

Starting Formulation

SF 1804

Gloss White Enamel (Maximum Acid Resistance) EPI-REZ™ Resin 5522-WY-55 / EPIKURE™ Curing Agent 8290-Y-60

Suggested Uses General use primer

Alternate formula to Starting Formula 1824

Features Formulated for improved acid resistance

Formula	<u>Material</u>	<u>Supplier</u>	<u>Pounds</u>	<u>Gallons</u>
Part A				
	EPI-REZ Resin 5522-WY-55	Hexion	501.2	56.00
	CYCLO SOL 63	Shell Chemical Co.	22.2	3.00
	Ektasolve EP, 2-Propoxyethanol	Eastman Chemical Products, Inc.	22.7	3.00
	DI Water		<u>38.9</u>	<u>4.67</u>
	Total Part A		585.0	66.67
Part B				
	EPIKURE Curing Agent 8290-Y-60	Hexion	81.0	9.17
	Pacote 847 Defoamer	Hydrite Chemical Co	4.0	0.56
	Ti Pure R-960	Du Pont Co.	250.0	7.74
	DI Water		33.3	4.00
	<i>High speed disperse to a texture of 7 ½ + Hegman</i>			
	DI Water		96.1	11.53
	Glacial Acetic Acid		<u>2.9</u>	<u>0.33</u>
	Total Part B		467.3	33.33
	Total Part A & B		1,052.3	100.00

Mixing Instructions

	<u>Pounds</u>	<u>Gallons</u>
Part A	585.0	66.67
Part B	<u>467.3</u>	<u>33.33</u>
Part A + B	1,052.3	100.00

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	Resin Composition	Units	Value
Part A		% solids	85.0
Part B		% solids	15.0
Part A + B		% solids	100.0

Typical Formulation Table 1 / Formulation Properties Properties

	Units	Value
Total weight solids	%	54.6
Total volume solids	%	41.1
Pigment volume concentration (PVC)	%	18.8
Volatile Organic Compound (VOC)	lb/gal	2.07
	g/L	249
Induction Time	min.	30
Reduction for Conventional Spray by Volume		
Parts A and B	parts	25
Water	parts	1
Viscosity @ 25°C		
Part A	KU	97
Part B	KU	75
Part A + B	KU	80

Coatings Performance Comparison To determine if a blend of EPI-REZ Resin 3520-WY-55 and EPI-REZ Resin 3546-WY-53 (77% to 23% w/w blend of dispersion as supplied) could be substituted on a pound for pound basis for an EPI-REZ Resin 5522-WY-55 dispersion in this application, we compared the performance of this starting formulation with that of Starting Formulation No. 1824.

Starting Formulation No. 1824 is a gloss white enamel based on EPI-REZ Resin 3520-WY-55 and EPI-REZ Resin 3546-WY-53 (77% to 23% w/w blend of dispersion as supplied) and EPIKURE Curing Agent 8290-Y-60 that was designed for maximum acid and corrosion resistance.

The results of this performance comparison are shown on the next page.

Typical Film Table 2 / Film Performance Properties ¹ Properties

			<u>SF 1804</u>	<u>SF 1824</u>
	<u>ASTM Method</u>	<u>Units</u>	<u>Value</u>	<u>Value</u>
Film thickness	D 1186	mils	1.6-1.7	1.7-1.8
24 hr. pencil hardness	D 1186		3B	4B
7 day pencil hardness			F	F
Set to touch dry	D 5895-B	hrs	1.5	2.5
Cotton-free dry		hrs	6.0	4.0

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Thru-dry		hrs	7.0	12.0
Adhesion	D 3359-A		5A	5A
MEK double-rubs	D 4752		94	60
Impact resistance Direct/Reverse	D 2794	in.-lbs.	24/4	28/4
Distilled water immersion at 60 °C	D 870		8MD-8D	6F-6MD
Salt spray resistance	B-117		8F	6F-8F
			3.5 mm creep	3.5 mm creep
Prohesion resistance (<i>Expose coated panels to salt spray of 0.35%wt ammonium sulfate and 0.05%wt sodium chloride at 35 °C for one hour and then dry at 40 °C for 1 hour.</i>)			8F	6 mm creep
			8 mm creep	Good adhesion
			CLOA*	

* "CLOA" is the abbreviation for "Complete Loss of Adhesion" after drying out

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.

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:

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

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