# Carbothane® 8845

OEM ENGINEERED FINISHES — product data

## Selection & Specification Data

**Generic Type**
Two component, acrylic, aliphatic polyurethane.

**Description**
Carbothane 8845 is a fast dry, high solids, low VOC, high gloss, high build, two component polyurethane coating. Carbothane 8845 exhibits the excellent dry times and handling characteristics required by Original Equipment Manufacturers. This coating has outstanding hardness, adhesion and resistance to: impact, marring, abrasion, chemicals and staining. Carbothane 8845 is recommended as a direct to metal finish coat or as a finish coat over properly primed substrates. Typical applications include air compressors, propane tanks, trailer chassis and frames, valves, pumps, waste water treatment plant equipment, agricultural equipment, hazardous material storage buildings and general industrial equipment. Not recommended for continuous immersion service.

**Features**
- VOC compliant – 1.9 lbs/ gal as supplied
- Direct-To-Metal (DTM)
- Fast Dry – 7-8 hours to handle at 75°F
- High solids, high build, high gloss
- Excellent abrasion resistance
- Application by conventional, airless spray, HVLP or electrostatic
- Excellent chemical resistance
- Ambient air or force cure with conventional or infrared ovens

**Color**
Wide variety of custom colors

**Finish**
High Gloss

**Primers**
Self-priming, epoxy, zinc rich epoxy or as recommended by Carboline

**Dry Film Thickness**
3 – 5 mils per coat (75-125 microns).

**Solids Content**
By Volume: 71% ± 2%

**Theoretical Coverage Rate per Gallon**
379 $ft^2$ at 3 mils (75 microns)
284 $ft^2$ at 4 mils (100 microns)
227 $ft^2$ at 5 mils (125 microns)
Mixing and application losses will vary and must be taken into consideration when estimating job requirements.

**HAPS Value**
0.54 lbs/solid gallon

**VOC Values**
As supplied: 1.9 lbs/gal (228 g/l)
Thinned:
6 oz/gal w/ #76: 2.1 lbs/gal (252 g/l)
These are nominal values.

**Ratio By Volume**
4:1 Ratio
4 parts Carbothane 8845 Part A
1 part Carbothane 8843 Converter Part B

**Pot Life**
90 min at 75°F (24°C) unthinned
Pot life decreases at higher temperatures. Pot life ends when coating becomes too viscous to use. This product is moisture sensitive. Avoid moisture contamination.

**Dry Temp. Resistance**
Continuous: 200°F (93°C)
Non-Continuous: 250°F (121°C)
Discoloration is observed above 180°F (82°C).

## Substrates & Surface Preparation

**General**
Surfaces must be clean and dry. Employ adequate methods to remove dirt, dust, oil and all other contaminants that could interfere with adhesion of the coating.

**Steel**
Abrasive blast to a commercial finish in accordance with SSPC-SP6 and obtain a 1½ - 2 mil (35-50 micron) blast profile.

**Phosphatize**
Apply 8845 directly to dry, properly phosphatized substrate. Perform adhesion tests to insure proper, uniform and acceptable adhesion of 8845 direct to phosphatized metal substrate.

**Primed Surfaces**
Remove any oil or grease from the surface to be coated with Thinner #2 or Carboline Surface Cleaner #3 (Refer to Data Sheet) in accordance with SSPC-SP1.

## Typical Chemical Resistance

| Exposure | Splash & Spillage | Fumes |
|---|---|---|
| Acids | Very Good[1] | Excellent |
| Alkalies | Very Good[1] | Excellent |
| Solvents | Very Good[2] | Excellent |
| Salt | Excellent | Excellent |
| Water | Excellent | Excellent |

1. Certain colors may discolor.
2. Resistance may vary dependent on the type of solvent involved.

## Curing Schedule

| Ambient, Material & Surface Temp | Dry to Touch | Dry to Handle or Assemble | Dry to Full Cure |
|---|---|---|---|
| 75°F (24°C) | 90-120 minutes | 7-8 hours | 7-14 days |

These times are based on a 4.0 mil (100 micron) dry film thickness. Higher film thickness, insufficient ventilation or cooler temperatures will require longer cure times and could result in solvent entrapment and premature failure. Note: Product may be force cured.

**FORCE CURE INFORMATION**

| Oven Temperature at 150°F (66°C) | | |
|---|---|---|
| Flash Time is 20 minutes. | Oven Dwell Time 45 minutes. | Cool Down is 10 minutes. |
| **Oven Temperature at 180°F (82°C)** | | |
| Flash Time is 20 minutes. | Oven Dwell Time 30 minutes. | Cool Down is 10 minutes. |



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# *Carbothane® 8845*

Carboline 8000 Series has been specifically designed for OEM applications.

For specific product requirements or process painting recommendations contact Carboline OEM Engineered Finishes Division.

