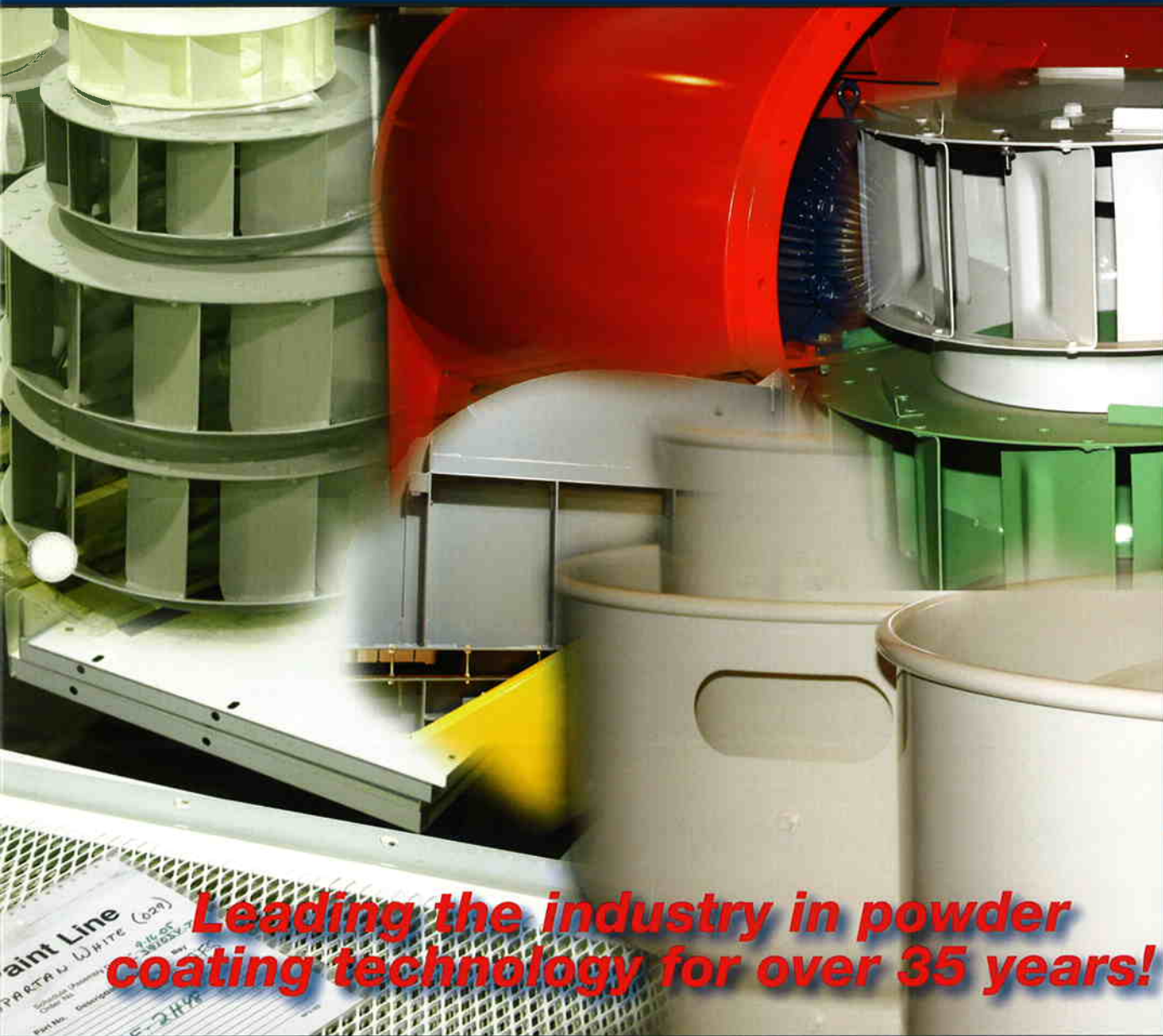


Disclaimer: This color chart is for reference only and is not to be used for final color matching. Shades may vary due to the color and resolution of your computer screen and/or your particular color printer output. Greenheck is not responsible or liable for color matches made with online color chart.

# Performance Coatings for Commercial & Industrial Fans

- Enamel Coatings
- Protective Coatings



**Leading the industry in powder coating technology for over 35 years!**



 **GREENHECK**  
Building Value in Air.

January  
2009

## Standard Enamel Coatings

### Performance Coatings

Greenheck carries an extensive range of high quality coatings to meet the demands of all commercial and industrial applications; the range offers a choice of either protective or decorative coatings for many products.

### Powder Coatings

More and more quality equipment manufacturers are turning to powder coating as their primary finishing system. We recommend that you consider an in-house applied "electrostatic powder" coating and use liquid coatings when a suitable powder coating is not available. Typically there is no additional lead-time for in-house standard colors.

