

## SELECTION & SPECIFICATION DATA

<b>Generic Type</b>	Alkyd resin based, fast drying semi-gloss high build topcoat paint
<b>Description</b>	Fast drying alkyd enamel topcoat for general use. It can be applied easily and in high microns and has fast drying properties. When applied over a primer suitable for moderate to medium corrosive environments, it protects steel surfaces very well. Can be used for both new construction and repair/renovation works.
<b>Features</b>	<ul style="list-style-type: none"> <li>• Air drying</li> <li>• Semi-gloss (Except for metallic colors)</li> <li>• Can be applied with paint guns such as Airless, Airmix and Air Spray</li> <li>• High surface coverage/covering</li> <li>• Flexible</li> <li>• Can be baked at low temperatures (max. 120°C)*</li> <li>• Can be applied over metal and wooden surfaces.</li> </ul>
<b>Color</b>	Various
<b>Finish</b>	<p>Semi-Gloss</p> <p>This value has been measured under laboratory conditions. In oil-based products, the ambient temperature and curing temperature in application may affect the product gloss. While the brightness increases at high temperatures, the brightness may decrease at low temperatures. Before the application, it is recommended to check the brightness with a trial application in the application conditions, and if a trial cannot be made, it is recommended to request support from Carboline Technical Service for trial application.</p>
<b>Primer</b>	Typically applied over Alkyd Primers.
<b>Dry Film Thickness</b>	<p>51 microns (2 mils) Minimum</p> <p>102 microns (4 mils) Maximum</p>
<b>Solids Content</b>	By Volume 52% +/- 4%
<b>Theoretical Coverage Rate</b>	<p>20.5 m<sup>2</sup>/l at 25 microns (834 ft<sup>2</sup>/gal at 1.0 mils)</p> <p>10.2 m<sup>2</sup>/l at 50 microns (417 ft<sup>2</sup>/gal at 2.0 mils)</p> <p>5.1 m<sup>2</sup>/l at 100 microns (209 ft<sup>2</sup>/gal at 4.0 mils)</p> <p>Allow for loss in mixing and application.</p>
<b>Theoretical Coverage Rates</b>	<p>10.4 m<sup>2</sup>/l at 50 microns</p> <p>Allow for loss in mixing and application.</p>
<b>VOC Value(s)</b>	414 ± %3 g/l (for color white) (EPA Method 24)
<b>Dry Temp. Resistance</b>	<p>Continuous: 93°C (199°F)</p> <p>Non-Continuous: 121°C (250°F)</p>
<b>Limitations</b>	<p>Not for immersion applications or splash and spillage of acids, alkalies or solvents.</p> <p>During baking, as a result of thermoplastic nature of the product, some softening may occur. This should be regarded as normal and does not affect performance.</p>

## SUBSTRATES & SURFACE PREPARATION

<b>General</b>	Surfaces should be cleaned as per SSPC SP-1 standard to remove all oil, grease, rust, dust, dirt and other chemical contaminants. Mechanical defects like protrusions, weld spatter, delamination and other fabrication defects should be corrected in accordance to ISO 8501-3 by hand and power tools.
<b>Steel</b>	Cleaned to Sa 2, Sa 2½ or Sa 3 surface cleanliness level in accordance with ISO 8501-1. Due to the surface tolerant properties of the paint, in some cases it can also be applied mechanically to surfaces cleaned to ISO St2 or St3. For better performance, direct application to metal is not recommended. Prefer Carboline industrial primers beforehand.
<b>Galvanized Steel</b>	After roughening (by a sanding paper or power tool), apply Carboline Galoseal. This product is advised to be applied after Carboline Galoseal has been sufficiently dried out. (Avoid excessive thicknesses!)
<b>Aluminum</b>	After roughening (by a sanding paper or power tool), apply Carboline Galoseal. This product is advised to be applied after Carboline Galoseal has been sufficiently dried out. (Avoid excessive thicknesses!)

## MIXING & THINNING

<b>Mixing</b>	Power mix until uniform in consistency.
<b>Thinning</b>	<p>After thorough mixing, Carboline Thinner #10 can be used. Thinner is allowed to enter 15-20% for air spray application and 5-10% for airless applications. In brush and roller applications, thinner thinner is recommended in the range of 5-10% for smooth spreading of the primer to the surface.</p> <p>The use of thinners other than those supplied or recommended by Carboline may adversely affect product performance and may void product warranty.</p>

## APPLICATION EQUIPMENT GUIDELINES

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.

