

Norske Limprodusenters forening
 v/Moelven Limtre AS
 Sør laminering AS
 Vestlandske Limtre AS
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 Norge

Assessment of Emission Measurements

1. Emission measurements have been performed on a laminated timber called **Limtre GL 30C Gran** according to "Emission Classification of Building Materials: Protocol for Chemical and Sensory Testing of Building Materials", ver 15.12.2004, test report 3F026536, dated 2014-02-17.

Results of the emission testing:

Compound	Criteria of M1 after 28 days (mg/m ³ h)	Emission results of Limtre GL 30C Gran after 28 days (mg/m ³ h)	Pass / Fail criteria
TVOC (C ₆ – C ₁₆)	< 0.2	0.040	PASS
Formaldehyde	< 0.05	< 0.033	PASS
Ammonia	< 0.03	< 0.005	PASS
Carcinogenic compounds (IARC C1)	< 0.005	< 0.003	PASS
Not odorous	≥ 0.1	0.8	PASS

The tested product **LIMTRE GL 30C GRAN** complies with all the requirements of M1.


2. The emission test of formaldehyde can be compared to an emission test according to **EN 717-1:2004, E1**.

According to EN 14080:2013 the loading factor for laminated timber in a test according to EN 717-1 is 0.3 m²/m³. The area specific air flow rate becomes 3.3 m³/m²h. The test is carried out at 45 % RH, in M1 at 50 % RH. After adjustment of this difference (division by 1.09 (ASTM E 1333-96)) the emission of formaldehyde of the tested sample expressed as concentration is conc < 0.033 /3.3/1.09 < 0.009 mg/m³.

Compound	Criteria of E1 EN 717-1 (mg/m ³)	Formaldehyde result of Limtre GL 30C Gran expressed as concentration according to EN 717-1 (mg/m ³)	Pass / Fail criteria
Formaldehyde	< 0.124	< 0.009	PASS

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