

Carbomastic® 15LT - Surface Tolerant Epoxy Primer

Selection & Specification Data

Generic Type	2 Pack Cycoaliphatic Amine Epoxy	
Description	<u>Aluminium-pigmented, low-stress, high-solids epoxy with outstanding performance properties and proven field history.</u> Carbomastic 15LT was the pioneer epoxy coating in a number of industrial markets and still today, provides unequalled levels of barrier protection and corrosion resistance over existing finishes and rusted or SIS-St2 or St3-cleaned steel.	
Features	<ul style="list-style-type: none"> • Single coat application characteristics • Suitable as a topcoat for most tightly adhered existing coatings • Excellent choice for field touch-up of zinc-rich primers and galvanised steel. • Unique formulation with aluminium flakes provides exceptional barrier protection. • VOC compliant to current EPA 1990 PG6/23(97) when used as a general primer. 	
Components	2	
Colour	Aluminium	
Finish	Matt	
Primers	Self-priming. May be applied over most tightly adhering coatings as well as inorganic zinc primers. A mist coat may be required to minimise bubbling over inorganic zinc primers.	
Topcoats	Carboguard 891 Carbothane 1290/133HB/133HG Carboxane 2000	
Dry Film Thickness	75 µm over existing coatings and inorganic zinc primers. 125 µm minimum on rusted steel substrates. 175 - 250 µm in one or two coats for severe exposures and immersion conditions. Do not exceed 250 µm in a single coat.	
Solids Content	By Volume:	86% ± 2%
Theoretical Coverage Rate	11.5 m ² /l at 75 µm Allow for loss in mixing and application	
VOC Values	As supplied:	28 g/l This value is nominal.
Dry Temp. Resistance	Continuous:	120°C
	Non-Continuous:	150°C
	Discoloration and loss of gloss is observed above 82°C.	
Thinner	Thinner No. 2.	
Cleaner	Thinner No. 2.	
Limitations	<ul style="list-style-type: none"> • Epoxies lose gloss, discolour and eventually chalk in sunlight exposure. 	

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	<u>Immersion:</u>	SIS-Sa3 (SSPC-SP5) with a 50 - 75 µm surface profile.
	<u>Non-Immersion:</u>	SIS-Sa2 (SSPC-SP6) with a 50 - 75 µm surface profile for maximum protection. SIS-St2 (SP2), St3 (SP3), or Sa1 (SP7) are also acceptable methods.
Galvanised Steel (Aged)	Treat with Surface Cleaner No. 3 and prime with Rustbond Penetrating Sealer.	
Galvanised Steel (New)	SIS-Sa1 (SSPC-SP7) or Surface Cleaner No. 3.	
Previously Painted Surfaces	Lightly sand or abrade to roughen surface and degloss the surface. Wash with Surface Cleaner No. 3. Existing paint must attain a minimum 3B rating in accordance with ASTM D3359 "X-Scribe" adhesion test.	

Performance Data

Test Method	System	Results
ASTM D 4541 Adhesion (Elcometer)	Blasted steel 1 coat CM 15	5.6 Mpa.
ASTM D 4541 Adhesion (Pneumatic)	a) Blasted steel 1 coat CM 15 b) Rusted steel 1 coat CM 15	a) 9.95 Mpa. b) 8.4 Mpa.
ASTM D522 Flexibility	Blasted steel 1 coat CM15	a) Conical - crack 9.6 mm, actual elongation 48.57% b) Cylindrical - no cracking observed
ASTM D4060 Taber Abrasion	1 coat CM15 CS 17 wheel, 1000 gm load, 3000 cycles	89.8 mg per 3000 cycles
ASTM G14 Impact Resistance	Blasted steel 1 coat CM15 Rusted steel 1 coat CM15	Area damaged: a) 1/4 inch (0.25") b) 1/4 - 9/16 inch (0.44")
ASTM B 117 Salt Spray	1 coat CM 15 over rusted steel	No blistering, rusting or softening. No rust creep from scribe.
ASTM D 1735 Water Fog	1 coat CM 15 over rusted steel	No blistering or softening. No creep from scribe.

Test reports and additional data available upon written request.