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<b>Spray Application</b>	40-80 ° angle and also can be applied with bottom / top air spray gun with 1.5 to 1.8 nozzle diameter.
<b>Airless Spray</b>	Pump Ratio: 30:1 (min.)* GPM Output: 3.0 (min.) Material Hose: 3/8" I.D. (min.) Tip Size: 0.013"-0.015" Output PSI: 1800-2700 Filter Size: 60 mesh *PTFE packings are recommended and available from the pump manufacturer..
<b>Brush &amp; Roller (General)</b>	For small areas and touch-up only. Avoid excessive rebrushing or rerolling.
<b>Brush</b>	Use a synthetic bristle brush.
<b>Roller</b>	Use a short-nap natural roller

## APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	2°C (36°F)	2°C (36°F)	2°C (36°F)	0%
Maximum	35°C (95°F)	35°C (95°F)	35°C (95°F)	80%

This product requires the substrate temperature to be above 3C above the dew point. Condensation due to substrate temperatures below the dew point can cause flash rusting on prepared steel and interfere with proper adhesion to the substrate. Special application techniques may be required above or below normal application conditions.

## CURING SCHEDULE

Surface Temp.	Set to Touch	Dry to Touch	Dry Hard
23°C (73°F)	50 Minutes	90 Minutes	14 Hours

These times are based on a 2.0-3.0 mil (50-75 microns) dry film thickness. Higher film thickness, insufficient ventilation, high humidity or cooler temperatures will require longer cure times and could result in solvent entrapment or premature failure.

## CLEANUP & SAFETY

<b>Cleanup</b>	Use Thinner #2 or Acetone. In case of spillage, absorb and dispose of in accordance with local applicable regulations.
<b>Safety</b>	Read and follow all caution statements on this product data sheet and on the MSDS for this product. Employ normal workmanlike safety precautions. Use adequate ventilation and wear gloves or use protective cream on face and hands if hypersensitive. Keep container closed when not in use.
<b>Ventilation</b>	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 respirator.
<b>Caution</b>	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

<b>Shelf Life</b>	12 months at 75 °F (24 °C) *Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers.
<b>Shipping Weight (Approximate)</b>	20 L (28.5 kg*) *It may vary according to the color.
<b>Storage Temperature &amp; Humidity</b>	4°C-43°C %95 Relative Humidity
<b>Flash Point (Setaflash)</b>	4°C
<b>Storage</b>	Store Indoors.

# Carbocoat 45

## PRODUCT DATA SHEET

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### WARRANTY

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To the best of our knowledge the technical data contained herein is true and accurate on the date of publication and is subject to change without prior notice. User must contact Carboline to verify correctness before specifying or ordering. No guarantee of accuracy is given or implied. Carboline warrants our products to be free of manufacturing defects in accord with applicable Carboline quality control procedures. THIS WARRANTY IS NOT VALID WHEN THE PRODUCT IS NOT: (1) APPLIED IN ACCORDANCE WITH CARBOLINE'S SPECIFICATIONS, AND/OR (2) PROPERLY STORED, CURED, AND USED UNDER NORMAL OPERATING CONDITIONS. Carboline assumes no responsibility for coverage, performance, injuries, or damages resulting from use of the product. If this product is found not to perform as specified upon inspection by a Carboline representative during the warranty period, Carboline's sole obligation, if any, is to replace the Carboline product(s) proven to be defective or refund the purchase price thereof, at Carboline's sole option. Carboline shall not be liable for any other losses or damages. This warranty excludes (1) labor and costs of labor for the application or removal of any product, and (2) any incidental or consequential damages, whether based on breach of express or implied warranty, negligence, strict liability or any other legal theory. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY CARBOLINE, EXPRESS OR IMPLIED, STATUTORY, BY OPERATION OF LAW, OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. All of the trademarks referenced above are the property of Carboline International Corporation unless otherwise indicated. The whole text of this Product Data Sheet, as well as the documents derived from it, have been written in English, and for legal purposes the English version shall prevail.