

Starting Formulation

SF 1741 WB White Primer - 6520 6870 (less than 100 g/L VOC) Waterborne White Primer – 4:1 Ratio with

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 |

Generated: February 23, 2018

Issue Date:

Revision:

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| | | | |
|---------------------------|--------------------------|-------|------|
| 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 |

High Speed Disperse to a texture of 5-6 Hegman Scale. Reduce speed, then add while continuing to mix

| | | | |
|----------------------------|---------------------------------|--------------|--------------|
| EPI-REZ Resin 6520-WH-53 | Hexion | 129.0 | 14.34 |
| CoatOSil1770 Silane | Momentive Performance Materials | 4.5 | 0.51 |
| BYK 348 | BYK Chemie | 4.5 | 0.51 |
| 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

Pounds

Gallons

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

| - | <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 |

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| | | | |
|--|--------|------|----------|
| Sag resistance | D-4400 | mils | 16 |
| Salt Spray Resistance | B-117 | hrs | 1000 |
| 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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