



ENERGY SYSTEMS

Finishing Standards including Color Codes for Custom Parts for Suppliers

Approval details for this document are maintained
electronically within EnerSys' PLM environment

REV	AUTHORIZATION	DESCRIPTION OF CHANGE	ORIGINATOR
01	PR-03956	Initial release; Combined ATL 0700002 & ATS 070-022-00	J. Highet
02	CN03696	Add to Code 289 : Dongguan Shi Li Hui Industrial Co., Ltd. H5312194 Outdoor Sand Texture Gray; correct typo in Code 289 Little Sparrow from Donguan to Dongguan	J. Highet



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Purpose:

This document outlines standard add-on finishing requirements and associated color codes for custom manufactured, fabricated or otherwise processed custom parts.

Scope:

This document applies to all suppliers that supply manufactured, fabricated, or processed parts to Energy Systems Global (ESG) as part of meeting the contractual requirements of an ESG-issued and supplier accepted Purchase Order. Specific requirements within this document apply as appropriate to the parts or services being supplied to ESG.

Definitions:

ESG: Energy Systems Global is a line of business within the EnerSys corporation.

ATL: Alpha Technologies Ltd. or EnerSys Burnaby site.

ATS: Alpha Technologies Services or EnerSys Bellingham site.

Custom Part: A part, component or assembly that is fabricated, processed, or manufactured per requirements specified in ESG part or assembly drawings/documents.

ATL Part Number: The unique identifier applied to an ATL-custom designed or manufactured part. This number is noted on ATL-provided drawing(s) as well as the ATL PO.

ATS Part Number: The unique identifier applied to an ATS-custom designed or manufactured part. This number is noted on ATS-provided drawing(s) as well as the ATS PO.

GL Part Number: The unique identifier applied to an ESG-designed or manufactured part refers to a **Global** part number. This number is noted on ESG-provided drawing(s) as well as the ESG PO.

Supplier: An organization that supplies goods, raw materials and/or services to ESG.

Finishing: An add-on process applied to a part's surface to achieve a better aesthetic look and/or performance. A non-exhaustive list includes Electro-plating, Powder Coating, Spray Painting, Anodizing, and E-coating etc.

Finish Code: A three-digit number assigned in this document to represent the finishing to be applied to a part during the fabrication process.

Legacy Finish Code: A two-digit Alpha-numeric code in the legacy ATL, Argus or ATS Part Number in the format "XXX-XXX-FF(-xxx)" to represent the finishing required for the part.

Example: 613-656-W3

W3 is the legacy finish code for this part.

Example: 619-00194-V9-001

V9 is the legacy finish code for this part.



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Part Number Table: A table can be found in ESG part or assembly drawings relating Part Numbers and finishing requirements represented by Finish Codes.

1.0 Precedence Level:

In case of requirements conflict, follow this priority from highest to lowest:

- 1: TDN (Temporary Deviation Notification)
- 2: ESG Engineering Drawing/Documentation
- 3: This standard
- 4: Other ESG Engineering published standards where applicable
- 5: Supplier/manufacturer internal standard

2.0 Part Number Table

The part finishing is defined in the Part Number Table in the part/assembly drawing. To each specific part number, a finish code, or a combination of finish codes, will be assigned with a brief description for reference. When a graphics silkscreen is required, the silkscreen number will be indicated. Additional finishing requirements can be found in both drawing notes and extra columns of Part Number Table.

When an add-on finish is not required for a specific part number, either “-” or “N/A” (Not Applicable) will be used instead of a finish code. Typical applicable finish descriptions are:

BARE – use the part as is after fabrication, without any add-on finish.

MILL FINISH – the original finish processed by the material mill shall be preserved, without any alteration.

Examples of Part Number Tables:

Sheet metal parts based on the same drawing with different powder coatings or without add-on finish:

PART NUMBER TABLE FINISH CODE IN ACCORDANCE WITH ENERSYS DOCUMENT PPS-13955			
PART NUMBER	FINISH CODE	DESCRIPTION	SILKSCREEN #
GL0025825-0001	238	LIGHT GRAY	NONE
GL0025825-0002	211	WHITE	NONE
GL0025825-0003	209	BLACK	NONE
GL0025825-0004	-	BARE	NONE
GL0025825-0005	201	ASA-61 GRAY	NONE
GL0025825-0006	210	SEA FOAM GREEN	NONE

Die cast metal parts based on the same drawing with multiple finishes applied:

PART NUMBER TABLE FINISH CODE IN ACCORDANCE WITH ENERSYS DOCUMENT PPS-13955			
PART NUMBER	FINISH CODE	DESCRIPTION	SILKSCREEN #
GL0024903-0001	102 AND 243	CLEAR ALODINE AND BLACK POWDER COAT	GL0020202-0000
GL0024903-0002	102 AND 243	CLEAR ALODINE AND BLACK POWDER COAT	GL0020298-0000

Sheet metal cabinet weldment assembly with different powder coatings or without add-on finish:

PART NUMBER TABLE FINISH CODE IN ACCORDANCE WITH ENERSYS DOCUMENT PPS-13955			
PART NUMBER	FINISH CODE	DESCRIPTION	SILKSCREEN #
GL0024770-0001	203	BLACK, SEMI-GLOSS POWDER COAT	-
GL0024770-0002	201	GRAY, SEMI-GLOSS POWDER COAT	-
GL0024770-0003	-	MILL FINISH, VINYL CLAD	-
GL0024770-0004	249	GREY, RAL 9007	-

Plastic injection molded parts based on the same drawing with coloring requirements on resin and no add-on finish:

PART NUMBER TABLE FINISH CODE IN ACCORDANCE WITH ENERSYS DOCUMENT PPS-13955			
PART NUMBER	FINISH CODE	DESCRIPTION	SILKSCREEN #
GL0024770-0001	-	RAL 5010, GENTIAN BLUE	GL0021212-0000
GL0024770-0002	-	RAL 3027, RASPBERRY RED	GL0021220-0000
GL0024770-0003	-	BLACK	GL0021233-0000
GL0024770-0004	-	RAL 7012, BASALT GREY	GL0021239-0000
GL0024770-0005	-	RAL 5010, GENTIAN BLUE	GL0021253-0000

3.0 Legacy Finish Code Documents

Alpha and Argus legacy finishes may or may not be identified on a drawing that references a different document number than this one. In those cases, please refer to the following legacy finish code documents:

Part drawings that refer to “Alpha Document 0700002” (which is included in the ESG Supplier Production Standards package) containing ATL specific code information which should be confirmed with ESG prior to proceeding to avoid any confusion or conflict.

Part drawings that refer to “Alpha Document 070-022-00” (which is included in the ESG Supplier Production Standards package) containing ATS specific code information which should be confirmed with ESG prior to proceeding to avoid any confusion or conflict.

Part drawings that refer to “Argus Document 070-024-83” (which is included in the ESG Supplier Production Standards package) containing legacy code information, which should be confirmed with ESG prior to proceeding.

4.0 General Requirements

- 4.1 *RoHS*: All finishes and materials must be RoHS compliant to the latest European directive. If a particular finish specification does not meet RoHS, please notify ESG Purchasing immediately.
- 4.2 *PFAS*: All new finishes must be verified to be polyfluoroalkyl substance (PFAS) free before being accepted as an approved finish. All verified PFAS-free finishes shall be marked as such within this document. All finishes shown to contain PFAS must be replaced by a PFAS-free alternate, or discontinued by 01/01/2030. Finishes which are undetermined must be either verified to be PFAS-free, replaced with an alternate PFAS-free finish, or discontinued by 01/01/2030.

¹Indicates finish is PFAS free

²Indicates finish needs to be evaluated for PFAS

³Indicates finish contains PFAS

5.0 Finish Requirements

5.1 Painting Requirements:

All screw threads must be free of paint.

All hinges shall be free to turn as intended after finishing.

Painted surfaces shall be uniformly smooth, with no visible imperfections, when viewed from a distance of 3 feet with the unaided eye. The following conditions are unacceptable:

- a) Wrong Color – Color or gloss, which deviates from specification or contrast requirements.
- b) Poor Coverage – Paint, which does not cover or extends beyond specified areas.
- c) Scratches – Rubs, tears, or scrapes, which damage the paint surface, or which expose base metal or primer coats.
- d) Smudges, Mars, or Blemishes – Surface imperfections introduced during painting or drying that affect the appearance of the paint coat, such as smears, streaks, or blurry areas.
- e) Blisters, Voids, or Chips – Painted surfaces that exhibit signs of poor adhesion to the base metal, gaps or openings in the coating, or fragments broken out of the surface, which are visible to the naked eye.

- f) Orange Peel – Paint coating where the skin exhibits a rough or wrinkled appearance like the outside of an orange.
- g) Sags and Runs – Paint coatings, which exhibit irregular surfaces due to uneven paint flow.
- h) Rough Coating – Paint coating where the surface lacks smooth appearance due to improper spray technique. Roughness of the coating may be detected by running the fingertips across the painted surface.
- i) Contaminated Coating – Coatings which are rough or irregular due to application over sand, dirt, grit or metal particles.
- j) Excessive Paint – Surfaces where the coating exhibits noticeable layering or globular formation due to application of a more than adequate amount of paint or improper touch-up.
- k) Thin Coating – Coatings fail to fully cover the background over which it is applied due to insufficient paint application or insufficient hiding power of the coating. The resulting surface allows the base metal to show through the surface coat.
- l) Wet Paint – Paint coatings that are wet, tacky, soft, or uncured due to insufficient drying time or improper mixing.

5.2 Powder Coating Requirements:

Powder coating design thickness shall be 0.0015" – 0.0040", unless otherwise specified on an ESG drawing.

All screw threads must be free of powder coat.

All mating surfaces of hardware must be free of powder coat.

All hinges shall be free to turn as intended after finishing.