May 2001

To the best of our knowledge the technical data contained herein are true and accurate at the date of issuance and are subject to change without prior notice. User must contact Nullfire Limited to verify correctness before specifying or ordering. No guarantee of accuracy is given or implied. We guarantee our products to conform to Nullfire Limited quality control. We assume no responsibility for coverage, performance or injuries resulting from use. Liability, if any, is limited to replacement of products. Prices and cost data, if shown, are subject to change without prior notice. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY NULLIFIRE LIMITED, EXPRESS OR IMPLIED, STATUTORY, BY OPERATION OF LAW, OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Carboline® and Carbomastic® are registered trademarks.

Carbomastic[®] 15LT - Surface Tolerant Epoxy Primer

For further information please call . . . +44 (0)24 76855000 or fax: +44 (0)24 76422848

Application Equipment

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

Conventional Spray Pressure pot equipped with dual regulators, 9.5mm I.D. minimum material hose, 2.2mm I.D. fluid tip and appropriate air cap.

Airless Spray

Pump Ratio:	30:1 (min.)	
Volume Output:	11.5 l/min (min.)	(2.5 gpm min.)
Material Hose:	9.5mm (min.)	(3/8" I.D. min.)
Tip Size:	0.48 - 0.64mm	(0.019 - 0.025")
Output Pressure:	133-148 kg/cm ²	(1900-2100 psi)

Filter Size: 250µm (60 mesh)
Teflon packing is 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.

Brush Use a good quality decorator's brush.

Roller Use a medium-pile synthetic roller.

Mixing & Thinning

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

Ratio 1:1 Ratio (A to B) by volume.

Thinning May be thinned up to 25% with Thinner No. 2. Use of thinners other than those supplied by Carboline may adversely affect product performance and void product warranty, whether expressed or implied.

Pot Life 1½ hours at 20°C and less at higher temperatures. Pot life ends when coating becomes too viscous to use.

Cleanup & Safety

Cleanup Use Thinner No.2. 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 as a tank lining or 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 vapour concentration from reaching the lower explosion limit for the solvents used. In addition to ensuring proper ventilation, appropriate respirators must be used by all application personnel. Any Working in Confined Spaces Regulations should be followed.

Cleanup & Safety (Cont)

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 appropriate electrical codes. In areas where explosion hazards exist, workmen should be required to use non-ferrous tools and wear conductive and non-sparking shoes.

Application Conditions

Condition	Material	Surface	Ambient	Humidity
Normal	15° - 30°C	15° - 30°C	15° - 30°C	35 - 80%
Minimum	5°C	2°C	2°C	0%
Maximum	35°C	75°C	40°C	95%

This product simply requires the substrate temperature to be 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. & 50% Relative Humidity	Dry to Recoat/Topcoat	Final Cure for Immersion Service
5°C	18 hours	7 Days
10°C	10 hours	5 Days
20°C	6 hours	3 Days
30°C	4 hours	2 Days

These times are based on a 125 - 175 µm 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. **Dry to Touch is 5 hours at 24°C. Maximum recoat/topcoat times are 30 days for epoxies and 90 days for polyurethanes at 24°C.** Excessive humidity or condensation on the surface during curing can interfere with the cure. Any haze or blush must be removed by water washing before recoating. If the maximum recoat time has been exceeded, the surface must be abraded by sweep blasting prior to the application of additional coats. Note: This product contains conductive pigments and cannot be holiday tested.

Packaging, Handling & Storage

Pack Size 5 litre and 20 litre kits

Flash Point (Setaflash) Part A: > 93°C
Part B: 24°C

Storage (General) Store indoors.

Storage Temperature & Humidity 7 - 43°C
0 - 90% Relative Humidity

Shelf Life 24 months at 24°C



Torrington Avenue
Coventry • CV4 9TJ England
Tel: +44 (0)24 76855000
Fax +44 (0)24 76422848

To the best of our knowledge the technical data contained herein are true and accurate at the date of issuance and are subject to change without prior notice. User must contact Carboline Europe Limited to verify correctness before specifying or ordering. No guarantee of accuracy is given or implied. We guarantee our products to conform to Carboline Europe Limited quality control. We assume no responsibility for coverage, performance or injuries resulting from use. Liability, if any, is limited to replacement of products. Prices and cost data, if shown, are subject to change without prior notice. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY CARBOLINE EUROPE LIMITED, EXPRESS OR IMPLIED, STATUTORY, BY OPERATION OF LAW, OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.