

SELECTION & SPECIFICATION DATA

Generic Type	Self-curing, inorganic, zinc silicate.
Description	A weldable pre-construction inorganic zinc primer for shop use only.
Features	<ul style="list-style-type: none"> • Welds made over Carboweld 11 coated steel are equal in every respect to welds made to uncoated steel. • Designed to protect steel during construction phase of projects under normal conditions. • Can be topcoated for additional long term protection for atmospheric exposures. • Weld spatter does not adhere to or damage the coating. • Can be welded as quickly and easily as bare steel at production line speeds without loss in strength or consistency of the weld. • Dries to touch and to handle in 3 to 5 minutes.
Colour	Grey
Finish	Flat *Consult Carboline Technical Service for appropriate topcoat specific for the intended service.
Dry Film Thickness	15 - 20 microns (0.6 - 0.8 mils) in a single coat Thicknesses up to 37 microns are also acceptable.
Solid(s) Content	By Volume 29% (theoretical) By Weight 48%
Zinc Content in Dry Film	85% by weight
Theoretical Coverage Rates	14.5 m ² /l at 20 microns dry Allow for loss in mixing and application
VOC Values	As Supplied : 696 g/l These are nominal values.
Dry Temp. Resistance	Continuous: 380°C (716°F) Non-Continuous: 425°C (797°F)
Limitations	For projects with extended construction phases, beyond 12 months in normal conditions, consult Carboline Technical Service for more suitable primers. For shop use only. Not recommended for exposure to acid, alkalis or solutions outside pH range 5 to 10 without suitable topcoat.

SUBSTRATES & SURFACE PREPARATION

General	Remove all oil or grease from the surface to be coated with Thinner #2 in accordance with AS 1627.1
Steel	<p><u>For maximum performance:</u> SSPC-SP 10 (AS 1627.4 Sa 2½) with a 30-60 micron jagged blast profile.</p> <p><u>For general work:</u> Abrasive blast to SSPC-SP 6 (AS 1627.4 Sa 2).</p>

SUBSTRATES & SURFACE PREPARATION

Welding Data	Automatic- Carboweld 11 when applied at recommended thickness may be welded at speeds up to 1.2 metres per minute. This is dependent upon plate thickness and bead size. This includes the following processes: 1) Submerged arc 2) Flux core 3) Short arc 4) Metal Inert Gas (MIG).
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MIXING & THINNING

Mixing	Power mix base, then combine parts, sifting zinc filler slowly into base and mixing with continuous agitation. Mix until free of lumps. Pour mixture through 30 mesh screen. DO NOT MIX PARTIAL KITS. Keep under mild agitation during application.
Thinning	Not normally required, but may be thinned up to 20% with Thinner #21 in cool weather (below 4°C). For hot or windy conditions, use Thinner #33 up to 20%. Use of thinners other than those supplied or recommended by Carboline may adversely affect product performance and void product warranty, whether express or implied.
Ratio	12 Litre Kit Part A (Base): 11 litres Part B (Zinc Filler): 7 kg
Pot Life	48 hours at 24°C and less at higher temperatures. Pot life ends when coating becomes too viscous to use.

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)	The following spray equipment has been found suitable and is available from manufacturers such as Binks, DeVilbiss and Graco. Agitate the mixed material continuously during the spraying operation. If spraying stops for more than 15 minutes, recirculate the material remaining in the spray line.
Conventional Spray	Pressure pot with dual regulators, agitator, 9.5 mm (3/8") I.D. minimum hose, 15 metre maximum material hose length, 1.8 mm (.070") I.D. fluid tip and appropriate air cap. Keep pot at same level as application.
Airless Spray	Pump Ratio: 30:1 minimum* Output: 11 lt/minute minimum Material Hose: 9.5 mm (3/8") I.D. minimum Tip Size: .019-.023" Output PSI: 1500-2000 Filter Size: 60 mesh *Teflon packings are recommended and available from the pump manufacturer.
Brush	For touch-up of <u>areas less than 0.1 square metre (300 mm square)</u> . Use medium bristle brush and avoid over brushing.
Roller	<u>DO NOT APPLY BY ROLLER.</u>

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	-18°C (-0°F)	-18°C (-0°F)	-18°C (-0°F)	30%
Maximum	54°C (130°F)	93°C (200°F)	54°C (130°F)	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.	Dry to Handle	Final Cure General
-18°C (-0°F)	2 Hours	5 Days
4°C (40°F)	40 Minutes	12 Hours
16°C (60°F)	15 Minutes	6 Hours
27°C (80°F)	5 Minutes	4 Hours
38°C (100°F)	3 Minutes	2 Hours

Drying times are based on a 20-40 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. For shop applications or if the relative humidity is too low, the curing time can be reduced by raising the relative humidity by steam or water spray on the coated surface after an initial dry time of 1 hour at 24°C or equivalent.

CLEANUP & SAFETY

Cleanup	Use Thinner #21 or Isopropanol. 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. User should test and monitor exposure levels to ensure all personnel are below guidelines. If not sure or if not able to monitor levels, use suitable approved respirator.

PACKAGING, HANDLING & STORAGE

Shelf Life	Part A: 18 months at 24°C Zinc Filler: 48 months at 24°C Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers. For products/components exceeding the stated shelf life, contact Technical Services for further advice.
Storage Temperature & Humidity	4°- 43°C 0-90% Relative Humidity
Flash Point (Setaflash)	11°C for Part A
Shipping Weight (Approximate)	12 Litre Kit - 18.3 kg)

Carboweld 11

PRODUCT DATA SHEET



PACKAGING, HANDLING & STORAGE

Storage	Store Indoors.
	Keep Dry - Ensure both components are kept away from all sources of moisture

WARRANTY

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