When specified in part drawing the surface classification, acceptance will be viewed and judged from an at-arms-length distance, allowing 10 seconds per surface.

- a) Level A = Critical Surface
- b) Level B = Other Sides
- c) Level C = Internal

Acceptance Table

Defect Type	Maximum Size	Surface Classification		
		Level A	Level B	Level C
Scratch	1" L X 1/8" W	0	0	4
Non-Adhesive or peeling	1/4" Dia.	0	0	3 for a total of 1/4" Dia.
Stain & Discolor	1/4" Dia.	0	1	3
Dents/Pits with surface coverage tack	1/4" Dia.	0	1	3
Foreign Material/ Debris	1/4" Dia.	0	2	3

5.3 Electrophoretic coating (or Electrocoating or E-coating) Requirements:

Electrocoating design thickness: 0.0004" – 0.0012" unless otherwise specified on an ESG drawing.

5.4 Inorganic/Metallic Coating/Plating Requirements:

Per Plating/Coating Specifications in the table.

5.5 Silkscreening Requirements:

These requirements also apply to other graphics application methods on parts like pad-printing, hot stamping, laser marking etc.

Silkscreen printing to use inks evaluated for permanence in accordance with UL 969 or equivalent and shall remain legible for the life of the product.

Graphics of packaging materials are exempted from this requirement.

5.6 Cleanliness and Post Processing Requirements:

All parts shall be clean and free from residual manufacturing substances including but not limited to:

- Machining lubricants and coolants.
- Oils or grease.
- Mold release agents.
- Dirt, dust, or machining byproducts such as shavings.

6.0 Finish Codes

6.1 *Inorganic/Metallic Coating/Plating*

Code	Description	Applicable Substrate	Plating/Coating Specification
101	Chromate conversion Yellow (a.k.a. gold Alodine or gold Iridite)	Aluminum	Conversion coating per MIL-DTL-5541F, Class 3, Type 1 Obsolete code, do not use
102	Clear Chromate conversion (a.k.a. clear Alodine or clear Iridite)	Aluminum	Conversion coating per MIL-DTL-5541F, Class 3, Type II
103	Clear anodize	Aluminum	Anodize per MIL-A-8625F, either Type I, IB, IC, II or IIB are acceptable, Class 1, non-dyed
104	Black anodize	Aluminum	Anodize per MIL-A-8625F, either Type I, IB, IC, II, or IIB, are acceptable, Class 2, dyed black
105	Bright Electro Tin plated Class B	Copper, Brass, Aluminum, Iron and Steel	ASTM B545-97 Class B (minimum 5um) for electrical contact application, with minimum 1.3um thick porous free Nickel underplating.
106	Matte Electro Tin plated Class C	Copper, Brass, Aluminum, Iron and Steel	ASTM B545-97 Class C (8um) for soldering application, with minimum 1.3um thick porous free Nickel underplating.
107	Zinc plated minimum 5um (0.0002") thick, Clear Chromate Conversion	Iron and Steel	Zinc Plating Per ASTM B633-19, Service Condition 1 (mild), Type III with Colorless Chromate Conversion Coatings
108	Zinc plated minimum 8um (0.0003") thick, Clear Chromate Conversion	Iron and Steel	Zinc Plating Per ASTM B633-19, Service Condition 2 (moderate), Type III with Colorless Chromate Conversion Coatings
109	Zinc plated minimum 12um (0.0008") thick, Yellow Chromate Conversion	Iron and Steel	Zinc Plating Per ASTM B633-19, Service Condition 3 (severe), Type II with Colored ^s Chromate Coatings
110	Zinc plated minimum 25um (0.001") thick, Yellow Chromate Conversion	Iron and Steel	Zinc Plating Per ASTM B633-19, Service Condition 4 (very severe), Type II with Colored ^s Chromate Coatings

Code	Description	Applicable Substrate	Plating/Coating Specification
111	Zinc plated minimum 5um (0.0002") thick Black Chromate Conversion	Iron and Steel	Zinc Plating Per ASTM B633-19, Service Condition 1 (mild), with Black Chromate Conversion
112	Steel, hot dip galvanized (Zinc coating)	Iron and Steel	Zinc (hot dip galvanized) coating per ASTM A123/A123M.
113	Matte Electro Tin plated Class B	Copper, Brass, Aluminum, Iron, and Steel	ASTM B545-97 Class B (minimum 5um) for electrical contact application, with minimum 1.3um thick, porous free Nickel underplating
114	Silver Plated, Semi-bright, (2.5um minimum)	Copper, Brass, Aluminum [†] , Iron and Steel	ASTM B700-90 Type 1, Grade D (99.9% pure, semi-bright), Class N or S. Coating thickness: minimum 2.5uM for electrical contact application.
115	Black Oxide Coating	Iron and Steel, including Stainless Steel	Black Oxide Coating per ISO 11408.
116	Hard Chrome Plating	Zinc die cast	Hard Chrome Plating per SAE-AMS-QQ-C-320, Class 2b, minimum thickness 0.002" (.08mm), bright finish.
117	Bright Electro Tin plated Class C	Copper, Brass, Aluminum, Iron and Steel	ASTM B545-97 Class C (8um) for soldering application, with minimum 1.3um thick, porous free Nickel underplating
118	**Reserved for use in Burnaby spec 0700002		
119	**Reserved for use in Burnaby spec 0700002		
120	**Reserved for use in Burnaby spec 0700002		
121	Steel, electro-galvanized (Zinc coating)	Steel	Zinc Coated Per A879/A879M by the Electrolytic Process for Applications Requiring Designation of the Coating Mass on Each Surface
122	Zinc plated minimum 8um (0.0003") thick, Yellow Chromate Conversion	Iron and Steel	Zinc Plating Per ASTM B633-19, Service Condition 2 (moderate), Type II with Colored [§] Chromate Coatings

