

# **TOX SERVICES** TOXICOLOGY RISK ASSESSMENT CONSULTING

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**TO:** Mr. Christopher Lewis

**FROM:** Margaret H. Whittaker, Ph.D., M.P.H., CBiol., F.S.B., E.R.T.,  
D.A.B.T.

**DATE:** December 29, 2015

**RE:** Summary of the Cross-Check of 13 ROMA Mineral Paints against  
The Living Building Challenge's Declare Red List

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This memo covers a cross-check of 42 chemical ingredients that are present in the following 13 ROMA Mineral Paint product formulations against the Living Building Challenge's Declare Red List 3.0:

- EcoDomus Eggshell Transparent
- EcoDomus Eggshell White
- EcoDomus Matte White
- EcoDomus Satin White
- EcoDomus Matte Transparent
- EcoDomus Satin
- Biogrip Micro
- Biogrip Medium
- BioDomus I White
- BioDomus II White
- BioDomus I Deep Base
- BioDomus II Deep Base
- BioDomus Superflat White Base

## **LIVING BUILDING CHALLENGE DECLARE RED LIST**

The Living Building Challenge worked with the Healthy Building Network and the Pharos Project to develop the Red List. Methodologies used to establish the Red List are not publically available.

The original Red List, launched in 2006, was significantly updated with the release of LBC 3.0 in May 2014. The update ensures that the program aligns with other authoritative hazard lists including the U.S. Environmental Protection Agency (EPA) Action Plan Published Lists; the European Union (EU) REACH Substances of Very High Concern (SVHC) List; and the Cradle to Cradle Certified™ Banned Chemicals List done in collaboration with the Pharos Project.

According to (source), the Red List contains 814 substances belonging to an identified list of materials and compounds known to pose serious risks to human health and the greater ecosystem. A Living Building Project cannot contain any of the following

materials or compounds, which are the groups around which the 814 CAS numbers present on the Red List are identified:

- Alkylphenols
- Asbestos
- Bisphenol A (BPA)
- Cadmium
- Chlorinated Polyethylene and Chlorosulfonated Polyethylene
- Chlorobenzenes
- Chlorofluorocarbons (CFCs) and Hydrochlorofluorocarbons(HCFCs)
- Chloroprene (Neoprene)
- Chromium VI
- Chlorinated Polyvinyl Chloride (CPVC)
- Formaldehyde (added)
- Halogenated Flame Retardants (HFRs)
- Lead (added)
- Mercury
- Polychlorinated Biphenyls (PCBs)
- Perfluorinated Compounds(PFCs)
- Phthalates
- Polyvinyl Chloride (PVC)
- Polyvinylidene Chloride (PVDC)
- Short Chain Chlorinated Paraffins
- Wood treatments containing Creosote, Arsenic or Pentachlorophenol
- Volatile Organic Compounds (VOCs) in wet applied products<sup>1</sup>

There are temporary exceptions for specific Red List items due to current limitations in the materials economy. More information about the health and environmental effects of specific Red List chemicals is available on the Red List website (International Living Future Institute 2015).

### **CROSS-CHECK OF ROMA 42 MINERAL PAINT INGREDIENTS AGAINST DECLARE RED LIST**

For this review, ToxServices reviewed 42 CAS numbers that are present in the 13 ROMA Mineral Paint product formulations to determine if any of the 13 ROMA Mineral Paint product formulations contain any intentional chemical ingredients that are present on the Living Building Challenge's Red Declare List 3.0. The 42 CAS numbers comprise ingredients in the 13 ROMA Mineral Paint product formulations, and were provided to ToxServices during a Cradle to Cradle Certified™ Silver Certification process of the 13 ROMA Mineral Paint formulations dated November 17, 2015 (ToxServices 2015).

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<sup>1</sup> Wet applied products (coating, adhesives and sealants) must have VOC levels below the South Coast Air Quality Management District (SCAQMD) RULE 1168 for Adhesives and Sealants or the Carbon 2007 Suggested Control Measure (SCM) for Architectural Coatings as applicable. Containers of sealants and adhesives with capacity of 16 ounces or less must comply with applicable limits in the California Air Resources Board (CARB) Regulation for Reducing Emissions from Consumer products.

After the review, ToxServices has determined that none of the 42 CAS numbers that are present as ingredients in the 13 ROMA Mineral Paint product formulations are present on the Living Building Challenge's Declare Red List 3.0.

## **CONCLUSION**

This memo covers a cross-check of 42 chemical ingredients that are present in the following 13 ROMA Mineral Paint product formulations against the Living Building Challenge's Declare Red List 3.0:

- EcoDomus Eggshell Transparent
- EcoDomus Eggshell White
- EcoDomus Matte White
- EcoDomus Satin White
- EcoDomus Matte Transparent
- EcoDomus Satin
- Biogrip Micro
- Biogrip Medium
- BioDomus I White
- BioDomus II White
- BioDomus I Deep Base
- BioDomus II Deep Base
- BioDomus Superflat White Base

ToxServices has confirmed that none of the 42 CAS numbers that are declared ingredients in the 13 ROMA Mineral Paint product formulations are present on the Living Building Challenge's Declare Red List 3.0.

## **REFERENCES**

International Living Future Institute. 2015. The Red List. Website. Available: <http://living-future.org/redlist>. [Last accessed December 29, 2015]

ToxServices. 2015. Cradle to Cradle Certified™ Assessment Summary Report of 13 ROMA Mineral Paint Product Formulations.