



# Coating materials and coating systems for exterior masonry and concrete



**ABOLIN CO**

## Technical Bulletin according to EN 1062-1 Classification

**Better Facades  
Start Here!**

## About This Brochure

In the following pages we present the most famous coating systems developed by the Abolin Co research and production team and we highlight the specific performances of the products, in reference to the most relevant masonry and concrete painting works requirements. Abolin Co quality policy is certified according to ISO 9001 from TÜV Austria Hellas Certification Registration Number 010140732.

## Introduction of the EN 1062-1

EN 1062-1 identifies criteria that need to be considered when assessing the suitability of a coating system for a particular end use and provides a framework for communicating this information between manufacturer and user.

Where applicable, the relevant properties can also be used to products designed for use on interior surfaces of buildings. The characteristics of the coating material should conform to national regulations with regard to health, safety and the environment.

EN 1062 consists of the following parts under the general title Paints and varnishes ☐ Coating materials and coating systems for exterior masonry and concrete:

- Part 1: Classification
- Part 3: Determination and classification of liquid-water transmission rate (permeability)
- Part 6: Determination of carbon dioxide permeability
- Part 7: Determination of crack bridging properties
- Part 11: Methods of conditioning before testing

## Scope of the Std.

This European Standard specifies a general system for the description of coating materials and coating systems for the preservation, decoration and protection of exterior new and old, coated or uncoated masonry and concrete. It also includes a classification system based on certain physical properties.

This European Standard is applicable to all coating materials and coating systems for exterior masonry and concrete, including those for use in external thermal insulation systems.

## Abolin Co Products

- ❖ Cool Barrier Façade
- ❖ Active Cool

### Description by chemical type of binder

a) **Cool Barrier Façade** is based on pure acrylic elastomeric resin.

b) **Active Cool** is based on silicone resin.

### Description by the state of dissolution or dispersion of the binder in the coating material

a) **Cool Barrier Façade**: Water-dilutable\*

b) **Active Cool**: Water-dilutable\*

\* Binders dissolved or dispersed in water. Viscosity adjustment can be performed with water according to manufacturer's recommendations

### Classification

#### 1. General

**Cool Barrier Façade** is an elastomeric solar reflective decorative and protective coating suitable for exterior masonry (e.g. facades) and concrete.

Declaration under 1062-1 , 1000 hours UV Test (applied on fiber cement specimens)

**UNI EN ISO 4628-6:2011** Chalking degree = 0 (No chalking)

**UNI EN ISO 4628-2:2007** Blistering degree = 0 (No blistering)

**UNI EN ISO 4628-4:2007** Cracking degree = 0 (No cracking)

**UNI EN ISO 4628-5:2007** Flaking degree = 0 (No flaking)

**Active Cool** is a decorative, highly breathable solar reflective and photocatalytic silicon coating. Active Cool is specially designed for, but not limited, to building's exterior masonry works and external thermal insulation systems applications

Declaration under 1062-1 , 1000 hours UV Test (applied on fiber cement specimens)

**UNI EN ISO 4628-6:2011** Chalking degree = 2 (Light chalking)\*

**UNI EN ISO 4628-2:2007** Blistering degree = 0 (No blistering)

**UNI EN ISO 4628-4:2007** Cracking degree = 0 (No cracking)

**UNI EN ISO 4628-5:2007** Flaking degree = 0 (No flaking)

\*Light chalking is reasonable due to the photocatalytic activity

**Notes:** The durability of the coating system on the substrate depends on the local climatic environmental conditions. The conditioning according EN 1062-11 shall be adapted to the local climatic conditions at the usage site. Properties such as adhesion and texture that depend on the substrate have not been included in this report. It is essential that the coating system adheres properly to the appropriately prepared substrate to which it is applied. It is recommended that the coating system be applied to a trial area in order to determine whether it will require sealers and/or primers (reference surface).

## 2. Gloss

Table 1 — Classes for specular gloss (G)

Product	Class	
COOL BARRIER FACADE	G3	Matt
ACTIVE COOL	G3	Matt

**NOTE:** In practice, the gloss level achieved will depend on the state and nature of the substrate.

## 3. Dry film thickness

Table 2 — Classes for dry film thickness (E)

Product	Class	Requirement $\mu\text{m}$
COOL BARRIER FACADE	E4	> 200
		$\leq$ 400
ACTIVE COOL	E2	> 50
		$\leq$ 100

**NOTE:** Due to the roughness of the surface of mineral substrates and due to the characteristics of the application methods, masonry coatings build up an uneven layer rather than a film of uniform thickness.

