

# Starting Formulation

## SF 1728

### Waterborne Gray Midcoat – 3:1 Ratio

### EPI-REZ™ Resin 6520-WH-53 / EPIKURE™ Curing Agent 6870-W-53

**Introduction** This formulation is designed as a mid-coat between an epoxy based primer and an acrylic topcoat. It is a rapid drying, low VOC coating with a convenient combining ratio (3:1 by volume) and requires no induction time.

**Suggested Uses**

- Mid-coat metal over primed surface

**Features**

- Combining ratio of 3:1 by volume
- VOC level of 0.69 lb/gal. (83 g/l)
- Rapid dry and recoat
- No induction time

<sup>1</sup> VOC is the acronym for volatile organic compound as defined by the U.S. 40CFR51.100 (s).

<sup>2</sup> HAP is the acronym for hazardous air pollutant as defined by the U.S. Clean Air Act Amendments of 1990.

Formula	Material	Supplier	Pounds	Gallons
Part A				
	EPI-REZ Resin 6520-WH-53	Hexion	300.2	33.35
	Dipropylene Glycol n-Butyl Ether	Dow Chemical Company	28.2	3.72
	CIBA® EFKA® 2527 Defoamer	Ciba Specialty Chemicals	2.8	0.37
	Bayferrox Black 318M	Lanxess Corporation	22.0	0.54
	10 ES WOLLASTOCOAT®	NYCO® Minerals, Inc.	93.8	3.87
	SPARMITE™ Barytes	Elementis Pigments Inc.	62.8	1.71
	Ti-Pure® R-960	Du Pont Company	151.4	4.69
	ZEEOSPHERES® type 400	3M Company	62.6	3.12
	Wet Ground Mica, 325 Mesh	Franklin Industrial Minerals	6.6	0.28
<i>High Speed Disperse to a texture of 5-6 Hegman Scale. Reduce speed, then add</i>				
	EPI-REZ Resin 6520-WH-53	Hexion	93.1	10.35
	DI Water		<u>108.5</u>	<u>13.00</u>
		Total Part A	932.0	75.00
Part B				
	EPIKURE Curing Agent 6870-W-53	Hexion	200.0	22.34
	DI Water		<u>22.2</u>	<u>2.66</u>
		Total Part B	222.2	25.00

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Total Part A & B	1154.2	100.00
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Mixing Instructions

	<u>Pounds</u>	<u>Gallons</u>
Part A	932.0	75.00
Part B	<u>222.2</u>	<u>25.00</u>
Part A + B	1154.2	100.00

Typical Formulation Table 1 / Formulation Properties Properties

	<u>Units</u>	<u>Value</u>
Mix ratio Part A: Part B	By volume	3 : 1
Amine hydrogen equiv. to Epoxy equiv. ratio (based on solids)		4.2 : 1
Pigment : Binder Weight Ratio		1.3 : 1
Total weight solids	%	60.9
Total volume solids	%	45.4
Pigment volume concentration (PVC)	%	31.3
Volatile Organic Compound (VOC)	lb/gal	0.69
	g/L	83
Induction Time	min.	None
Pot life	hrs	3 - 4
Viscosity @ 25°C		
Part A + Part B	KU	100
Dilute w/ 30 lb. of additional water	KU	~80
Dilute w/ 80 lb. of additional water	KU	~65

Typical Film Table 2 / Film Performance Properties <sup>1</sup> Properties

	<u>ASTM Method</u>	<u>Units</u>	<u>Value</u>
Pencil hardness on concrete	D-1186		
24 hrs			2B
14 days			F
Set to touch dry	D-5895 B	hrs	<0.25
Cotton free	D-5895 B	hrs	1.0
Through dry	D-5895 B	hrs	7.5
Set to touch dry	D-5895 B	hrs	0.5
Impact Resistance	D-2794		
Direct		in/lb	24
Reverse		in/lb	2
Adhesion (X-cut)	D-3359		5A

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MIBK Spot test (soften 2 pencils units)

D-1308

min.

>60

<sup>1</sup> Applied to cold-roll steel, cured for 14 days at 77°F and 55% RH

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

#### 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.

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#### Contact Information

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

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

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