

# Starting Formulation

SF 1032

Coal Tar Coating

EPON™ Resin 834 / EPIKURE™ Curing Agent 3223

- Features
- Provides high film build (5-8 mils dry film thickness) per coat
  - Low VOC of 195 grams/liter (1.62 pounds/gallon)
  - Low moisture permeability
  - Recommended for severely corrosive environments where black color is not objectionable
  - Well-suited for fresh and salt water immersion, as well as for acidic exposures
  - Excellent adhesion to properly cleaned steel and concrete
  - Recommended for heated insulated piping after the pipe has been properly sandblasted

Formula	Material	Supplier	Pounds	Gallons
Part A				
	Coal Tar Pitch, CP-250	Allied Signal, Inc.	367.5	36.2
Heat coal tar to about 120°F, then add the following;				
	Xylene		38.7	5.4
	Secondary butyl alcohol		64.9	9.7
When solution is homogeneous, then add				
	EPON Resin 834-X-90	Hexion	273.6	28.8
Pigments				
	Mistron™ CF5A	Cyprus Industrial Minerals Co.	247.0	10.6
	Cab-O-Sil™	Cabot Corp.	10.4	0.6
Disperse with high speed disperser to grind Hegman 4-6				
	Total Part A		1,002.1	91.3
Part B				
	EPIKURE 3223 Curing Agent	Hexion	31.3	4.0
	Secondary butyl alcohol		31.4	4.7
	Total Part B		62.7	8.7
	Total Part A & B		1,064.8	100.0

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Mixing Instructions

	<u>Pounds</u>	<u>Gallons</u>
Part A	1,002.1	91.3
Part B	<u>62.7</u>	<u>8.7</u>
Part A + B	1,064.8	100.0

To manufacture the base component, heat the coal tar pitch to 120 °F; thin with xylene/SBA mixture and then add the EPON Resin 834-X-90. Disperse the pigments in this vehicle using a high shear mixer. Charge the ingredients of the curing agent component to a suitable separate container and mix thoroughly. Package the base component and curing agent component separately to be mixed just prior to application.

**Typical Handling Properties** Slowly, and very carefully, add the curing agent component to the base component with good agitation. Make certain that no curing agent comes in contact with the applicator. Continue mixing until the curing agent is thoroughly dispersed. Allow the mixture to stand for 30 minutes before application. Do not mix more material than can be applied in a three to four hour period and do not mix in batches larger than five gallons.

When applied to steel and concrete surfaces, two coats of five to eight mils (dry film thickness) are recommended to yield a total dry film thickness of 10 to 15 mils. Over steel, improved resistance to undercutting may be obtained by applying an appropriate zinc-rich primer, under the EPON Resin/coal tar coating. When used as a masonry filler, the material should be applied over a small area by brush or spray, and quickly smoothed out by squeegee. Repeat the process until entire area to be filled has been so treated.

For application of this system, we recommend the use of a fresh-air-supplied hood and other personal protective equipment and clothing sufficient to protect the applicator.

In contrast to conventional coatings, which cure either solely or to some degree by solvent evaporation, this formulation cures by chemical reaction. As a result, the set-to-touch time is quite long-about 3 hours at 75 °F.. However, under favorable application conditions (temperature greater than 60 °F), the coating becomes hard enough to handle after drying overnight, and develops full chemical and solvent resistance within one week.

**Typical Formulation Properties** Table 1 / Formulation Properties

	<u>Units</u>	<u>Value</u>
Nonvolatile content by weight	%	84.8
Weight per gallon	lb/gal	10.7
Pigment : Binder Weight Ratio		28.5/71.5
Volatile Organic Compound (VOC)	lb/gal	1.62
	g/L	195
Color		Black
Viscosity of base component, 24 hours after manufacture	poise	50-60
Induction Time	Min	30
Pot life	Hrs	3-4

**Storage** Recommendations regarding storage conditions can be obtained by visiting our web site at [www.hexion.com](http://www.hexion.com)

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## General Information

These are starting formulations and are not proven in the user's particular application but are simply meant to demonstrate the efficacy of the products and to assist in the development of the user's own formulation. It is the user's responsibility to fully-test and qualify the formulation, along with the ingredients, methods, applications or equipment identified herein ("Information"), by the user's knowledgeable formulator or scientist, and to determine the appropriate use conditions and legal restrictions, prior to use of any Information.

## Safety, Storage & Handling

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

Exposure to these materials should be minimized and avoided, if feasible, through the observance of proper precautions, use of appropriate engineering controls and proper personal protective clothing and equipment, and adherence to proper handling procedures. None of these materials should be used, stored, or transported until the handling precautions and recommendations as stated in the Material Safety Data Sheet (MSDS) for these and all other products being used are understood by all persons who will work with them. Questions and requests for information on Hexion Inc. ("Hexion") products should be directed to your Hexion sales representative, or the nearest Hexion sales office. Information and MSDSs on non-Hexion products should be obtained from the respective manufacturer.

## Contact Information

For product prices, availability, or order placement, please contact customer service:

[www.hexion.com/Contacts/](http://www.hexion.com/Contacts/)

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