

Technical Data Sheet



COOL BARRIER ALPOL 2K

**Product description**

This is a high performance, high solids two component, exterior/interior, low VOC, polyester-aliphatic urethane coating. Provides a high gloss, excellent chemical resistance, color retention, and chalk resistance.

- Outstanding resistance to a wide range of chemical, weather, and mechanical conditions
- Abrasion and impact resistant
- Superior exterior color and gloss retention.
- Outstanding application properties

**Typical use**

For industrial, commercial, or marine applications where a heavy duty polyurethane coating is required

- Resists splash, spillage, and fumes of dilute acids, alkalies, solvents, and fuels
- Tank Exteriors
- Pipelines
- Bridges
- Machinery and Equipment
- Marine Vessels
- Product finish type application

**Performance Colours**

Various Federal 595B colors  
Color: Wide range of colors available, LSA included.

**Product data**

Property	Test/Standard	Description
Solids by volume	ISO 3233	70% ± 2%, mixed, may vary by color
Gloss level (GU 60 °)	ISO 2813	Gloss
VOC-EU IED (2010/75/EU) (calculated)		350 g/l

The provided data is typical for factory produced products, subject to slight variation depending on colour.

All data is valid for mixed paint. Gloss description: According to Abolin Performance Coatings' definition.

**Film thickness per coat**

Typical recommended specification range

Dry film thickness	50 - 75 microns
Wet Film Thickness	75 - 112 microns
Theoretical Speeding Rate	14.00 -9,30 m <sup>2</sup> /l

## Surface preparation

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

### Minimum recommended surface preparation:

Minimum recommended surface preparation:

\* Iron & Steel: SSPC-SP6/NACE 3

\* Aluminum SSPC-SP-1

\* Galvanizing SSPC-SP-1

\* Primer required

## Surface Preparation Standards

	Condition of Surface	ISO 8501-1 BS7079:A1	Swedish Std. SIS055900	SSPC	NACE
White Metal		Sa 3	Sa 3	SP 5	1
Near White Metal		Sa 2.5	Sa 2.5	SP 10	2
Commercial Blast		Sa 2	Sa 2	SP 6	3
Brush-Off Blast		Sa 1	Sa 1	SP 7	4
Hand Tool Cleaning	- Rusted	C St 2	C St 2	SP 2	
	- Pitted & Rusted	D St 2	D St 2	SP 2	
Power Tool Cleaning	- Rusted	C St 3	C St 3	SP 3	
	- Pitted & Rusted	D St 3	D St 3	SP 3	

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

### Iron & Steel

Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. Minimum surface preparation is Commercial Blast Cleaning per SSPC-SP6/NACE 3. For better performance, use Near White Metal Blast Cleaning per SSPC-SP10/NACE 2. Blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (1-2 mils / 25-50 microns). Prime any bare steel the same day as it is cleaned or before flash rusting occurs. Primer Required.

### Previously Painted Surfaces:

If in sound condition, clean the surface of all foreign material. Smooth, hard or glossy coatings and surfaces should be dulled by abrading the surface. Apply a test area, allowing paint to dry one week before testing adhesion. If adhesion is poor, or if this products attacks the previous finish, removal of the previous coating may be necessary. If paint is peeling or badly weathered, clean surface to sound substrate and treat as a new surface as above.

### Galvanized Steel

Allow to weather a minimum of six months prior to coating. Solvent Clean per SSPC-SP1. When weathering is not possible, or the surface has been treated with chromates or silicates, first Solvent Clean per SSPC-SP1 and apply a test patch. Allow paint to dry at least one week before testing adhesion. If adhesion is poor, brush blasting per SSPC-SP7 is necessary to remove these treatments. Rusty galvanizing requires a minimum of Hand Tool Cleaning per SSPC-SP2, prime the area the same day as cleaned or before flash rusting occurs. Primer required.

### Concrete and Masonry

For surface preparation, refer to SSPC-SP13/NACE 6, or ICRI No. 310.2, CSP 1-3. Surfaces should be thoroughly clean and dry. Concrete and mortar must be cured at least 28 days @ 75°F (24°C). Remove all loose mortar and foreign material. Surface must be free of laitance, concrete dust, dirt, form release agents, moisture curing membranes, loose cement and hardeners. Fill bug holes, air pockets and other voids with Steel-Seam FT910. Primer required.

### Follow the standard methods listed below when applicable:

ASTM D4258 Standard Practice for Cleaning Concrete. ASTM D4259 Standard Practice for Abrading Concrete. ASTM D4260 Standard Practice for Etching Concrete.

ASTM F1869 Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete.

SSPC-SP 13/Nace 6 Surface Preparation of Concrete. ICRI No. 310.2 Concrete Surface Preparation.

This Technical Data Sheet supersedes those previously issued.

The Technical Data Sheet (TDS) is recommended to be read in conjunction with the Safety Data Sheet (SDS) and the Application Guide (AG) for this product. ABOLIN CO GREECE: Email: [abolin@abolinco.com](mailto:abolin@abolinco.com), web: [www.abolinco.com](http://www.abolinco.com)

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## RECOMMENDED SYSTEMS

### Dry Film Thickness / ct. Mils (Microns)

#### Steel, epoxy primer:

1-2 cts. Recoatable Epoxy Primer	4.0-6.0 (100-150)
1-2 cts. COOL BARRIER ALPOL 2K	2.0-3.0 (50-75)

#### Galvanized Metal:

1-2 cts. Rust Inhibitive Epoxy Primer	12.0-4.0 (50-100)
1-2 cts. COOL BARRIER ALPOL 2K	2.0-3.0 (50-75)

#### Previously Painted:

1-2 cts. COOL BARRIER ALPOL 2K	2.0-3.0 (50-75)
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The systems listed above are representative of the product's use, other systems may be appropriate.

