



# COMPLIANCE TESTED by berkeley analytical

## VOC Emission Test Certificate

**Product Name: Rapid Refloor Pit Grout - MMRRPG-1500-6**

Product Sample Information		Certificate Information	
Company:	Metzger McGuire	Certificate No:	200514-04
Company Website:	www.metzgermcguire.com	Certified By:	
Product Type:	Grout; see attached customer letter for product coverage		Raja S. Tannous, Laboratory Director
Date Produced:	1/20/2020	Date:	May 14, 2020

**Reference Standard:** California Department of Public Health CDPH/EHLB/Standard Method Version 1.2, 2017 (Emission testing method for CA Specification 01350)

### Acceptance Criteria and Results Demonstrating Compliance of Product Sample to Referenced Standard:

Exposure Scenario <sup>1</sup>	Individual VOCs of Concern <sup>2</sup>		Formaldehyde <sup>3</sup>		TVOC <sup>4</sup>
	Criterion	Compliant?	Criterion	Compliant?	
School Classroom	≤½ Chronic REL	YES	≤9.0 µg/m <sup>3</sup>	YES	≤ 0.5 mg/m <sup>3</sup>
Private Office	≤½ Chronic REL	YES	≤9.0 µg/m <sup>3</sup>	YES	≤ 0.5 mg/m <sup>3</sup>

**Product Coverage<sup>5</sup>:** 46 g/m<sup>2</sup>

1. Exposure scenarios & product quantities for classroom & office are defined in Tables 4-2 – 4-5 (CDPH Std. Mtd. V1.2-2017)
2. Maximum allowable concentrations of individual target VOCs are specified in Table 4-1 (*ibid.*)
3. Maximum allowable formaldehyde concentration is ≤9 µg/m<sup>3</sup>, effective Jan 1, 2012; previous limit was ≤16.5 µg/m<sup>3</sup> (*ibid.*)
4. Informative only; predicted TVOC Range in three categories, i.e., ≤0.5 mg/m<sup>3</sup>, >0.5 – 4.9 mg/m<sup>3</sup>, and ≥5.0 mg/m<sup>3</sup>
5. Informative and applicable only to tests of wet-applied products; grams of sample applied per square meter of substrate

### Standards & Codes Recognizing CDPH Standard Method V1.2 (partial list)

- USGBC LEED Version 4, BD&C, ID&C
- The WELL Building Standard
- ANSI/GBI 01, Green Building Assessment Protocol

**Narrative:** Metzger McGuire selected a sample representative of its Rapid Refloor Pit Grout - MMRRPG-1500-6 product and submitted it on 4/13/2020 for testing. Berkeley Analytical measured and evaluated the emissions of VOCs from this sample following CDPH/EHLB/Standard Method V1.2-2017. The results of the test are presented in Berkeley Analytical report, 1040-003-04A-May1420.

**Berkeley Analytical** is an independent, third-party laboratory specializing in the analysis of organic chemicals emitted by and contained in building products, finishes, furniture, and consumer products. We are an ISO/IEC 17025 accredited laboratory (IAS, [TL-383](#)); all standards used in performing this test are in Berkeley Analytical's scope of accreditation.

**DISCLAIMER:** THIS CERTIFICATE OF COMPLIANCE AFFIRMS THAT: 1) A SAMPLE OF THE LISTED PRODUCT WAS TESTED ACCORDING TO THE REFERENCED STANDARD; 2) THE MEASURED VOC EMISSIONS FROM THE SAMPLE WERE EVALUATED FOR THE DEFINED EXPOSURE SCENARIO(S); AND 3) THE RESULTS MEET THE ACCEPTANCE CRITERIA OF THE REFERENCED STANDARD(S). BERKELEY ANALYTICAL IS NOT RESPONSIBLE FOR ANY CLAIMS REGARDING A PRODUCT OR PRODUCTS ENTERED INTO COMMERCE THAT MAY BE BASED ON THIS TEST. BERKELEY ANALYTICAL PROVIDES THIS CERTIFICATE OF COMPLIANCE "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PURPOSE.



March 18, 2020

To Whom It May Concern

RE: VOC Emission Testing; CDPH Standard Method V1.2; non-full spread adhesive/sealant application calculations

Below are the rationale and the calculations for quantity of Metzger/McGuire's Rapid Refloor Pit Grout that would be used in the standard school classroom and the standard private office defined in CDPH Standard Method V1.2.

#### CLASSROOM

Metzger/McGuire's Rapid Refloor Pit Grout is a fine grouting product for polished concrete floors. The intended application of the product is to screed it down tightly onto the floor surface, allow the product to cure, then remove the applied product in its entirety during the next concrete honing/polishing step. When applied properly, the only remaining product is that which has filled in any micro-pitting, cracks or other surface defects which create a void beneath the floor's surface profile.

In a 40'x24' room (ceiling height of 8.5' not relevant as this is only for floor) there would be 960 square feet of floor surface that would potentially be grouted with Rapid Refloor Pit Grout as part of the concrete polishing process. There are no industry guidelines for what acceptable or typical amounts of surface defects in a concrete floor – especially on a micro level. It has been our experience however that when fine grouting a polished concrete floor, only some 3% or less of the applied material remains in the floor after the product is removed during the honing/polishing process. Rapid Refloor Pit Grout's technical data sheet indicates a typical coverage rate for the product of 435-875 sf per gallon of material. The actual coverage rate depends upon the thickness the product is applied at as well as the prevalence of surface defects present in the concrete floor. Accordingly, with the lowest rate of coverage total product usage would be 2.206 gallons of material. At the optimal coverage rate, product usage would be 1.09 gallons. Assuming that even in a worst case scenario 10% of the product remains filling surface defects after the removal step, the total amount of product remaining in the floor in this "worst case" classroom scenario would range from .109 gallons to .220 gallons in a 40x24x8.5' room. Coverage rates are referenced on the Rapid Refloor Pit Grout Technical Data Sheet.

#### OFFICE

In a 12'x10' room (ceiling height of 9' not relevant as this is only for floor) there would be 120 square feet of floor surface that would potentially be grouted with Rapid Refloor Pit Grout as part of the concrete polishing process. There are no industry guidelines for what acceptable or typical amounts of surface defects in a concrete floor – especially on a micro level. It has been our experience however that when fine grouting a polished concrete floor, only some 3% or less of the applied material remains in the floor after the product is removed during the honing/polishing process. Rapid Refloor Pit Grout's technical data sheet indicates a typical coverage rate for the product of 175-350 sf per 1500ml cartridge, or approximately 435-875 sf per gallon of material. The actual coverage rate depends upon the thickness the product is applied at as well as the prevalence of surface defects present in the concrete floor. Accordingly, with the lowest rate of coverage, total product usage would be .275 gallons of material. At the optimal coverage rate, product usage would be .137 gallons. Assuming that even in a worst case scenario 10% of the product remains filling surface defects after the removal step, the total amount of product remaining in the floor in this "worst case" office scenario would range from .0275 gallons to .0137 gallons in a 12'x10'x9' room. Coverage rates are referenced on the Rapid Refloor Pit Grout Technical Data Sheet.

Please contact me should you have further questions or concerns regarding this issue.

Best Regards,

Scott Metzger  
President

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