

Multi-Use Epoxy Primers

ERP Series Primers

ERP-420 Gray
ERP-520 White

ERP Series Primers are multi-use primers that provide excellent chemical and corrosion resistance with an extremely hard finish. They have excellent adhesion properties when applied over properly prepared and minimally prepared substrates and can be applied in a wide range of temperatures (down to 32°F, 0°C). Topcoating is not required to provide corrosion protection.

ERP Series Primers are an excellent choice for interior applications where one-coat and high build protection is required.

ERP primers may be used when water immersion is a requirement in performance specifications.

Features and Benefits:

- Excellent adhesion to wide range of substrates
- Excellent chemical resistance
- Excellent corrosion resistance
- Low temperature cure range (down to 32°F, 0°C)

Associated Products:

- ERP-201 Fast Multi-Use Epoxy Primer Catalyst
- ERP-420 Fast Multi-Use Epoxy Primer – Gray
- ERP-520 Fast Multi-Use Epoxy Primer – White

Physical Constants: *All values are theoretical, depend on color and are Ready-to-Spray. Actual values could vary slightly due to manufacturing variability.*

	ERP-420 alone	ERP-420 / ERP-201	ERP-520 alone	ERP-520 / ERP-201
Percent solids (by weight)	84.7%	83.0%	85.4%	83.4%
Percent solids (by volume)	75.5%	71.9%	75.4%	71.9%
HAPs	≤1.9 lbs/gal	≤2.1 lbs/gal	≤1.9 lbs/gal	≤2.1 lbs/gal
Photo-chemically reactive	Yes	Yes	Yes	Yes
Flashpoint: ERP-420 = 70°F (21°C), ERP-520 = 70°F (21°C), ERP-201 = 66°F (19°C)				

RTS Combinations:	ERP-420 alone	ERP-420 / ERP-201	ERP-520 alone	ERP-520 / ERP-201
Volume Ratio	As is	1 : 1	As is	1 : 1
Applicable Use Category	Primer	Primer	Primer	Primer
VOC Actual	212 (g/L) 1.77 (lbs/gal)	243 (g/L) 2.03 (lbs/gal)	212 (g/L) 1.77 (lbs/gal)	243 (g/L) 2.03 (lbs/gal)
VOC Regulatory (less water less exempt)	212 (g/L) 1.77 (lbs/gal)	243 (g/L) 2.03 (lbs/gal)	212 (g/L) 1.77 (lbs/gal)	243 (g/L) 2.03 (lbs/gal)
Density	1390 (g/L) 11.59 (lbs/gal)	1433 (g/L) 11.95 (lbs/gal)	1457 (g/L) 12.15 (lbs/gal)	1467 (g/L) 12.23 (lbs/gal)
Volatiles wt. %	15.3	17.0	14.6	16.6
Water wt. %	0.0	0.0	0.0	0.0
Exempt wt. %	0.0	0.0	0.0	0.0
Water vol. %	0.0	0.0	0.0	0.0
Exempt vol. %	0.0	0.0	0.0	0.0

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Directions for Use

Surface Preparation:



The surface to be coated must be sanded and free of all contamination (including dust, dirt, oil, grease and oxidation). A chemical treatment (or conversion coating) will improve adhesion and performance properties of the finished coat. Variability can occur with substrates, preparation, application method or environment. We recommend that adhesion and system compatibility be checked prior to full application.

Metal	Direct to Substrate
Cold Rolled Steel	Excellent
Hot Rolled Steel	Excellent
Galvaneal	Not Recommended
Galvanized	Excellent
Aluminum	Excellent
Plastic / Fiberglass	Not Recommended

Mix Directions:



Mix Directions: Mechanical mixing is required.
Stir thoroughly before and occasionally during use.



Thinning: From 10% (to stay under 2.8 VOC) and up to 25% (to stay under 3.50 VOC) of Q80 (Xylene).



Blend Ratio	ERP Series : ERP-201 1 : 1 1 part component A (ERP-420 or ERP-520) to 1 part component B (ERP-201)
Pot Life @ 77°F (25°C):	4 hours
Spray Viscosity Range:	40 sec (#3-zahn) no reducer, 10 – 15 sec (#3-zahn) with 25% Q80 addition
Shelf Life: (each component unopened)	A side is 3 years (36 months), component A (ERP-420 or ERP-520)
Shelf Life: (each component unopened)	B side is 3 years (36 months), component B (ERP-201)

Application Equipment:



Conventional (with or without pressure pot):	1.5 – 2.0 mm tip with 55 – 70 psi at gun
HVLP (with or without pressure pot)	1.5 – 2.0 mm tip with 10 psi at cap or per manufacturer
Airless:	0.017 – 0.021 mm tip with minimum 1,500 psi fluid pressure
Air-Assisted Airless:	No recommendation
Brush or Roll:	Brush (use polyester/nylon brush) and roller (use solvent resistant core) application is recommended.
Electrostatic:	No recommendation

Application:



Apply:	2 – 3 coats with a 15 minute flash between coats. Apply only when air, product and surface temperatures are above 32°F (0°C) and when surface temperature is at least 5°F (3°C) above the dewpoint and no frost or ice is present on the substrate. Avoid exterior painting late in the day when dew or condensation is likely to form or when rain is threatening.
Recommended Wet Film Build:	5 – 10 mils
Recommended Dry Film Build:	4 – 7 mils
Square Foot Coverage @ 1mil no loss:	1,153 sq. ft.