Code	Description	Applicable Substrate	Plating/Coating Specification
123	Steel Sheet Tin-Plated	Steel	ASTM A624/A624M-22 Electrolytic Tin Plate (aka "Ferrostan")
124	Nickel Plated minimum 5um (0.0002") thick, Semi-bright, (2.5um minimum)	Copper, Brass, Aluminum [†] , Iron and Steel	ASTM B689 Type 1, Class 5, Coating thickness: minimum 5uM for electrical contact application
125	One-Sided, Heat-Laminated, Strippable Vinyl Moisture Barrier	Aluminum	
126	Passivation	Stainless Steel	Stainless Steel Passivation per ASTM A967/A967M
127	Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process	Steel	Zinc Plating: G90-Commercial Quality per ASTM A653/A653M

§ Further specification may be required in the drawing if variance in color may affect the aesthetic look of the product.

†Consult plating supplier before specifying with Aluminum substrate.

6.2 Organic Coating:

Code	Description	Approved Coating Manufacturer and P/N
201	ASA-61 Gray, Semi-gloss, Powder Coat	¹ Cardinal T008-GR736 Gray Powder Coat (UL Recognized) ² Guangzhou P-GY9452-S5 Gray Powder Coat (from Bellingham)
202	Gray leatherette, Textured, Powder Coat	² Protech HT212A4 (was H1000AT4) Textured Gray Hybrid Powder Coat (UL Recognized)
203	Black, Semi-gloss, Powder Coat	² Protech PS311N13 (was DS311N12) Semi Gloss Black TGIC Polyester Powder Coat (UL Recognized) ² Morton Thiokol 20-7037 Ebony Black Powder Coat (from Bellingham)



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Code	Description	Approved Coating Manufacturer and P/N
204	Light tan, Powder Coat	² Glidden Pulvalure 6DI06 Lite Tan TGIC Polyester Powder Coat (UL Recognized)
205	Clear Powder coat	² Tiger Drylac 39/00020 TGIC Polyester (UL Recognized)
206	Midnight blue, Powder Coat	² Protech PS211B2 (was P100B2) Midnight Blue TGIC Polyester Powder Coat (UL Recognized)
207	Platinum, Powder Coat	² Protech HS412H36 (was H1000H36) Platinum Hybrid Powder Coat (UL Recognized)
208 *	Textured Blue	² Textured Polane, Pantone #281C Blue (Pending powder coat P/N)
209	Black, Gloss, Powder Coat	¹ Cardinal T009-Bk12 #17038 Black TGIC Polyester Powder Coat
210	Sea foam green, Powder Coat	¹ Cardinal T009-GN325 Sea Foam Green Powder Coat (from Bellingham) ² Interpon 600 O616396S1JK TGIC Polyester Powder Coat (from Bellingham)
211	White, Powder Coat	² Protech P100W14 White TGIC Polyester Powder Coat (UL Recognized) ² Tiger Drylac Polyester 39/10160 Horizon White (UL Recognized) ¹ Cardinal T009-WH11 Horizon White Powder Coat ² Sherwin Williams PWS9-01169 ² Protech PS112W104 ² Interpon 600 O62770S0JA TGIC Polyester Powder Coat (from Bellingham)
212	Flat Black, Powder Coat	² Morton Thiokol 80-7001 Corvel Solar Black TGIC Polyester Powder Coat ¹ Cardinal #E300-BK147 Flat Black Epoxy ² Huacai EN275CA Black Powder Coat (from Bellingham)
213	Gray, Textured, Powder Coat	² Protech PC 4732 Blue-Gray Textured Hybrid (Epoxy/Polyester) Powder Coat