### Application

The following is a guide. Changes in pressures and tip sizes may be needed for proper spray characteristics. Always purge spray equipment before use with listed reducer. Any reduction must be compliant with existing VOC regulations and compatible with the existing environmental and application conditions.

**Reducer** .....Reducer 150

**Clean Up** ..... Reducer 150

**Airless Spray Pressure**.....2400 - 3000 psi

**Hose**.....3/8" ID

**Tip** .....013" - .017"

**Filter** .....60 mesh

**Reduction**.....As needed up to 10% by volume

#### Conventional Spray

**Cap** .....63P

**Tip** .....66

**Atomization Pressure**.....50 - 60 psi

**Fluid Pressure**.....20 - 30 psi

**Reduction**.....As needed up to 10% by volume

#### Brush

**Brush**.....Natural Bristle

**Reduction**.....As needed up to 10% by volume

#### Roller

**Cover** .....1/4" woven with solvent resistant core

**Reduction**.....As needed up to 10% by volume

If specific application equipment is not listed above, equivalent equipment may be substituted.

### Application conditions

**Temperature:** 40°F (4.5°C) minimum, 120°F (49°C) maximum (air, surface, and material)

At least 5°F (2.8°C) above dew point

**Relative humidity:** 85% maximum

## Performance tips

Stripe coat all crevices, welds, and sharp angles to prevent early failure in these areas.

When using spray application, use a 50% overlap with each pass of the gun to avoid holidays, bare areas, and pinholes. If necessary, cross spray at a right angle.

Spreading rates are calculated on volume solids and do not include an application loss factor due to surface profile, roughness or porosity of the surface, skill and technique of the applicator, method of application, various surface irregularities, material lost during mixing, spillage, overthinning, climatic conditions, and excessive film build.

Excessive reduction of material can affect film build, appearance, and adhesion.

Do not apply the material beyond recommended pot life. Do not mix previously catalyzed material with new. In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with Reducer. Mixed coating is sensitive to water. Use water traps in all air lines. Moisture contact can reduce pot life and affect gloss and color.

When rolling this product, always maintain a wet edge to avoid roller marks. Roll as close to any cut-in areas as possible to eliminate visual imperfections. Roller application must be from a roller tray, not by pouring the material onto the surface.

## Drying and Curing time @ 4 mils wet (100 microns):

Substrate temperature	10 °C	25 °C	40 °C
Humidity	50% RH		
Surface (touch) dry	16 h	2 h	30 min
Dry hard	24 h	5 h	2 h
Dry to over coat, minimum	24 h	5 h	2 h
Dried/cured for service	7 d	7 d	5 d

## Pot Life

2 hours at 25 °C

Drying and curing times are determined under controlled temperatures and relative humidity below 50 %, and at average of the DFT range for the product. Surface (touch) dry: The state of drying when slight pressure with a finger does not leave an imprint or reveal tackiness. Dry hard: Minimum time before the coating can tolerate normal foot traffic without permanent marks, imprints or other physical damage. Dry to over coat, minimum: The shortest time allowed before the next coat can be applied. Dried/cured for service: Minimum time before the coating can be permanently exposed to the intended environment/medium.

## Product compatibility

Depending on the actual exposure of the coating system, various primers and topcoats can be used in combination with this product. Some examples are shown above. Contact Abolin for specific system recommendation.

Primer coat: epoxy, epoxy mastic.

## Mixing Ration

Mixing ratio by weight: base to hardener 3 : 1,2

The volume stated is for factory made colours. Note that local variants in pack size and filled volumes can vary due to local regulations.

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### **Storage**

The product must be stored in accordance with national regulations. Keep the containers in a dry, cool, well ventilated space and away from sources of heat and ignition. Containers must be kept tightly closed. Handle with care.

**Shelf life at 23 °C:** 24 month(s)

In some markets commercial shelf life can be dictated shorter by local legislation. The above is minimum shelf life, thereafter the paint quality is subject to re-inspection.

### **Caution**

This product is for professional use only. The applicators and operators shall be trained, experienced and have the capability and equipment to mix/stir and apply the coatings correctly and according to Abolin's technical documentation. Applicators and operators shall use appropriate personal protection equipment when using this product. This guideline is given based on the current knowledge of the product. Any suggested deviation to suit the site conditions shall be forwarded to the responsible Abolin representative for approval before commencing the work.

### **Health and safety**

Please observe the precautionary notices displayed on the container. Use under well ventilated conditions. Do not inhale spray mist. Avoid skin contact. Spillage on the skin should immediately be removed with suitable cleanser, soap and water. Eyes should be well flushed with water and medical attention sought immediately.

### **Colour variation**

When applicable, products primarily meant for use as primers may have slight colour variations from batch to batch. Such products may fade and chalk when exposed to sunlight and weathering.

### **Disclaimer**

The information in this document is given to the best of Abolin's knowledge, based on laboratory testing and practical experience. Abolin's products are considered as semi-finished goods and as such, products are often used under conditions beyond Abolin's control. Abolin cannot guarantee anything but the quality of the product itself. Minor product variations may be implemented in order to comply with local requirements. Abolin reserves the right to change the given data without further notice. Users should always consult Abolin for specific guidance on the general suitability of this product for their needs and specific application practices. If there is any inconsistency between different language issues of this document, the English version will prevail.