

SELECTION & SPECIFICATION DATA

Generic Type	High solids, two-component, glossy and high build acrylic aliphatic polyurethane topcoat
Description	High build, high solids and glossy finish. This material, which is suitable for application over various Carboline primers and intermediate coats and can also be applied direct to metal, provides weather-resistant performance in a wide range of colors.
Features	<ul style="list-style-type: none"> • Gloss • All RAL color card and special colors based on client requests • Can be applied with paint guns such as Airless, Airmix and Air Spray • According to ISO12944, it can be recommended as a stand-alone paint system as "Direct to Metal" in environments up to C3 corrosion category.
Color	Various
Finish	Gloss may vary with color
Primer	Refer to Substrates & Surface Preparation
Dry Film Thickness	60-100microns per coat* Dry film thickness in excess of 4 mils (100 microns) per coat is not recommended.
Solids Content	By Volume 72% +/- 4% <i>* When tinted values may vary slightly with color.</i>
Theoretical Coverage Rate	28.3 m ² /l at 25 microns (1155 ft ² /gal at 1.0 mils) Allow for loss in mixing and application.
VOC Values	As Supplied : 315 g/l <i>*When tinted values may vary slightly with color.</i>
Dry Temp. Resistance	Continuous: 93°C (200°F) Non-Continuous: 121°C (250°F) Discoloration and loss of gloss is observed above 200°F (93°C). The alignment of aluminum flakes in aluminum-filled finishes is very dependent on application conditions and techniques. Care must be taken to keep conditions as constant as possible to reduce variations in final appearance. It is also advisable to work from a single batch of material since variations can occur from batch to batch. For more information consult Carboline Technical Service Department.
Topcoats	Carbothane® Clear Coat when required.

SUBSTRATES & SURFACE PREPARATION

General	All surfaces must be clean, dry and free of oil, grease, dirt, dust or other substances that may impair the adhesion of the product to the substrate in accordance with SSPC-SP 1. For all surfaces, prime with the special Carboline primer recommended by your Carboline Sales Representative. For detailed requirements, review the Technical Sheet for the specific liner
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Multi-Gard 22-1344

PRODUCT DATA SHEET



SUBSTRATES & SURFACE PREPARATION

Previously Painted Surfaces

Lightly sand or abrade to roughen and degloss the surface. Existing paint must attain a minimum 3B rating in accordance with ASTM D3359 "X-Scribe" adhesion test. Prime with specific Carboline primers as recommended by your Carboline sales representative.

PERFORMANCE DATA

All test data was generated under laboratory conditions. Field testing results may vary.

Test Method	System	Results
ASTM B 117 Salt Fog	Sa 2½ grade and 40-75 micron surface profile 6mm cold rolled steel panel 100 µm DFT	No effect on plane, no rust in scribe and no undercutting after 500 hours
Cross Cut (ASTM D3359)	At St2 grade cleaned, grinded surface profile on 2 mm Aluminum panel 100 µm DFT	5B
Cross Cut (ASTM D3359)	At St2 grade cleaned, grinded surface profile on 2 mm Galvanized panel 100 µm DFT	5B
Cross Cut (ASTM D3359)	At St2 grade cleaned, grinded surface profile on 2 mm Stainless metal panel 100 µm DFT	5B
Pull-off Adhesion Test (ASTM D4541)	6 mm thick Cold rolled steel sheet with Sa 2½ level and 40-75 micron surface roughness CG616 Gray (100 µ) + MG1344 (50 µ)	22 Mpa
QUV Weathering Test (ASTM G154 Cycle 1)	QUV Basic Weatherometer (with UVA 340 lamp) 0.8 mm thick sanded cold rolled sheet	Only 11% brightness loss and Delta E 1,58 color change in 2000 test hours

MIXING & THINNING

Mixing | Power mix Part A separately, then combine and power mix. DO NOT MIX PARTIAL KITS.

Thinning | Spray: Up to 11 oz/gal (max. 20%) w/ #25
Roller: Up to max. 5% w/ #25.
Use of thinners other than those supplied or recommended by Carboline may adversely affect product performance and void product warranty, whether expressed or implied.
a In extreme cold whether Thinner# 25 WT can be used.
Thinner #214 may also be used up to 6 oz/gal for either spray or brush/roller application. Thinner #236E may also be used to thin this product to minimize HAP and VOC emissions. Consult Carboline Technical Service for guidance.

Ratio | 6:1 Ratio (A to B) (by volume)
6 Units by Volume Multigard 22-1344 Comp. A
1 Unit by Volume Urethane Converter 811

Pot Life | 3 hours at 77°F (25°C) and less at higher temperatures. Pot life ends when coating becomes too viscous to use. MOISTURE CONTAMINATION WILL SHORTEN POT LIFE AND CAUSE GELLATION

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.

Spray Application (General)	This is a high solids coating and may require adjustments to spray techniques. Wet film thickness is achieved easily and quickly. 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: 0.013-0.017" Output PSI: 2100-2400 Filter Size: 60 mesh *Teflon packings are recommended and available from the pump manufacturer.
Brush & Roller (General)	Multiple coats may be required to obtain desired appearance, recommended dry film thickness and adequate hiding. Avoid excessive re-brushing or re-rolling. For best results, tie-in within 10 minutes at 75°F (24°C).
Brush	Recommended for touch-up only. Use a medium, natural bristle brush.
Roller	Use a medium-nap synthetic roller cover with phenolic core.

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	5°C (41°F)	5°C (41°F)	5°C (41°F)	0%
Maximum	38°C (100°F)	43°C (109°F)	43°C (109°F)	85%

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

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

CURING SCHEDULE

Surface Temp.	Set to Touch	Dry to Handle	Dry Hard
25°C (77°F)	2 Hours	4 Hours	8 Hours

* When tinted values may vary slightly with color.

These times are based on a 3.0 mil (75 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.

Maximum recoat time is 1 year. Surface must be clean and dry. As part of good painting practice it is recommended to test for adhesion by wiping the surface with Thinner 25. If the film shows a slight "tack" the surface is suitable for recoating without extensive surface preparation such as abrading.

Multi-Gard 22-1344

PRODUCT DATA SHEET



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

Shelf Life	Part A: Min. 12 months at 75°F (24°C) Part B: Min. 6 months at 75°F (24°C) *Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers.
Shipping Weight (Approximate)	<ul style="list-style-type: none">• 1 takım Net weight 17,5 lt (Gross weight: 22.7-26.2 kg)• Comp. A Net weight 15 lt (Gross weight: 19.5-23 kg)• Comp. B Net weight 2.5 lt (Gross weight: 3.2 kg)
Storage Temperature & Humidity	40° - 110°F (4°-43°C) 0-90% Relative Humidity
Flash Point (Setaflash)	Part A - 25°C Part B - 50°C
Storage	Store Indoors.

WARRANTY

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.