Code	Description	Approved Coating Manufacturer and P/N
214	Gray, Textured, Epoxy Polyester Powder Coat (aka "CFR Gray")	² Cardinal H312-BG160 Beige Textured Epoxy Polyester Hybrid Powder Coat ² Sherwin-Williams H-2415-2T Pro Grey Texture ² Tiger Drylac 209/72250 Textured Light Gray Epoxy Polyester Hybrid Powder Coat (from Bellingham)
215	Safety red, Powder Coat	² DOW Plastics ENVELON Series Safety Red (SR) Powder Coat ² Cardinal T009-RD03 TGIC Polyester Powder Coat. ² Axalta PFR400S9 RED BARON TGIC-Polyester Powder Coat
216	Beige, Polyester Powder Coat (aka "Solaris Beige")	² Tiger Drylac Series 49/70520 (RAL9002) TGIC Polyester Powder Coat
217	Light Silver, Polyester Powder Coat	² Tiger Drylac Series 38/91020 Anodized Silver TGIC Polyester Powder Coat
218	Dark green, Semi-gloss, Polyester Powder Coat	¹ Cardinal C006-GN03 Green TGIC Free Polyester Powder Coat, Semi Gloss Smooth Green
219	Light Silver, Polyester Powder Coat	Tiger Drylac Series 38/91020 Anodized Silver TGIC Polyester Powder Coat type? Duplicate code; refer to code 217.
220	White Powder Coat	² Tiger Drylac 39/10210 Apollo White Glossy
221	Fieldstone tan Powder Coat	² Sherwin-Williams 47982 Code F2NG59 Fieldstone Tan
222	Black, textured , Epoxy Powder Coat	² Protech ET442N2 (was E2000NT2) Textured Black Epoxy Powder Coat
223	Light blue, Polyurethane Powder Coat	² Cardinal 6405-6842 Light Blue Polyurethane
224	Dark Blue, Polyester Powder Coat	² Cardinal TO32-BL64 Dark Blue TGIC Polyester Powder Coat
225	White, Polyester Powder Coat	² Hentzen P4156WPC White TGIC Polyester Powder Coat

Code	Description	Approved Coating Manufacturer and P/N
226	Charcoal Gray, Polyester Powder Coat	³ Cardinal C241-GR663 Charcoal Gray Polyester Powder Coat ² Tiger Drylac Series 209-71390 (ATM Gray) Fine Textured Gray Polyester Powder Coat (from Bellingham)
227	Almond, Semi-gloss, Powder Coat	² Axalta PFT-500-S8 Almond, Semi-Gloss Powder Coat ² Tiger Drylac Series 39/15020 Almond Smooth Glossy ¹ Cardinal T009-BG01 Polyester TGIC Powder Coating, Full Gloss Smooth, Almond (from Bellingham)
228	Hybrid Gray Powder Coat	² Tiger Drylac 459/70150 ¹ Cardinal GR1465-C004 ² Sherwin Williams PAS400623
229	Central Office White, Powder Coat	² Dupont China AD3000-9181536 TGIC Type Powder (White) ² Axalta UFW563S3 Urethane Powder Coat (for application of Pantone Cool Gray 1)
230*	ASA61 Gray, Semi-Gloss, Powder Coat (UL Recognized)	² Glidden No.5 Pulvalure Gray Powder Coat (UL Recognized) ² Fuller Kativo IF-3164 (KUR-13255-40) Gray Polyester Powder Coat (UL Recognized) ² Morton Thiokol 20-7056 (U1575-17056) Powder Coat (UL Recognized) ² Protech PS311A13 (was P1000A13) ASA61 Gray Polyester Powder Coat (UL Recognized) (Pending verification if this is the same as #201)
231*	Gray, Textured, Polyester Powder Coat	² Tiger Drylac 449/71190 ² Fuller Kativo 3449-12B Blue-Gray Textured TGIC Polyester Powder Coat (Pending verification if this is the same as #213)
232	Warm Gray 3C Powder Coat	² Calix #3C Warm Gray – Cardinal T032-GR693 – Polyester TGIC Powder Coating Semi-Gloss Texture LS#4266
233	Metallic Brown, Polyurethane Powder Coat	² Protech UM512M48 Polyurethane (smooth, metallic brown)



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Code	Description	Approved Coating Manufacturer and P/N
234	Exterior Gray, Polyester Powder Coat	² Spectrum GY10 SP618 ³ Cardinal - Gray Quartz Exterior p/n# T243 GR301 Polyester Powder Coat
235*	Charcoal Gray Powder Coat	² Newbridge Charcoal Gray (pending powder coat P/N)
236	Motorola Shadow Black, Polyester/Epoxy Powder Coat	² Spectrum BK10 SP241 ² Morton Thiokol 20-7304 Polyester Powder Coat ² Morton Thiokol 10-7393 Epoxy Powder Coat
237	Charcoal Gray Powder Coat	² Tiger Drylac (China and Canada) 49/80076 Polyester TGIC Powder Coat ² Sherwin Williams PAT100705
238	Light Gray Powder Coat	² Cardinal GR142-T241
239	Telco Green Powder Coat	² Spectrum GN80-P235 – Polyester Powder Coat – High Gloss Texture
240	Off White Powder Coat	² Cardinal BG583-T038 - Polyester TGIC Powder Coat - High Gloss Texture
241	Spruce Green Powder Coat	² Protech PS311G644 - Polyester TGIC
242	“Traffic” Green Powder Coat	² Cardinal T007-GN16 - Polyester TGIC Powder Coat - High Gloss Smooth
243	Black, Textured, Semi-Gloss, Polyester Powder Coat	³ Cardinal C241-BK01 - Polyester Powder Coat (TGIC free) ² Hua Cai Yuan TH1646 (China) ² Sherwin Williams PBT100607 ² Sherwin Williams RBT100005 (TGIC free) ² Protech PX411N42
244	Black, Epoxy Electrocoat	² PPG Powercron 6000CX Epoxy Electrocoat ² PPG Powercron 6100CE Epoxy Electrocoat (Non-UV Resistant) (from Bellingham)



