

Starting Formulation

SF 1700

Waterborne White Primer

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

Introduction This waterborne white primer is designed as an alternative to standard solventborne epoxy / polyamide coatings. This formulation has a convenient 4:1 w/w combining ratio and does not require an induction time. It offers superior anticorrosive performance; visible end of pot life, and a good balance of final performance properties (hardness, flexibility, abrasion-and chemical- resistance), This primer can be readily-overcoated with a variety of coating types in two to four hours.

- Suggested Uses**
- Corrosion resistant metal primer
 - Transportation primers (truck, bus)
 - Fast dry automotive refinish primer

- Features**
- Combining ratio of 4:1 by volume
 - Non-HAP¹ formula
 - VOC² level of 0.82 lb/gal. (98 g/l)
 - Contains corrosion inhibitive pigment
 - Rapid dry and recoat

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

² 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 ¹	Hexion	300.0	33.33
	PPH Propylene Glycol Phenyl Ether		26.0	2.95
	EFKA® 2526 Defoamer	CIBA Specialty Company	3.0	0.35
	Ti-Pure® R-960	Du Pont	100.0	3.10
	10 ES WOLLASTOCOAT®	NYCO Minerals, Inc.	100.0	4.12
	Sparmite™ A Barytes	Elementis Pigments Inc.	67.0	1.83
	HALOX® SW-111	HALOX Pigments	94.7	3.98
	Wet Ground Mica, 325 Mesh	Franklin Industrial Minerals	7.0	0.30
<i>High Speed Disperse to a texture of 5-6 Hegman Scale. Reduce speed, then add</i>				
	EPI-REZ Resin 6520-WH-53	Hexion	107.5	11.94
	CoatOSil™ 1770 Silane	Momentive Performance Materials	8.6	0.98
	Water		<u>142.9</u>	<u>17.12</u>
	Total Part A		959.7	80.00

Part B

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EPIKURE Curing Agent 6870-W-53	Hexion	180.0	19.78
Raybo 60	Raybo Chemical	<u>2.0</u>	<u>0.22</u>
	Total Part B	182.0	20.00
	Total Part A & B	1141.7	100.00

¹ Formulated at 1:1 stoichiometry (epoxy equiv. solids: amine equiv. solids).

Mixing Instructions

	<u>Pounds</u>	<u>Gallons</u>
Part A	959.7	80.0
Part B	<u>182.0</u>	<u>20.00</u>
Part A + B	1142.7	100.00

Typical Formulation Table 1 / Formulation Properties Properties

	<u>Units</u>	<u>Value</u>
Mix ratio Part A : Part B	By volume	4 : 1
	By weight	5.27 : 1
Pigment : Binder Weight Ratio		1.09 : 1
Total weight solids	%	61.0
Total volume solids	%	48.5
Pigment volume concentration (PVC)	%	27.2
Volatile Organic Compound (VOC)	lb/gal	0.82
	g/L	98
Induction Time	minutes	None
Potlife	hrs	4 - 5

Typical Film Table 2 / Film Performance Properties on smooth cold-rolled steel (CRS) panels ¹ Properties

	<u>ASTM Method</u>	<u>Units</u>	<u>Value</u>
Dry Film Thickness	D-1186	mils	2 – 4
Dry Times (drawdowns, 4 mil dry)	D-5895B		
Set-to-Touch, Stage II		hrs	0.3
Cotton Free, Stage III		hrs	0.5
Through, Stage IV		hrs	1.5
Pencil hardness	D-1186		
24 hrs			F
7 days			2H
Specular Gloss, (60° / 20°)	D-523	%	25/4
Impact Resistance	D-2794		
Direct		in/lb	28
Reverse		in/lb	4

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MEK resistance	D-5402	double rubs	150
DI Water Resistance	D-870	days	83
Blister rating, field	D-714		10 (none)
Salt spray resistance	B-117	hrs	2,000
Blister rating, field	D-714		8F - 6F
Scribe creep	D1654	mm	4 – 6
Salt Spray Resistance	B-117	hrs	1000
Blister rating, field	D-714		10 (none)
Scribe creep	D1654		4 - 6

¹ Performance data is reported after 7 days at 77°F and 50% RH

Storage Recommendations regarding storage conditions can be obtained by visiting our web site at 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

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