintenance (protective coatings)
- Marine coatings
- Industrial finishes

### Benefits

- Complies with stringent VOC requirements (<100 g/L VOC)
- Offers the potential for cost savings
- Very good flexibility and corrosion resistance
- Easy application by roller, brush or spray

### Sales Specifications

Property	Value	Unit
Color	3 max	Gardner
Epoxy Equivalent	230 - 270	g/eq
Epoxy Number	15.9 - 18.7	%
Solids	89 - 91	% m/m
Viscosity* @25°C	2100 - 2300	mPa.s**

\* Number of grams of resin containing 1 equivalent of epoxide (Weight per equivalent, WPE, is alternative term)

\*\* 1mPa.s = centipoise

### Typical Properties

Property	Value	Unit
Density Solution 25°C	1.07 - 1.17	kg/L
Solvent	Xylene	

## Performance details

The table below shows the performance of EPIKOTE Resin 874L-X-90 compared to a standard solid solution resin grade in a red iron oxide anticorrosion primer.

PROPERTY	Unit	EPIKOTE 874L-X-90 <sup>†</sup>	EPIKOTE 874L-X-90 <sup>†</sup>	EPIKOTE Resin 1001-X-75 <sup>**</sup>	
EPIKURE™ Curing agent			3155	195	3115-X-70
Pigment volume concentration	%		27	30	30
Solids (%wt) at application viscosity	%		80	83	60
Volatile Organic Compounds (VOC)	g/L		<250	<250	<450
Pot life	Hours		4	4	8
Application viscosity	Pa.s		0.2-0.3	0.2-0.3	0.2-0.3
Dry film thickness	mm		75	75	130
Number of coating layers			1	1	4
Corrosion resistance					
Salt spray 1500 hrs			F2-M6	F8-F4	F2-M6
Chemical resistance					
10% Sodium hydroxide			10	F6 at bottom	10
10% Sulphuric acid		170 hrs.	VD8 at bottom	170 hrs. FM4	96 hrs. Delamination
10% Acetic acid		24 hrs.	MD8	170 hrs. M4	29 hrs. Delamination
Solvent resistance					
Xylene (1500 hrs.)			10	10	10
MIBK (1200 hrs.)		10	Glossy	10 Glossy	10 Loss of gloss
<p>? Paint formulation similar to EPIKOTE Technical Bulletin EK 2.2.4.6</p> <p>?? Paint formulation similar to EPIKOTE Technical Bulletin EK 2.2.4.1</p>					

EPIKOTE Resin 874L-X-90  
<https://www.hexion.com/en-US/product/epikote-resin-874l-x-90>

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## Cost Savings

Conventional solid resin based systems typically have VOC emission levels of ~450 g/l at application viscosity. The current VOC emission limit for marine and maintenance applications in many European countries and in the USA is 340 g/L and in some cases even down to 250 g/L. EPIKOTE 874-X-90 enables the formulation of high-solids paints with VOC emission levels down to less than 100 g/L. Since EPIKOTE 874-X-90 can meet both current and future VOC legislation; the customer can avoid future re-formulation costs. Lower VOC emissions correspond with solvent cost savings. Significant savings are also achieved by reduced labor costs. Paints with higher volume solids content require fewer spraying cycles to achieve the desired dry film thickness. Packaging, transportation and storage cost savings are achieved because of the very high solids content of the paint. Finally, the versatility of EPIKOTE 874-X-90 makes it a viable alternative to both solid and liquid resin grades in many different applications. This offers many opportunities for grade range rationalization and inventory cost reduction

## Safety, Storage & Handling

Please refer to the MSDS for the most current Safety and Handling information.

Please refer to the Hexion web site for Shelf Life and recommended Storage information.

For literature and technical assistance, visit our website at [www.hexion.com/epoxy](http://www.hexion.com/epoxy)

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