## Application Equipment

Listed below are general equipment guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results.

**General Guidelines:**

**Spray Application (General)** The following spray equipment has been found suitable and is available from manufacturers such as Binks, DeVilbiss and Graco.

**Conventional Spray** Pressure pot equipped with dual regulators, 3/8" I.D. minimum material hose, .070" I.D. fluid tip and appropriate air cap.

**Airless Spray**

| | |
|---|---|
| Pump Ratio: | 30:1 (min.) |
| GPM Output: | 3.0 (min.) |
| Material Hose: | 3/8" I.D. (min.) |
| Tip Size: | .013-.017" |
| Output PSI: | 2500-3500 |
| Filter Size: | 60 mesh |

Teflon packings are recommended and available from the pump manufacturer.

**Electrostatic** Contact Carboline for specific equipment recommendations.

**HVLP** Contact Carboline for specific equipment recommendations.

**Touch Up** Respray or brush. Brushing recommended only for touchup of small areas. Use natural bristle brush applying with full strokes.

## Mixing & Thinning

**Mixing** For plural component application equipment follow the equipment manufacturer's instructions. For batch mixing, power mix part A separately, then combine and power mix thoroughly in the following proportions:
THIS PRODUCT IS MOISTURE SENSITIVE. AVOID MOISTURE CONTAMINATION. DO NOT MIX PARTIAL KITS.

**Ratio** 4:1 Ratio (A to B)

| | 1 Gallon Kit | 5 Gallon Kit |
|---|---|---|
| 8845 Part A | .8 gallons (in 1 gallon can) | 4 gallons (in 5 gallon can) |
| Urethane Converter 8843 | 25.6 fluid ozs. | 1 gallon |

**Thinning** Normally not required. May be thinned up to 6 oz/gal (5%) with #76. Thinner #97 used when applying 8845 in very hot conditions. Use of thinners other than those supplied or recommended by Carboline may adversely affect product performance and void product warranty, whether expressed or implied.

**Pot Life** 90 minutes at 75°F (24°C).

## Application Conditions

| Condition | Material | Surface | Ambient | Humidity |
|---|---|---|---|---|
| Normal | 60°-85°F (16°-29°C) | 60°-85°F (16°-29°C) | 60°-85°F (16°-29°C) | 40-60% |
| Minimum | 50°F (10°C) | 35°F (2°C) | 35°F (2°C) | 10% |
| Maximum | 130°F (54°C) | 120°F (50°C) | 95°F (35°C) | 80% |

Industry standards are for substrate temperatures to be 5°F (3°C) above the dew point.

## Application Conditions Cont.

Caution: This product is moisture sensitive in the liquid stage and until fully cured. Protect from high humidity, dew and direct moisture contact until fully cured. Application and/or curing in humidities above maximum, or exposure to moisture from rain or dew may result in loss of gloss and/or microbubbling of the product.

## Cleanup & Safety

**Cleanup** Use Thinner #2 or Acetone. In case of spillage, absorb and dispose of in accordance with local applicable regulations.

**Safety** Read and follow all caution statements on this product data sheet and on the MSDS for this product. Employ normal workmanlike safety precautions. Hypersensitive persons should wear protective clothing, gloves and use protective cream on face, hands and all exposed areas.

**Ventilation** When used in enclosed areas, thorough air circulation must be used during and after application until the coating is cured. The ventilation system should be capable of preventing the solvent vapor concentration from reaching the lower explosion limit for the solvents used. User should test and monitor exposure levels to insure all personnel are below guidelines. If not sure or if not able to monitor levels, use MSHA/NIOSH approved supplied air respirator.

**Caution** This product contains flammable solvents. Keep away from sparks and open flames. All electrical equipment and installations should be made and grounded in accordance with the National Electric Code. In areas where explosion hazards exist, workmen should be required to use non-ferrous tools and wear conductive and non-sparking shoes.

## Packaging, Handling & Storage

| **Shipping Weight 8845 (Approximate)** | 1 Gallon Kit | 5 Gallon Kit |
|---|---|---|
| | 15 lbs. (6 kg) | 58 lbs. (22 kg) |
| **Thinner 76** | 8 lbs. (4 kg) | 41 lbs. (19kg) |
| **Thinner 97** | 8 lbs. (4 kg) | 41 lbs. (19kg) |

Carbothane 8845 is also available in drum quantities.

**Flash Point (Setaflash)**

| | |
|---|---|
| Part A: | 63°F (17°C) |
| Part B: | 62°F (17°C) |
| Thinner 76: | 21°F (-6°C) |

**Storage (General)** Store Indoors.

**Storage Temperature & Humidity** 40° - 110°F (4-43°C)
0-80% Relative Humidity

**Shelf Life** Part A: Min. 36 months at 75°F (24°C)
Part B: Min. 24 months at 75°F (24°C)

***Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers.**

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