

## BREEAM Assessment Limewash Paint

Date of Issue 03.2023

### BREEAM Compliance Assessment Manufacturers' Calculation of VOC's for Bauwerk Limewash Paint

The VOC Content has been tested based upon calculations derived from the constituent ingredients contained in the product. We note that the EU allowable limits for our type of product is 30g/l. The products have been formally tested and the following results have been received:

Bauwerk Limewash Paint has a limit of below 0.01 g/l

Ref	Product	Requirements	Manufacturers Comment
A	Paints and Varnishes		
	Performance requirement	VOC content limit	Submitted Product: Bauwerk Limewash Paint
	Compliant performance standard	EU Directive 2004/42/CE (Paints Directive)	<b>Fully compliant</b>
	Compliant testing standard	Emissions from products – manufacturers' calculations for paints and varnishes	Refer to notes below this table <b>Fully compliant</b>
	Fungal and Algae resistance in wet areas	Paint to be fungal and algal resistant in wet areas such as bathrooms, kitchens and utility room	Bauwerk Lime Wash Paints have a PH-Level 12-13 and are naturally antibacterial <b>Fully compliant</b>

Please note: BS EN ISO 11890-2:2013 / ISO 11890-2:2020 is only applicable for the determination of VOC and SVOC with an expected VOC and/or SVOC content greater than 0,01 % by mass up to 100 % by mass.

Reference: <https://www.iso.org/standard/72823.html>

Bauwerk Paints are pure mineral paints and as such are 100% solvent free and do not reach the required mass by volume of VOC's and SVOC's to be tested under ISO 11890-2:2020

As ISO 11890-2:2020 also mentions: "NOTE 1 Some ingredients of coating materials and their raw materials can decompose during analysis and cause artificial VOC and/or SVOC signals. When determining VOC and/or SVOC for coating materials and their raw materials, these signals are artefacts of the method and are not taken into account"

The provided test certificate for Bauwerk Products does prove this very point.

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In summary, ISO 11890-2:2020 is not the right test for the determination of pure limewash paints with a zero amount of solvents present as the test would not be sensitive enough to detect any measurable amounts.

**As an alternative BREEM allows for the calculation of 'Emissions from products – manufacturers' calculations for paints and varnishes', which we include in the enclosed tables.**

### Manufacturers Calculation of VOC's for Bauwerk Colour Limewash Paint

Product	Bauwerk Limewash Paint		
Ingredients	% by mass	VOC Content in%	VOC content g/lit
Calcium Hydroxide CAS 1305-62-0	20	0	0
White or other pigment powders (only) CAS 13463-67-7 Thickener (powder only) CAS 1332-58-7	<= 10	0	0
Lime water ph12-13 CAS 1305-62-0	>=70	0	0
Watery dispersion of polymer CAS 69011-36-5	<=6	1.5	0.009
Result	100		0.009
Note: due to high ph level of CACO2 solution the very low VOC content of polymer is chemically neutralised			