

SERIES 44 - chemical agent resistant coating (CARC)

POLYURETHANE POWDER COATING FOR CARC APPLICATIONS WITH SUPERIOR CORROSION PROTECTION. COMPLIANT TO MIL-PRF-32348 TYPE IV

Typical applications

- ammunition boxes
- telecommunications parts
- file cabinets
- other military applications

Product details

Standard packaging in original 44 lb (20 kg) box and 5 lb (2.5 kg) minipack

Specific gravity (ASTM D792) approximately 1.60 g/cm³ depending on pigmentation avoid direct and extended exposure to heat

Theoretical coverage at 2.5 mils (60 µm) film thickness: **51.5 ft²/lb (11.1 m²/kg)**. Refer also to the latest edition of "Theoretic Powder Coating Coverage Chart" version 00-1001 (imperial) version 00-1000 (metric)

Storage stability 6 months at no more than 77 °F (25 °C) avoid direct and extended exposure to heat

Finish

finish	gloss
smooth flat matte	02-06*

* Gloss level according to ASTM 523 at 60° angle (doesn't apply to metallic effect powder coatings). The measured gloss level of effect powder coatings can diverge from the details given in this Product Data Sheet. The creation of tolerance samples is recommended

Available as Type IV CARC coatings, MIL-PRF-32348 approved:

product description	product ID
Forest Green Fed Std 34079 QPL Q2119	344/50194
Desert Tan Fed Std 33446 QPL Q2118	344/15010

It can be made to order in non-stock colors (minimum order quantity applies)

Features

- good weather resistance
- good storage stability

Pretreatment

Refer to TT-C-490 for ferrous substrates and TT-C-490/MIL-C-5541F for non-ferrous substrates

Processing

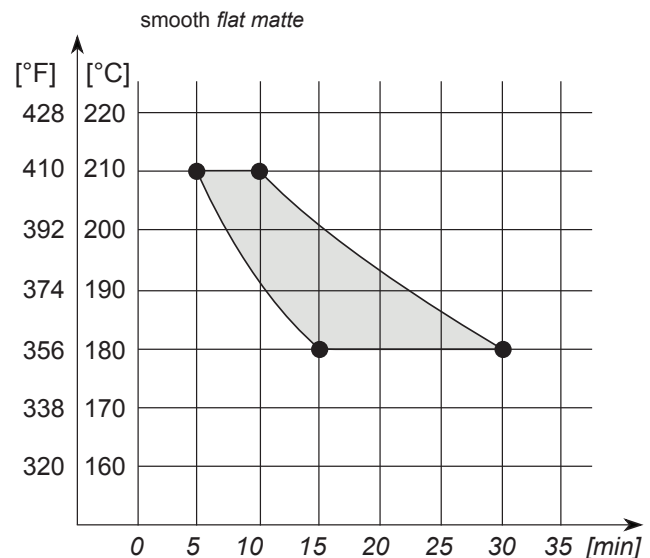
Corona and Tribostatic*

* For Tribostatic powder coatings, confirm before ordering. Suitability of metallic effects for Tribostatic processing must be verified prior to actual application. Please refer to the latest edition of the relevant application guidelines for metallic effect powder coatings

Since not all powder coatings are suitable for recycling/reclaim, please verify before ordering

Cure parameters

(substrate temperature versus curing time)



substrate temp.	min. curing time	max. curing time
356 °F (180 °C)	15 minutes	30 minutes
410 °F (210 °C)	5 minutes	10 minutes

Cure parameters must be closely observed since mechanical properties will develop before full cross-linking

Test results

Checked under laboratory conditions on iron phosphated steel test panels Bonderite B-1000 or equivalent. Cure conditions are according to the cure curves. Actual product performance may vary due to product-specific properties such as gloss, color, effect and finish as well as application-related and environmental influences. When used as a two-coat system, the increase in film thickness will result in a decrease of mechanical properties.

test method	test	Series 44 CARC smooth flat matte
ISO 2360	recommended film thickness	2.5-3.5 mils (60-80 µm)
ASTM D3359 method B	cross cut tape test 1mm cutting distance	5B
ASTM D522	mandrel bending test cracking of coating	≤1/8 inch (≤3 mm)
ASTM D2794	ball impact test cracking of coating	80 in/lb no appearance of cracks down to the substrate
ASTM D3363	pencil hardness	H minimum
ASTM D2247	determination of resistance to humidity 500 hours	maximum undercutting 1/32 inch (1 mm), no blistering
ASTM B117	salt spray resistance 500 hours	maximum undercutting 1/32 inch (1 mm), no blistering
JP8 hydrocarbon fluid	hydrocarbon resistance	no change
ASTM G 154	accelerated weathering 1,000 hours QUV-A	minimal change of color and gloss
Spot test for 30 minutes	DS2P resistance	no major color and gloss change
1 hour resistance to 10% acetic acid	acid resistance	no blistering

Cleaning recommendations: refer to the latest edition of TIGER "Cleaning Recommendations" information sheet, Version 00-1005

Please note

Top coating with a clear exterior grade powder coating over an interior grade powder coating does not result into a weather resistant coating system.

Post-bending properties of any part must be verified prior to application. Minor cracks in the coated surface may lead to corrosion.

Joint sealants and any other auxiliary products, such as glazing aids, gliding waxes, drilling and cutting lubricants, which come in contact with the coated surface, must be pH-neutral and free of substances that may damage the finish. Therefore, a suitability test at the applicator's end, prior to coating, is highly recommended.

In general, colors in the red, orange and yellow range may require an increased film thickness to achieve full hiding.

Please read and understand the Safety Data Sheet (SDS) before use.

Chemical resistance

The required chemical resistance of a powder coating depends, among other things, on its formulation. Chemical resistance requirements must be considered according to processing conditions and final use of the finished product. This is best established during the product specification process. Agreement between all parties involved must be reached about the requirements for such chemical resistance as well as the test method, which may be performed in accordance with PCI test method #8 "Solvent Cure Test". Furthermore, the test duration and concentration of the test media need to be agreed upon.

Disclaimer

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