

**REVISED**

**ASSESSMENT OF MARKETING CLAIMS FOR ROMA ECO-SUSTAINABLE  
BUILDING TECHNOLOGIES'  
ECOLOGICAL EXTERIOR AND INTERIOR POTASSIUM SILICATE PAINT  
FORMULATIONS**

**Prepared for:**

**ROMA Eco-Sustainable Building Technologies**

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## INTRODUCTION

ROMA Eco-Sustainable Building Technologies (“ROMA”) has collaborated with biologists and chemists to formulate architectural coverings with the stated intention of exceeding both the performance and sustainability of conventional and even “Low” or “Zero” volatile organic compound (VOC) paints and wall coverings. ROMA claims that their paint products are manufactured without chemicals that contribute to Sick Building Syndrome (SBS), have low to no levels of VOCs, and do not contain chemicals on the Declare Red List. This report verifies the scientific basis of ROMA’s marketing claims and statements for six exterior paint products and eight interior paint products manufactured by ROMA in Umbria, Italy.

## SPECIFIC HEALTH AND ENVIRONMENTAL CLAIMS ASSESSED BY TOXSERVICES

ToxServices verified the following r specific health and environmental claims for six exterior potassium silicate paint products and eight interior potassium silicate paint products (identified in Table 1).

1. ROMA exterior and interior potassium silicate paint product formulations do not contain the following ingredients:
  - a. APEO (Alkylphenol Ethoxylates)
  - b. HCHO (Formaldehyde)
  - c. PEG (Polyethylene Glycol)
  - d. PG (Propylene Glycol).
2. ROMA exterior and interior potassium silicate paint product formulations do not contain chemicals associated with Sick Building Syndrome (SBS).
3. ROMA paint products contain very low or no VOC’s.
4. ROMA paint products do not contain any chemicals listed on the Declare Red List (Living Building Challenge).

<b>Table 1: ROMA Exterior and Interior Paint Lines Assessed by ToxServices</b>	
Exterior Paint Products	BioDomus White I
	BioDomus White II
	BioDomus Deep Base
	BioDomus Deep Base II
	BioGrip Medium
	BioGrip Micro
Interior Paint Products	EcoDomus Eggshell Deep Base
	EcoDomus Eggshell White I
	BioDomus Superflat Deep Base
	BioDomus Superflat White
	EcoDomus Matte White
	EcoDomus Matte Deep Base
	EcoDomus Satin Deep Base
	EcoDomus Satin White

## **ASSESSMENT OF COMPLIANCE WITH MARKETING CLAIMS**

### **Evaluation of Claim #1: Absence of Specific Toxic Chemicals in ROMA Paint Formulations**

The ROMA website, ROMA product labels, and ROMA data sheets claim that the following chemicals are not included in ROMA's exterior and interior potassium silicate paint products (ROMA 2014):

- Propylene Glycol (PG) (CAS # 57-55-6)
- Polyethylene Glycol (PEG) (CAS# 25322-68-3)
- Formaldehyde (HCHO) (CAS# 50-00-0)
- Alkylphenol Ethoxylates (APEO) (various CAS#'s)

ToxServices evaluated the six exterior and eight interior paint formulations listed in Table 1 and has determined that none of these paints contain the chemicals PG, PEG, HCHO, or APEO as ingredients. Therefore, Claim #1 has been verified.

### **Evaluation of Claim #2: Absence of Sick Building Syndrome Chemicals in ROMA Paint Formulations**

Sick Building Syndrome (SBS) is a condition in which acute health problems are linked to the time spent in a building but a specific illness or cause cannot be identified (U.S. EPA 1991). To evaluate whether chemicals associated with Sick Building Syndrome are present in ROMA's six exterior and eight interior paint formulations listed in Table 1, ToxServices relied on information provided by the U.S. Environmental Protection Agency (U.S. EPA) that identifies VOC's, formaldehyde, carbon monoxide, nitrogen dioxide, and respirable particulates as contributing to SBS (U.S. EPA 1991). VOC chemicals are those that contain at least one carbon atom, with the exception of carbon monoxide, carbon dioxide, carbonic acid, and select other chemicals as identified by the California Air Resource Board (CARB) (2011). Low vapor pressure VOCs (LVP-VOCs) are not considered as VOCs by CARB (2011) as long as they have at least one of the following properties:

- A vapor pressure less than 0.1 mm Hg at 20°C
- More than 12 carbon atoms
- A boiling point greater than 216°C.

Respirable particles are those that can penetrate deep into the lungs where gas-exchange occurs (WHO 1999). These particles have aerodynamic diameters of less than 10 µm.

ToxServices evaluated the ROMA paint formulations and determined that ROMA's six exterior and eight interior paints do not contain VOC's, formaldehyde, carbon monoxide, nitrogen dioxide, or respirable particulates as defined above. Therefore, Claim #2 has been verified.

### **Evaluation of Claim #3: Absence of VOCs in ROMA's Exterior and Interior Potassium Silicate Paint Product Formulations**

As defined above, VOCs are those chemicals containing at least one carbon (CARB 2011). LVP-VOCs, as defined above, are not considered as VOCs in this assessment. ToxServices evaluated ROMA's six exterior and eight interior paint formulations listed in Table 1 and identified no VOCs.