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Code	Description	Approved Coating Manufacturer and P/N
245	Signal Grey Smooth Glossy (RAL 7004) Powder Coat	² Tiger Drylac 49/73300 - Interior/Exterior, Weather Resistant TGIC Polyester Powder Coating
246	Cream, Smooth Glossy (RAL 9001) Powder Coat	² Protech TD6204-5 – Erie Anti-Graffiti Polyurethane Coating, Color (RAL 9001) Cream, Smooth Glossy
247	Warm Gray 1C Powder Coat	² Calix #1C Warm Gray – Cardinal T032-GR692 – Polyester TGCI Powder Coating Semi-Gloss Texture LS#4262
248	Nut Brown (RAL 8011), Glossy, Powder Coat	² Tiger Drylac 49/66100 - Interior/Exterior, Weather Resistant TGIC Polyester Powder Coating, Color Nut Brown (RAL 8011), Glossy
249	Gray Aluminum, Metallic, Glossy (RAL 9007) Powder Coat	² Tiger Drylac 49/92880 - Interior/Exterior, Weather Resistant TGIC Polyester Powder Coating
250	Light Gray, Low Gloss (RAL 7035) Powder Coat	² Envirocron PCTC 70268, Exterior Polyester Powder Coating (RAL 7035), Low Gloss ² Cardinal T013-GR185 ² Axalta 678062B
251	White, Textured, Semi-Gloss, Polyester Powder Coat	² Cardinal #C031-WH120, Polyester Powder Coating, Semi-Gloss Texture, White
252	Umbra Gray (RAL 7022) Powder Coat	² Tiger Drylac 49/72850 – Interior/Exterior, Weather Resistant TGCI Polyester Powder Coating, Color Umbra Gray (RAL 7022)
253	Satuary Bronze Powder Coat	² DuPont Alesta PFJ407A5 TGIC Polyester Powder Coat
254	Anti-graffiti Clear Powder Coat	² Sherwin-Williams Powdura UCS9-00007
255	Anti-graffiti White Powder Coat	² Tiger Drylac 44/10008
256	Aluminum, Fed Std #17178 Powder Coat	Aluminum Finish, Federal Standard 595C #17178, approved powder coat suppliers: ² PPG, ² DuPont, ² Sherwin-Williams



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Code	Description	Approved Coating Manufacturer and P/N
257	Dark Green, Fed Std #14036 Powder Coat	² Sherwin Williams PGS5-00505
258	Super OGF Black Powder Coat	² IFS Coatings SRSS 10004 TGIC Polyester Powder Coat, Super Out Gas Forgiving (OGF)
259	Olive Brown, RAL 8008 Powder Coat	² Tiger Drylac 49/66110 or 38/60008 Powder Coat
260	Patrician Bronze 1452 Powder Coat	² Vitracoat PDL50011-1 Polyester Powder Coat
261	Midnight Neutral Powder Coat	² Cardinal # X009-BKN01767 Powder Coat
262	Black, Fed Std #27038 Powder Coat	² Cardinal / ² Tiger Drylac / ² Sherwin Williams Polyester powder coat matching Federal Standard 595B Color #27038
263	Green Powder Coat	² Protec PSG111G162 ² Sherwin Williams DGS8-70031-C50
264	Dark Brown, Fed Std #20040, Powder Coat	² Cardinal / ² Tiger Drylac / ² Sherwin Williams Polyester powder coat matching Federal Standard 595B Color #20040 ² Protech ZS341M321
265	Luster Gray, RAL 7042, Powder Coat	² Tiger Drylac 49/73250 or 38/70042
266	Dove Gray, PU96104, Powder Coat	² Spraylat Polyurethanes PU96104
267	Dark Hemlock Green Powder Coat	² TCI 9010-62306
268	RAL 6012 Black Green Powder Coat	² Tiger Drylac 38/50012 or 49/51540 ² TCI 9840-61262R
269	RAL 7040 Window Grey Powder Coat	² TCI 9840-71979R, Polyester TGIC Powder Coating, 80-89 Gloss Smooth