### Decorative Coatings

Enamel coatings offer good color and gloss retention in exterior applications and have reasonably good to excellent chemical resistance properties, similar to Greenheck's Permatector™ powder coating. Enamel coatings display excellent hardness and resistance to marring and their flow and leveling properties are very good.

#### Advantages of Electrostatic Powder Coating

- Better performance at lower film thickness than wet protective coatings
- Great long-term performance, i.e.: cracking, peeling, delaminating
- Provides better coverage in corners and edges which reduces the potential for corrosion
- Environmentally friendly, there are no Volatile Organic Compounds (VOC's) to flash off and pollute the atmosphere. ex: solvents
- Can be easily touched-up in the field with the appropriate wet coating
- Reduces labor requirements, which lowers the end-user's costs

#### Other Colors

If colors other than those shown are required, a color sample must accompany the order for exact matching and duplication. Non-standard colors are subject to an extra charge. **NOTE: Gray 040 matches Greenheck Permatector™**

Standard Greenheck enamel finishes are Sherwin-Williams Industrial Enamel or Kem Lustral Coatings. Any of the colors shown here can be duplicated by a Sherwin-Williams dealer in your area for touch up, etc. Call the Sherwin-Williams Co., Schofield, WI, (715) 355-1166, for identification numbers not shown here.

*Actual colors may vary slightly from this chart.*

Spartan White

029

Ivory

031

Marble

032

Desert Sand

033

Hampton Brown

GF105

Taupe

035

Medium Bronze

036

Classic Bronze

GF108

Horizon Blue

038

Capri Blue

GF106

Gray

040

Dark Gray

041

Charcoal

042

Machine Tool

043

Flat Black

044

Gloss Black

045

## Standard Protective Coatings

Identifying, selecting, and specifying the right coating for the corrosion protection you require is a complex and demanding process. The corrosion rate for any application depends to a large extent on the concentration of fumes, their temperature, and the amount of moisture associated with them.

Greenheck's sales and engineering people can assist in the quoting process and recommend the proper coating for an application. However, in order to complete the coating selection, you will need to know the following information about the customer's job:

1. Specific chemicals involved
2. Chemical concentration levels
3. Temperatures to be handled
4. Moisture levels (% to full immersion)
5. Exposure duration (occasional to continuous)
6. Exposure to sunlight
7. Abrasive materials (size & quantity in airstream)
8. Decorative requirements

Greenheck's standard Permator and Perma Z color 040 Gray has been replaced by RAL 7023 Concrete Grey, similar in color to our Hi-Pro Polyester Dark Gray 041



High Temperature Silver

Silver



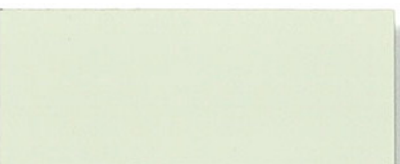
Hi-Pro Polyester

Dark Gray 041



Epoxy

Light Tan



Industrial Epoxy

Limestone

Max. Service Temp.	Dry Film Thickness	Material Type
250° F/120° C	2-3 mils	Steel or Aluminum

- Standard powder coating for steel products
- Good chemical and corrosion resistance
- Good mechanical properties
- Very good exterior color/gloss retention
- Excellent primer

Max. Service Temp.	Dry Film Thickness	Material Type
500° F/260° C	2-3 mils	Steel

- Standard coating applied to high temperature fans
- Good chemical resistance
- Good mechanical properties
- Withstands continuous temperatures up to 500° F

Max. Service Temp.	Dry Film Thickness	Material Type
250° F/120° C	2-3 mils	Steel or Aluminum

- Excellent chemical and corrosion resistance
- Excellent mechanical properties
- Excellent exterior color/gloss retention
- A 2-3-mil thickness exceeds the chemical resistance of a 4-6-mil thickness of the liquid Air Dry Phenolic

Max. Service Temp.	Dry Film Thickness	Material Type
250° F/120° C	2-3 mils	Steel or Aluminum

- Excellent chemical and moisture resistance
- Excellent mechanical properties
- Excellent salt spray results

Max. Service Temp.	Dry Film Thickness	Material Type
250° F/120° C	2.5-3 mils	Steel or Aluminum

- Superior chemical and corrosion resistance (acids, caustic, solvents, high moisture)
- Excellent mechanical properties
- Excellent salt spray results

**Greenheck's coatings are formulated to be the best in the industry!**

## GREENHECK PRODUCT APPLICATION GUIDE

Fan Application  
FA/110-04R2

A technical bulletin for engineers, contractors and students in the air movement and control industry.

### Performance Coatings for Ventilation Products

Greenheck's PermaCoat<sup>®</sup> powder coating. Baked enamels are decorative coatings and are not included in our relative resistance chart.

