



## Evaluation of the contribution to LEED prerequisites/credits

This document describes the main requirements relating to the **EUROBATEX** product range, useful for achieving the main credits of the LEED v4 and v4.1 certifications.

**The evaluation of the main contributions is reported below:**

LEED Categories		Credits	LEED Requirements	Points	EUROBATEX Compliance or contribution
EA	Prerequisites Minimum energy performance	Option 1 Energy for the whole building, simulation	Reduce the environmental and economic impact due to excessive energy consumption. The energy calculation is carried out by using a dynamic simulation model based on the ANSI / ASHRAE / IESNA 90.1-2010 standard, Appendix G with errata. Compared to the base building of reference, an improvement of 5% is required for new construction projects, 3% for major renovations and 2% for core and shell projects. Compliance with the mandatory provisions of the ASHRAE 90.1-2010 standards is also required	—	<b>EUROBATEX</b> contributes to the energy performance of the building as being part of the construction systems relating to the insulation of ducts and pipes. <b>EUROBATEX</b> contributes directly, with thermal conductivity parameters that vary according to the thickness of the product: from $\lambda$ 0.033 W/mK to $\lambda$ 0.035 W/mK assessed at a temperature of 0 °C to satisfy the requirements shown in tables 6.8.2 A and B and 6.8.3.
EA	Energy performance optimization	Option 1 Energy for the whole building, simulation	The credit requires demonstrating the improvement of the designed building compared to the reference baseline. The number of points awarded depends on the percentage of improvement obtained: 1 to 18 points are available with improvement percentages ranging from 6% to 50% for new buildings.	18	
MR	Building Product Disclosure and Product Optimization - Environmental Product Declaration	Option 1 Product with Environmental Product Declaration (EPD)	Encourage the use of materials for which life cycle information is available and which guarantee a better economic and environmental impact. In order to comply with the credit requirement it is necessary to use at least 20 materials from 5 different manufacturers with EPD certification compliant with the standards: ISO 14025, ISO 14040, ISO 14044 and EN 15804, with Independent Supervision.	1	<b>EUROBATEX</b> provides the EPD certification for its range of products with external verification issued by EPD Italy. The certification complies with ISO 14025 and EN 15804 standards.
EQ	Low emission materials	Option 1 Calculation of the product category	Reduce concentrations of chemical contaminants that can damage air quality, human health, productivity and the environment. The insulating materials installed must comply with the levels of limit compound emissions (VOC) decreed by the standards: - Standard method CDPH (2010) - German method of testing and evaluation AgBB (2010) - ISO 16000-3 / 6/9/11: 2010 in conjunction with French legislation on the labeling of the emission class VOC or the test method DIBt (2010).	3	<b>EUROBATEX</b> has VOC emission tests carried out by the CEFEP association of which it is a member. The tests were carried out, by a third party, according to the standards: ISO 16000-3 / 6/9/11: 2010 in conjunction with the German Scheme of test and evaluation AgBB (2012), DIBt (2010) and French legislation in the field of VOC emission classes. The tested <b>EUROBATEX</b> products comply with the limit values of AgBB and DIBt Regulations. For the french regulation emissions, the class is A +.
EQ	Thermal Comfort	Thermal Comfort Design Option 1 ASHRAE Standard 55-2010 Option 2 ISO and CEN Standard	Provide an adequate level of thermal comfort to promote productivity, comfort and well-being of occupants. The building should provide for the design of HVAC systems according to ASHRAE 55-2010 with assessment of the thermal environmental conditions for humans and employment. Alternatively, an analysis of thermal comfort is required in accordance with the standards: ISO 7730: 2005 and EN 15251: 2007.	1	<b>EUROBATEX</b> has an indirect impact on the achievement of credit. It contributes by protecting the pipes and ventilation ducts by ensuring an acceptable range of operating temperature and humidity. Therefore it prevents condensation of the humidified air. It also has a resistance to the diffusion of water vapour which depends on the thickness of the product and is: from $\mu$ 7000 to $\mu$ 10 000.
EQ	Acoustic Performances	HVAC Background Noise	Provide, through careful acoustic design, spaces that promote occupant well-being, productivity and communications. The background noise levels of HVAC systems should comply with the standards: 2011 ASHRAE Manual, HVAC Applications, Chapter 48, Table 1 or AHRI 885-2008 standard, table 15 or equivalent room. The sound transmission class and reverberation time must comply with the tables specified in this number.	1	<b>EUROBATEX</b> could contribute and affect acoustic insulation relating to the background noise of HVAC systems through the insulation of the ventilation ducts.