

Starting Formulation

SF 1741

Waterborne White Primer – 4:1 Ratio with <100 g/L VOC

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

Introduction This waterborne white primer is designed as an alternative to traditional, high VOC, solventborne epoxy / polyamide coatings. This formulation does not require an induction time. It provides 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 overcoated with a variety of coating types in two to three hours. Compared to Starting Formulation 1700, it offers improved wet adhesion, in the scribed and unscribed areas, after corrosion testing or water immersion.

- Suggested Uses**
- Corrosion resistant metal primer for industrial maintenance
 - Transportation primers (truck, bus, ACE)
 - Railcar coatings & small metal parts

- Features**
- Non-HAP¹ formula
 - VOC² level of 0.71 lb/gal. (85 g/l)
 - Rapid dry and recoat (6-7 hrs, dry-through)

² VOC is the acronym for volatile organic compound as defined by the U.S. 40CFR51.100 (s).

¹ 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	314.7	34.97
	Propylene Glycol Propyl Ether (PnP)	Dow Chemical Co	7.3	0.83
	Dipropylene Glycol n-Butyl Ether (DPnB)	Dow Chemical Co	12.8	1.71
	EFKA 2526 Defoamer	CIBA Specialties Company	3.1	0.41
	Anti-Terra U 100	BYK Chemie	10.5	1.25
	Ti-Pure R-960	Du Pont	125.9	3.69
	Sparmite A Barytes	Elementis Pigments	70.3	1.92
	10ES Wollastocoat	NYCO Minerals	104.9	4.41
	Disparlon L-1982N	King Industries	4.2	0.5
	HALOX SW-111	HALOX Pigments	99.3	4.12
	Wet Ground Mica, 325 Mesh	King Mountain Minerals	3.1	0.13
<i>High Speed Disperse to a texture of 5-6 Hegman Scale. Reduce speed, then add while continuing to mix</i>				
	EPI-REZ Resin 6520-WH-53	Hexion	129.0	14.34
	CoatOSil1770 Silane	Momentive Performance Materials	4.5	0.51
	BYK 219	BYK Chemie	4.5	0.51

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DTN 340

Water		<u>89.1</u>	<u>10.70</u>
	Total Part A	983.2	80.00
Part B			
EPIKURE Curing Agent 6870-W-53	Hexion	113.5	12.47
Raybo 60	Raybo Chemical	2.1	0.22
Water		<u>60.8</u>	<u>7.30</u>
	Total Part B	176.4	20.00
	Total Part A & B	1159.6	100.00

Mixing Instructions	<u>Pounds</u>	<u>Gallons</u>
Part A	983.2	80.00
Part B	<u>176.4</u>	<u>20.00</u>
Part A + B	1159.6	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
Amine hydrogen equiv. to Epoxy equiv. ratio (based on solids)		0.6 : 1
Total weight solids	%	61.5
PVC	%	30
Volatile Organic Compound (VOC)	lb/gal	0.71
	g/L	85
Viscosity	KU	73
Pot life	hrs	3-4

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

	<u>ASTM Method</u>	<u>Units</u>	<u>Value</u>
Dry Film Thickness	D-1186	mils	3 – 4
Dry Times (drawdowns, 3 mil dry)	D-5895B		
Set-to-Touch, Stage II		hrs	1.5
Cotton Free, Stage III		hrs	2.5
Through, Stage IV		hrs	6.5
Pencil hardness	D-1186		
24 hrs			3B
3 days			H
Gloss, (60°)	D-523	%	10
Sag resistance	D-4400	mils	16
Salt Spray Resistance	B-117	hrs	1000

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Blister rating, field	D-714		10 - #9F
Scribe creep	D-1654	mm	0-3
Adhesion, in field area after 1 hr. recovery	D-3359		4A, 5B

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

Storage Recommendations regarding storage conditions for Hexion epoxy resins, modifiers and curing agents can be obtained by visiting our web site at www.hexion.com/epoxy

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. The handling precautions and recommendations, as stated in the Material Safety Data Sheet (MSDS), for each product should be reviewed and understood by all persons before these products are used, stored or transported. 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/

For literature and technical assistance, visit our website at www.hexion.com/epoxy

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