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Code	Description	Approved Coating Manufacturer and P/N
270	Gloss Smooth Beige Powder Coat	² Cardinal T009-BG16, Polyester TGIC Powder Coating, Full Gloss Smooth
271	Gloss White, Powder Coat	² Protech PS111W2 Gloss White Polyester (UL Recognized)
272	Comet Black U1578-1, Powder Coat	² AkzoNobel, Interpon 600, JN103QF (Formerly 30-7018) ² Comet Black U1578-1, Polyester TGIC Powder Coating
273	Clear, Anti-graffiti, Smooth Glossy Powder Coat	² Tiger Drylac 44/00018
274	Chrome Green UD (RAL 6020), Powder Coat	² Envirocron PCTA49121, RAL 6020 Chrome Green UD Polyester
275	Stormy Sky, Satin (ICI A1938) Powder Coat	² Protech ZS341G483, Stormy Sky
276	Fir Green (RAL 6009) Powder Coat	² Tiger Drylac 149/52849 Smooth Glossy ² Tiger Drylac Fir Green 49/52840 (RAL 6009) (from Bellingham)
277	Black, Textured, Semi-Gloss, Polyester Powder Coat	² Cardinal # C241-BK303, Polyester Powder Coating, Semi-Gloss Texture, Black
278	Black Matte, Polyester Powder Coat	² Tiger Drylac 39/80020, TGIC Polyester Powder Coat
279	ASA-70 Light Grey, Polyester Powder Coat	² Tiger Drylac 139/70010, TGIC Polyester Powder Coat
280	Light Grey, Fed Std 16473 Powder Coat	² Sherwin Williams PAS560124
281	**Reserved for use in Burnaby spec 0700002	
282	**Reserved for use in Burnaby spec 0700002	
283	**Reserved for use in Burnaby spec 0700002	

Code	Description	Approved Coating Manufacturer and P/N
284	**Reserved for use in Burnaby spec 0700002	
285	**Reserved for use in Burnaby spec 0700002	
286	Bronze Green, Powder Coat	² Polyester/TGIC Powder Coating Tiger Drylac 249/55020
287	Black, Textured Powder Coat	³ Cardinal T241-BK59 polyester GIC powder Coat ² Huacai EN372C, Textured Black Powder Coat
288*	Gray, Textured Powder Coat	² Interpon 600 JL41SZ Polyester Powder coat (from Bellingham - pending verification if this is the same as #213)
289	Dark Gray, Textured Powder Coat	³ Dongguan Little Sparrow Plastic Technology Co., Ltd. BH7203, Textured, Polyester Powder Coat ³ Dongguan Shi Li Hui Industrial Co., Ltd. H5312194 Outdoor Sand Texture Gray, Polyester Powder Coat
290	Green, Semi-Gloss (RAL 6021) Powder Coat	² Tiger Drylac Series 49 Semi-Gloss RAL 6021
291	Pine Green, Anti-Graffiti (RAL 6028) Powder Coat	² Tiger Drylac Series 544/50040 RAL 6028 Anti-Graffiti Pine Green TGIC Polyester
292	Hammertone Gray, Powder Coat	² Protech HV 212 A9 Hammertone Gray Hybrid Powder Coat
293	Silver Gray, Powder Coat	² Protech HM 212 AS4 Silver Gray Hybrid Powder Coat
294	Almond, Anti-Graffiti Powder Coat	² Tiger Drylac Series 544/15020 Anti-Graffiti Almond TGIC Polyester
295	Sea Foam Green, Anti-Graffiti Powder Coat	² Tiger Drylac Series 544/50050 Anti-Graffiti Sea Foam Green TGIC Polyester
296	ASA-61 Gray, Anti-Graffiti Powder Coat	² Tiger Drylac Series 544/70020 Anti-Graffiti ASA-61 Gray TGIC Polyester

Code	Description	Approved Coating Manufacturer and P/N
297	Forest Green, Powder Coat	² Tiger Drylac Series 249/52690 Pantone 357C Green TGIC Polyester Powder Coat
298	Designer Beige, Urethane Powder Coat	² Valspar IF-2407 Designer Beige Urethane Powder Coat
299	Pastel Green, Polyester Powder Coat	² Tiger Drylac Series 249/52860 Smooth Green TGIC Polyester Powder Coat
300	"Generac" Beige, Powder Coat	² Powder Technology, Inc. #PT-TS95-TS35 Compartment Tan 2SD TGIC
301	Pine Green (RAL 6028), Powder Coat	² Tiger Drylac Pine Green 49/52650 (RAL 6028)
302	Almond, Thermal Plastic Powder Coat	² Plascoat PPA 571 ES, Almond (212)
303	Central Office White, Urethane Powder Coat	² Dupont Powder Coatings Central Office White UFW-563-S3, Urethane Powder Coat
304*	Hybrid Gray, Powder Coat	² Protech #HS312 A355 Hybrid Gray Powder Coat (from Bellingham - pending verification if this is the same as #228)
305	Black, Thermal Plastic Powder Coat	² Plascoat PPA 571 ES, Black (RAL 9005)
306	Beige, Thermal Plastic Powder Coat	² Plascoat PPA 571 ES, Beige (222)
307	Fog Grey, Textured Powder Coat	² TCI 6132-7047 Textured hybrid epoxy fog grey Powder coating
308	Electrical Grey, Polyester Powder Coat	² Protech PS211A4 (was P100A4) Electrical Gray TGIC Polyester Powder Coat (UL Recognized)
309	Semi-Gloss Beige, Polyester Powder Coat	³ Cardinal T241-BG414 Beige Polyester TGIC Powder Coating Semi-Gloss Texture
310	Flat Black, Static Charged Spray Paint	² Proprietary Paint: Hsing Jeng Fong Chem Paint Co. Ltd. (Guang Zhou)
311	Dark Blue, Powder Coat	² Tiger Drylac 49423-90 (RAL 5022) Powder Coat
312	Midnight Blue, Semi-Gloss Powder Coat	¹ Cardinal X002-BLW01541 RAL 5011 20% Gloss Powder Coat