## 4. Grain Size

Table 3 — Classes for grain size (S)

Product	Class		Requirement $\mu\text{m}$
COOL BARRIER FACADE	S1	Fine	< 100
ACTIVE COOL	S1	Fine	< 100

## 5 Water Vapour Transmission Rate

Water vapour transmission rate is determined in accordance with UNI EN ISO 7783-2.

Table 4 — Classes for water vapour transmission rate (V)

Product	Class		$\text{m}^{\text{a}}$
COOL BARRIER FACADE	V2	Medium Vapour Permeability	0,4699
ACTIVE COOL	V1	High Vapour Permeability	0,0636

<sup>a</sup> Values in diffusion equivalent air thickness (sd) in accordance with EN ISO 7783-2

**NOTE:** This property is used to assess the influence of the coating system on the humidity behaviour of the substrate.

## 6 Liquid Water Permeability

Liquid water permeability is determined in accordance with UNI EN 1062-3.

**Table 5 — Classes for liquid water permeability (W)**

Product	Class		W=kg/(m <sup>2</sup> · h <sup>0,5</sup> )
<b>COOL BARRIER FACADE</b>	W3	Low Water Permeability	0,004
<b>ACTIVE COOL</b>	W3	Low Water Permeability	0,058

**NOTE:** This property is used to assess the influence of the coating system on water penetration.

## 7 Crack-Bridging

Crack-bridging is determined in accordance with UNI EN 1062-1 static method A.

**Table 6 — Classes for crack-bridging (A)**

Product	Class	µm
<b>COOL BARRIER FACADE</b>	A3	> 800
<b>ACTIVE COOL</b>	A0	No Requirement

## 8 Carbon Dioxide Permeability

Carbon dioxide permeability is determined in accordance with EN 1062-6.

**Table 7 — Classes for carbon dioxide permeability (C)**

Product	Class	m <sup>a</sup>
<b>COOL BARRIER FACADE</b>	C1	164,147
<b>ACTIVE COOL</b>	C0	2,077

<sup>a</sup> Values in diffusion equivalent air thickness (sd) in accordance with EN 1062-6

## 9, Designation Code

Product	Designation Code						
<b>COOL BARRIER FACADE</b>	G3	E4	S1	V2	W3	A3	C1
<b>ACTIVE COOL</b>	G3	E2	S1	V1	W3	A0	C0

## General Conditions of Use

### a) Basic conditions

The substrate to be coated may require preparatory work depending on the characteristics of the coating materials to be applied. Substrates subject to elevated moisture contents due to capillarity, cannot be coated without preventative repairs or treatments.

The coating of masonry and concrete is usually carried out in three stages (see below) however, these are dependent on the condition of the substrate and therefore will need to be assessed by the applicator, contractor, architect etc:

- ❖ **Preparatory work.**
- ❖ **Priming work.**
- ❖ **Carrying out of the coating work itself.**

### b) Preparatory works

- **On new substrates:**

The work generally consists of mechanical operations such as scraping, brushing, low or high pressure washing and dusting.

- **On old substrates:**

Preparatory work, specifically adapted to the nature of the substrate concerned, should be defined at the time of the preliminary inspection of the substrate. Independent of any possible necessary structural repairs, the composition of the work should be such that the surfaces obtained will be comparable to those of a new substrate before priming and coating work. It should in particular, include localised rendering and filling operations.

- **On old substrates with an existing organic coating:**

If the existing coating can be preserved, its condition shall be checked, for example, by carrying out adhesive strength testing on sample areas.

The preparatory work will initially depend on the thickness of the existing coating, knowing that a thin coating can be more easily maintained than a thick one.

### c) Priming work

At the end of the preparatory work outlined above, new or old substrates shall receive one or more of the products described into product's technical data sheets, depending on the condition of the substrate or the type of finish coating to be applied.

### d) All works -General

- The amount of product applied shall conform to the Abolin Co's recommendations.
- Coating materials cannot be applied in the following weather conditions, unless there is a specific technical guide from Abolin Co
  - On frozen substrates;
  - If it is raining or foggy, in case of non protected substrates;
  - On wet substrates;
  - In strong, hot or dry wind;
  - If the temperature of the substrate is above 35 °C;
  - At temperatures below 5 °C, without special protection.

**Abolin Co recommends ADHESION TESTS prior to bidding the project to ensure adhesion and compatibility between the coating and the substrate.**