

# SERIES 69 - interior applications

EPOXY BASED POWDER COATING FOR INTERIOR APPLICATIONS COMPLIANT TO SEFA 8M-2016, SECTION 8.0 WITH EXCELLENT CHEMICAL RESISTANCE FOR SCIENTIFIC EQUIPMENT & LABORATORY FURNITURE APPLICATIONS

## Typical applications

- laboratory equipment
- laboratory furniture
- scientific equipment
- laboratory metal casework
- surfaces where increased chemical resistance is required

## Product details

**Standard packaging** in original 44 & 55 lb (20 & 25 kg) boxes and 5 lb (2.5 kg) minipack

**Specific gravity (ASTM D792)** approximately 1.2-1.8 g/cm<sup>3</sup> depending on pigmentation

**Theoretical coverage** at 2.5 mils (60 µm) film thickness: **51.5 ft<sup>2</sup>/lb (11.1 m<sup>2</sup>/kg)**. Refer 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

## Features

- very good mechanical properties
- excellent chemical resistance
  - Acetone, slight change in gloss
  - Gasoline, no detectable change
  - 37% Hydrochloric Acid, no detectable change
  - 30% Hydrogen Peroxide, no detectable change
  - 30% Nitric Acid, no detectable change
  - 85% Phosphoric Acid, no detectable change
  - 77% Sulfuric Acid, no detectable change
- good resistance to corrosion
- good flow properties
- excellent coverage
- good storage stability

## Finish

| finish        | gloss <sup>†</sup> |
|---------------|--------------------|
| smooth glossy | 90+*               |

<sup>†</sup> Some gloss levels may vary. Please consult individual Technical Data Sheets for specific gloss levels.

\* 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.

## Pretreatment

The following table reflects the common methods of pre-treatment with regards to various substrates and applications. In selecting the proper type of pretreatment, the suitability of the type of powder coating for a desired application according to the guidelines on this page should be observed.

|                              | Aluminum |          |          | Galvanized Steel |          |          | Steel    |          |                       |
|------------------------------|----------|----------|----------|------------------|----------|----------|----------|----------|-----------------------|
| Degreasing                   | ○        |          |          | ○                |          |          | ○        |          |                       |
| <sup>1</sup> ) Chromating    | ○        | ○        | ○        | ○                | ○        | ○        | ○        | ○        | ○                     |
| <sup>2</sup> ) Pre-Anodizing | ○        | ○        | ○        |                  |          |          |          |          |                       |
| <sup>2</sup> ) Chrome free   | ○        | ○        | ○        | ○                | ○        |          |          |          |                       |
| Iron Phosphating             |          |          |          |                  |          |          | ○        | ○        |                       |
| Zinc Phosphating             |          |          |          | ○                | ○        | ○        | ○        | ○        | ○                     |
| Blasting                     |          |          |          |                  |          |          | ○        | ○        | ○                     |
| <sup>3</sup> ) Sweeping      |          |          |          | ○                | ○        | ○        | ○        | ○        | ○                     |
|                              | <b>I</b> | <b>E</b> | <b>A</b> | <b>I</b>         | <b>E</b> | <b>A</b> | <b>S</b> | <b>I</b> | <b>E</b> <sup>4</sup> |

Application: I = interior; E = exterior; A = architectural; S = steel

- 1) according to ASTM B 449
- 2) according to GSB quality and test regulations.
- 3) only for zinc coated parts >1.8 mils (>45 µm)
- 4) for a two-coat process/TIGER Shield

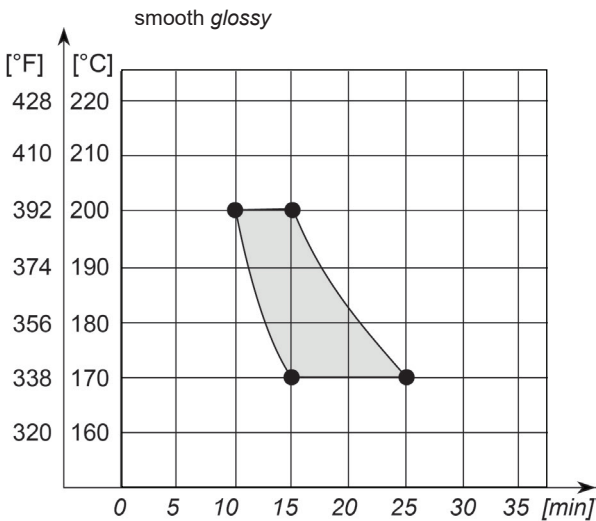
## Processing

### Corona

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 |
|-----------------|------------------|------------------|
| 338 °F (170 °C) | 15 minutes       | 25 minutes       |
| 392 °F (200 °C) | 10 minutes       | 15 minutes       |

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

## Test results

Non-SEFA 8M-2016 tests checked under laboratory conditions on iron phosphated steel test panels Bonderite B-1000 or equivalent. SEFA 8M-2016 tests checked under specification conditions on cold rolled steel panels. 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 69<br>smooth glossy   |
|---|--|--|
| ISO 2360                                    | recommended film thickness                           | 2.5-3.5 mils<br>(60-80 µm)   |
| ASTM D523                                   | gloss - 60°  | 90+  |
| SEFA 8M-2016 8.1                            | chemical spot test                                   | forty nine chemical reagents tested achieving SEFA 8M-2016 criteria    |
| SEFA 8M-2016 8.2                            | hot water test                                       | no visible effect due to hot water<br>(1,000 mL at 94°C for 5 minutes) |
| SEFA 8M-2016 8.3                            | ball impact test<br>cracking of coating              | 100 in/lb<br>no checks or cracks down to the substrate                 |
| Modified ASTM D3359<br>per SEFA 8M-2016 8.4 | cross cut tape test                                  | 5B   |
| Modified ASTM D3363<br>per SEFA 8M-2016 8.5 | pencil hardness                                      | 4H   |
| ASTM D522                                   | manderal bending test<br>cracking of coatings        | ≤1/8 inches<br>(≤3 mm)   |
| ASTM D2247                                  | determination of resistance to humidity<br>500 hours | maximum undercutting 1/32 inch (1 mm), no blistering                   |
| ASTM B1173                                  | salt spray resistance<br>500 hours                   | maximum undercutting 1/32 inch (1mm), no blistering                    |

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

## Please note

Epoxy powder coatings have a tendency to color shift and gloss variations due to changes in curing conditions. It is recommended to closely observe the curing parameters for TIGER Drylac® Series 69.

Please consult the manufacturer before applying any 2-coat systems that feature a primer or e-coat as base coat.

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.

In general, whites and 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.

Product is certified under SEFA 8M-2016. Tests were conducted using Section 8.1 Chemical Spot Test where forty nine chemical reagents were left on the panel for a period of one hour. Out of forty nine chemicals tested, there were no more than four Level 3 conditions observed. Some chemicals that passed include: Acetone, 60% Chromic Acid, Gasoline, 37% Hydrochloric Acid, 30% Hydrogen Peroxide, Methyl Ethyl Ketone, 70% Nitric Acid, 85% Phosphoric Acid, and 96% Sulfuric Acid.

## Disclaimer

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