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Code	Description	Approved Coating Manufacturer and P/N
313	Desert Sand, Matte Powder Coat	² Tiger Drylac 16/15013, Desert Sand MIL580 Smooth Matte Power Coat
314	Alpha Blue, Textured Powder Coat	³ Cardinal C241-BL628, LS# 16989 Dark Blue, Textured, Semi-Gloss, Polyester Powder Coat ² Dupont (Dongguan Dupont Huajia Performance Coatings Limited Company, China) ² Alesta AE7150431-S Midnight Blue/RAL 5011, Semi Gloss, TGIC free Polyester Powder Coat ¹ Huacai JJ301C, Textured Blue Powder Coat
315	Flat Black, Powder Coat	² Morton Thiokol 80-7001 Corvel Solar Black TGIC Polyester Powder Coat ¹ Cardinal #E300-BK147 Flat Black Epoxy ² Huacai EN275CA Black Powder Coat
316	Tan, Anti-Graffiti Powder Coat	² Tiger Drylac Series 544/15010 Anti-Graffiti General Tan TGIC Polyester
317	Surf Green, Medium Gloss Powder Coat (Lectro)	² TCI Powder Coatings # 9610-6042, Medium Gloss Green Polyester (TGIC)

* Some clarification may be required for these codes, please contact ES's Engineering team when specifying these codes.

Appendix A:

Legacy Alpha Bellingham 070-022-00 Finish Spec Cross Reference

Legacy Alpha	ES Spec		Legacy Alpha	ES Spec		Legacy Alpha	ES Spec
A3	103		A4	104		A5	102
A6	125		A7	105		B1	201
B2	202		B3	203		B4	204
B5	205		B6	206		B7	207
B8	208		B10	209		B11	312



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Legacy Alpha	ES Spec		Legacy Alpha	ES Spec		Legacy Alpha	ES Spec
B12	313		B14	314		C2	210
C3	211		C4	315		C5	213
C6	316		C7	214		C8	298
C9	226		C10	317		C11	286
C12	287		C13	288		C15	289
D2	102		E1	290		E2	215
E3	291		E4	292		E5	293
E6	294		E7	295		E8	296
E9	297		E10	216		E11	217
F1	299		F2	227		F3	228
F4	218		F5	300		F6	276
F7	301		F8	302		F9	234
F10	303		G2	126		H1	201
H2	304		H3	305		H4	217
H5	312		H6	306		H7	227
J2	210		J3	301		J4	211
M1	105/106 113/117		M3	109		M4	110
M5	127		M6	107		N2	112
N3	121		N4	122		N5	108
N9	123		N10	121 and 220		N11	111
N12	216		N13	121 and 216		N14	121 and 209
N15	121 and 218		N16	121 and 314		N17	121 and 315
N18	121 and 289		P1	201		P2	202
P3	203		P4	204		P5	221
P6	206		P7	207		P8	307
P9	222		P10	303		P11	237



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Legacy Alpha	ES Spec		Legacy Alpha	ES Spec		Legacy Alpha	ES Spec
P12	243		R2	210		R3	211
R4	315		R5	213		R6	308
R7	214		R8	298		R9	226
R10	309		R11	234		R12	287
T1	290		T2	215		T3	309
T4	292		T5	293		T7	295
T8	296		T9	297		T10	314
T11	289		U1	299		U2	227
U3	228		U4	305		U5	301
U6	306		U9	310		U10	311
U11	312		V1	122 and 201		V2	120 and 211
V4	234		V5	244		V6	120 and 210
V7	120 and 307		V8	244 and 315		V9	244 and 211
V10	244 and 210		W2	122 and 210		W3	109 and 210
W4	110 and 210		W5	109 and 227		W6	110 and 227
W7	109 and 315		W8	110 and 315		W9	122* and 312
W10	122* and 211		W11	122 and 301		W12	122 and 300
X1	309		X2	105/106 113/117		X3	201
X6	105/106 113/117		13	105/106 113/117		15	114
18	124						



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Appendix B:

Legacy Purcell SEP-2 Finish Spec Cross Reference (for future use)

Legacy Purcell	ES Spec		Legacy Purcell	ES Spec		Legacy Purcell	ES Spec
tbd	tbd		tbd	tbd		tbd	tbd

END OF DOCUMENT

For assistance, contact Alpha Technical Support:
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24/7 for emergency support
[Click here to report a problem](#)