**Performance Coatings**  
 In the ever changing world of finishing, more and more quality equipment manufacturers are turning to powder coating as their primary finishing system. There are many coating choices that provide a good to excellent level of protection at an economical cost. Greenheck has been applying coatings in-house since 1974. We recommend that you consider an in-house applied "electrostatic powder" coating as your first choice and use liquid coatings when a suitable powder coating is not available.

**Protective Coatings**  
 Protective coatings are most widely used for corrosion control. They are used to provide long term protection under a broad range of corrosive conditions, extending from atmospheric exposure to the most demanding chemical processing conditions. They can be either a powder or liquid coating. Protective coatings provide little or no structural strength, yet they protect other materials in preserve their strength and integrity.

**Decorative Coatings**  
 For projects where the exterior appearance is important and additional chemical resistance is not required, customers can choose from standard or custom decorative colors. A decorative coating is a baked enamel that is applied as liquid paint or electrostatic powder.

Baked enamel is available in a variety of colors and typically composed of polyester or alkyl-amino resin systems. They display excellent hardness and resistance to marring and their flow and leveling properties are very good. Baked enamel offers good color and gloss retention in exterior applications. Baked enamel has reasonably good to excellent chemical resistance properties, similar to



P.O. Box 410 • Schofield, WI 54476 • 715-359-6171 • Fax 715-356-2399  
 Copyright © 2008 Greenheck Fan Corp.

### Greenheck Product Application Guide

#### Relative Resistance Chart, continued from page 8

**Resistance to Corrosive:**  
 1. PermaCoat<sup>®</sup>  
 2. Perma-Z  
 3. Pro Fluorite  
 4. Pro-Z  
 5. High Temperature Silver  
 6. Industrial Epoxy  
 7. Industrial Epoxy  
 8. High Temperature Aluminum  
 9. Coat-Tite Epoxy  
 10. Aro-Conform  
 11. Epoxy Phenolic  
 12. Polyurethane  
 13. Baked Phenolic  
 14. Modified Epoxy Phenolic  
 15. Fluorocarbon

**Resistance to Abrasive:**  
 E = Excellent  
 G = Good  
 P = Poor

**Oxidizing Agents:**  
 F = Fair  
 ND = No Data Available  
 NR = Not Recommended

Coatings are listed in order from the best value to the most expensive.

Oxidizing Agents	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Bleaching Compounds	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E
Calcium Hypochlorite	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E
Chlorine	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E
Hydrochloric Acid	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E
Hydrofluoric Acid	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E
Sulfuric Acid	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E
Acetic Acid	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E
Formic Acid	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E
Nitric Acid	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E
Phosphoric Acid	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E
Sulfamic Acid	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E
Hydrogen Peroxide	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E
Ammonia	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E
Sodium Hydroxide	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E
Potassium Hydroxide	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E
Sodium Chloride	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E
Potassium Chloride	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E
Sodium Sulfate	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E
Potassium Sulfate	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E
Sodium Nitrate	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E
Potassium Nitrate	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E
Sodium Phosphate	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E
Potassium Phosphate	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E
Sodium Bicarbonate	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E
Potassium Bicarbonate	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E
Sodium Acetate	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E
Potassium Acetate	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E
Sodium Citrate	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E
Potassium Citrate	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E
Sodium Oxalate	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E
Potassium Oxalate	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E
Sodium Selenate	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E
Potassium Selenate	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E
Sodium Selenite	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E
Potassium Selenite	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E
Sodium Tellurate	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E
Potassium Tellurate	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E
Sodium Tellurite	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E
Potassium Tellurite	G	G	G	G	E	E	E	E	E	E	E	E	E	E	E

Greenheck Product Application Guides are technical bulletins created by Greenheck for engineers, contractors and students in the air movement and control industry. Issue FA/110-04R2 is Performance Coatings for Ventilation Products. The guide gives information about the wide variety of coatings available and includes a comprehensive relative resistance chart for a number of corrosives. See the complete article at [www.greenheck.com/application/info/fan\\_applications](http://www.greenheck.com/application/info/fan_applications) or order your guide at [www.greenheck.com/contact/Greenheck](http://www.greenheck.com/contact/Greenheck).

## Building Value in Air

Greenheck delivers value to mechanical engineers by helping them solve virtually any air quality challenges their clients face with a comprehensive selection of

top quality, innovative air-related equipment. We offer extra value to contractors by providing easy-to-install, competitively priced, reliable products that arrive on time.

And building owners and occupants value the energy efficiency, low maintenance and quiet dependable operation they experience long after the construction project ends.



Prepared to Support Green Building Efforts

*As a result of our commitment to continuous improvement, Greenheck reserves the right to change specifications without notice.*