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Directions for Use continued

Dry Times:



Air Dry @ 5 mils DFT	32°F (0°C)	50°F (10°C)	70°F (21°C) 50%RH	90°F (32°C)
Dry to touch:	24 hours	8 hours	4 hours	1 hours
Dry through/Handle:	38 hours	16 hours	8 hours	4 hours
Dry to Recoat/Topcoat Minimum:	24 hours	6 hours	3 hours	1.5 hours
Dry to Recoat with self Maximum:	90 days	60 days	30 days	14 days
Dry to Topcoat with urethanes Maximum:	30 days	14 days	7 days	4 days
Cure to immersion**	21 days	7 days	5 days	3 days

- Paint film is not fully cured for 7 days. Drying time listed will vary, depending upon film build, color selection, temperature, humidity and degree of air movement.
- Dry times are dependent on air and surface temperatures as well as film thickness, ventilation and relative humidity.
- Maximum recoating time is highly dependent upon actual surface temperatures, not simply air temperatures.
- Surface temperatures should be monitored, especially with sun exposure or heated surfaces. Higher surface temperatures shorten the maximum recoat window.

Technical Data*

Technical Properties:

BONDERITE® 1000 ERP-420/201

Test	ASTM Method	Results
Pencil Hardness	D3363	4H
Adhesion	D3359	5A
Taber Abrasion (CS17 wheel, 1,000 gram weight, 1,000 cycles)	D4060	84.6 mg loss
Impact (Direct)	D2794	16 in·lbs
In Service Temperature Limit	Intermittent 400°F, (204°C) dry heat, 150°F, (66°C) wet heat. Continuous 300°F, (149°C) discoloration will occur at high temps.	

Chemical Resistance:

Bonderite 1000 ERP-420/201

Chemical	ASTM Method	Result
Xylene	D1308	Pass
10% NaOH	D1308	Pass
10% HCl	D1308	Pass
10% H ₂ SO ₄	D1308	Pass
Gasoline	D1308	Pass
Machine Oil	D1308	Pass
Water**	D1308	Pass

** See miscellaneous section for immersion service information.

Weather Resistance:

Blasted Hot Rolled Steel ERP-420/201 (7 dry mils)

	ASTM Method	Result
Salt Spray – 2000 hours	B117	
Corrosion Creep	D1654	9A
Scribe Blisters	D714	4F
Face Blisters	D714	None
Controlled Condensation – 2,000 hours	D4585	No rusting or blisters

All tests results assume proper cure and preparation of test substrates. Unless otherwise stated, all results were obtained spraying product direct to metal on Bonderite 1000.

* The application and performance property data above are believed to be reliable based on laboratory findings. It is for the buyer to satisfy itself on the suitability of the product for its particular use. Variation in environment, procedures of use, or extrapolation of data may cause unsatisfactory results.

Miscellaneous:

**IMMERSION SERVICE: Near White Metal Blast SSPC-SP10 is mandatory for ferrous metals.

Not recommended for use in swimming pools or with alkyd-oil topcoats. Hot rolled steel must be prepared by abrasive blast cleaning. ERP-201 has a tendency to drift in color and may change the color of the white primer. All other performance characteristics are unaffected.

The chemistry of this product leads to natural yellowing of the cured film over time. This condition continues as the film ages; the extent of the change will vary with application conditions. This condition does not degrade coating performance. The film will also lose gloss and may chalk over time; given exterior exposure. This condition will not affect film integrity.

Do not tint.

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Safety:



These materials are designed for application only by professional, trained personnel, using proper equipment under controlled conditions and are not intended for sale to the general public.

Safe application of paints and coatings requires knowledge of equipment, materials and individual training. Directions and precautionary information on both equipment and products should be carefully read and strictly observed for personal safety and property protection. Consideration must be given to eliminate conditions, which may generate hazardous atmospheres during spray application or subject operators or bystanders to injury or illness.

Special precautions must be taken when utilizing spray equipment, particularly airless equipment. High-pressure injection of coatings into the skin by airless equipment may cause serious injury requiring immediate medical attention at a hospital. Treatment advice may also be obtained from Poison Centers.

Air quality should be maintained with adequate ventilation; applicators can achieve additional protection by wearing respirators and other protective garments such as gloves and overalls. In all cases, wear protective eye equipment. During the application of all coatings materials, all flames, welding and smoking must be prohibited. Explosion proof equipment must be used when coating these materials in confined areas.

PRECAUTIONARY INFORMATION

Before using the products listed herein, carefully read each product label and follow directions for its use. Please read and observe all warnings and precautionary information on all product labels. Prevent all contact with skin and eyes and breathing of vapors and spray mist. Repeated inhalation of high vapor concentrations may cause a series of progressive effects including irritation of the respiratory system, permanent brain and nervous system damage and possible unconsciousness and death in poorly ventilated areas. Eye watering, headaches, nausea, dizziness and loss of coordination are indications that solvent levels are too high. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

KEEP OUT OF THE REACH OF CHILDREN

MEDICAL RESPONSE

Emergency Medical or Spill Control Information (412) 434-4515; IN CANADA (514) 645-1320 AND IN MEXICO 01-800-00-21-400. Have label information available.



Safety Data Sheets (SDS) for the PPG products mentioned in this publication are available through www.ppgcommercialcoatings.com (Safety, SDS Search) or your PPG Distributor.

For additional information regarding this product, see the SDS and label information.



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