ROMA also claims that no VOC colorants are used in their products. The only ingredients identified as a colorant or pigment in ROMA's exterior and interior potassium silicate paint product formulations are Tioxide RXL and Tioxide TR88, both of which contain titanium dioxide. These two ingredients do not contain VOCs as defined by CARB (2011).

Based on the ToxServices evaluation, Claim #3 has been verified.

### **Evaluation of Claim #4: ROMA's Exterior and Interior Potassium Silicate Paint Product Formulations Do Not Contain Declare Red List Chemicals**

The Living Building Challenge (LBC) is described by the International Living Building Institute as a philosophy, advocacy tool and certification program that promotes the most advanced measurement of sustainability in the built environment (International Living Future Institute 2014). The Living Building Challenge requires a project to meet 20 specific imperatives within seven performance areas (or "Petals"). The seven performance areas are: Site, Water, Energy, Health, Materials, Equity, and Beauty (LBC 2012)

Included in the Living Building Challenge is the Material Red List (see Table 3 in Appendix A). The Declare Red List, Imperative 11, identifies fourteen chemicals and materials that builders must avoid using if they want to achieve a Living Building designation (LBC 2012). The Declare Red List requires that a manufacturer disclose ingredients in their products to ensure that they are free of Red List chemicals and materials. The Living Building Challenge *Declare Red List* represents the "worst in class" materials, chemicals, and elements known to pose serious risks to human health and the greater ecosystem (International Living Future Institute 2014).

None of the chemicals on the Living Building Challenge Declare Red List (Red List 2012) are present in any of ROMA's six exterior and eight interior potassium silicate paints. Therefore, Claim #4 has been verified.

## **CONCLUSION**

ToxServices verified four specific marketing claims that pertain to ROMA's six exterior and eight interior paint formulations. These claims, summarized below in Table 2, have been verified by ToxServices.

All marketing statements made by ROMA with regard to their interior and exterior potassium silicate paint formulations will be expected to be in compliance with U.S. Federal Trade Commission (FTC) Green Guide when these products are sold in the U.S. The Green Guide

governs marketing claims representing environmental attributes of products. All specific claims regarding environmentally beneficial attributes of products, including but not limited to toxicity, degradability, recyclability, renewable energy, and renewable materials, should be as specific as possible and backed with supporting documentation. The ToxServices verified ROMA’s marketing claims as described in this report based on the information reviewed and consistent with the principles of the Green Guide.

As the results of the assessment of marketing claims can only be properly interpreted within the context of the criteria discussed in this document, the report may not be distributed, copied, or reproduced unless done so in its entirety.

**Table 2: Summary of Scientific Substantiations for ROMA Marketing Claims**

<b>Marketing Claim</b>	<b>Scientifically Substantiated</b>	<b>Review Summary</b>
Claim #1: Absence of Specific Toxic Chemicals in ROMA Paint Formulations	<b>YES</b>	ToxServices evaluated the six exterior and eight interior paint formulations listed in Table 1 and has determined that none of these paints contain the chemicals PG, PEG, HCHO, or Alkylphenol Ethoxylates as ingredients. Therefore, Claim #1 has been verified.
Claim #2: Absence of Sick Building Syndrome Chemicals in ROMA Paint Formulations	<b>YES</b>	ToxServices evaluated the six exterior and eight interior paints listed in Table 1 and has determined that these paints do not contain VOC’s, formaldehyde, carbon monoxide, nitrogen dioxide, or respirable particulates as defined above. Therefore, Claim #2 has been verified.
Claim #3: Absence of VOCs in ROMA’s Exterior and Interior Potassium Silicate Paint Product Formulations	<b>YES</b>	ToxServices evaluated the six exterior and eight interior paint formulations listed in Table 1 and determined that these paints do not contain VOCs as defined above. Therefore, Claim #3 has been verified.
Claim #4: ROMA’s Exterior and	<b>YES</b>	ToxServices evaluated the six exterior and eight

<p>Interior Potassium Silicate Paint Product Formulations Do Not Contain Living Building Challenge Declare Red List Chemicals</p>		<p>interior paint formulations listed in Table 1 and determined that these paints do not contain any of the Living Building Challenge Declare Red List (Red List 2012). Therefore, Claim #4 has been verified.</p>
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## APPENDIX A: LIVING BUILDING CHALLENGE RED LIST

**Table 3: Living Building Challenge Red List**

<b>Living Building Challenge Imperative 11 - Red List 2012</b>
Asbestos
Cadmium
Chlorinated Polyethylene and Chlorosulfonated Polyethylene
Chlorofluorocarbons (CFCs)
Chloroprene (Neoprene)
Formaldehyde (added)
Halogenated Flame Retardants
Hydrochlorofluorocarbons (HCFCs)
Lead (added)
Mercury
Petrochemical Fertilizers and Pesticides
Phthalates
Polyvinyl Chloride (PVC)
Wood treatments containing Creosote, Arsenic or Pentachlorophenol

List available: [http://living-future.org/sites/default/files/LBC/LBC\\_Documents/LBC%2012-0501.pdf](http://living-future.org/sites/default/files/LBC/LBC_Documents/LBC%202012-0501.pdf)