

K-FLEX USA ELASTOMERIC INSULATION AND ACCESSORIES LEED CONTRIBUTION GUIDE

K-Flex USA manufactures closed cell elastomeric insulation in tube, sheet, and fitting form. These products improve thermal performance and control condensation on mechanical systems in commercial buildings and are fundamental to energy efficiency. As a result, they can contribute to several categories of the Leadership in Energy and Environmental Design (LEED) rating system for New Construction and Major Renovations, Commercial Interiors, Core & Shell, Schools and Existing Buildings, Operations and Maintenance products.

LEED Certification and the awarding of credits are based on overall project design, properly designed building systems and assemblies, and the performance of the project as a whole under the intent of reducing the environmental and economic impacts associated with excessive energy use. K-Flex USA insulation products can be a component of many of these systems and assemblies, with all components within those systems and assemblies considered to access compliance with the LEED Rating System used for certification within a given category.

Exceeding code requirements for mechanical insulation can significantly improve the energy efficiency of buildings. To demonstrate the benefits of mechanical insulation, you can supplement the Whole Building Energy Simulation with other modeling, like 3E Plus from NIA or K-Flex USA's ISOCALC program.

LEED Credit Category	LEED Requirement	K-Flex USA Product Contribution
Energy and Atmosphere Credit 1: Optimize Energy Performance	Achieve increased levels of energy performance beyond the prerequisite standard (ASHRAE 90.1-2007) to reduce environmental and economic impacts associated with excessive energy use.	K-Flex USA elastomeric insulation products help lower energy usage and can contribute to LEED Certification when insulation thickness is specified greater than ASHRAE 90.1-2007 requirements.
Materials and Resources Credit 4: Recycled Content Credit 5: Regional Materials	Products must contain minimum recycled content of 10% (1 point) or 20% (2 points). Products must be manufactured within 500 miles of the project site.	None – All K-Flex USA elastomeric insulation products contain 0% recycled content. All K-Flex USA elastomeric insulation products are manufactured in Youngsville (Raleigh), North Carolina. Compliance depends on project location.
Indoor Environmental Quality Credit 4.1: Low Emitting Materials – Adhesives and Sealants Credit 7: Thermal Comfort Credit 9: Enhanced Acoustical Performance (LEED for Schools)	Adhesives must comply with South Coast Air Quality Management District (SCAQMD) Regulation 1168 for maximum allowable VOC content. Design HVAC systems to meet the requirements of ASHRAE Standard 55-2004. Design learning spaces to meet Sound Transmission Class (STC) requirements of ANSI Standard S12.60-2002 AND Reduce background noise from HVAC systems.	K-Flex® 720 Adhesive VOC Content is 0 g/L and meets SCAQMD 1168 requirements. K-Flex® 1120 Water Based Adhesive VOC content is 0 g/L and meets SCAQMD 1168 requirements. K-Flex USA elastomeric insulation products create comfortable thermal environments by helping to maximize mechanical system performance. K-FONIK GK high mass noise barriers contribute to overall STC ratings in mechanical and building envelope applications. K-Flex Duct® Liner Gray delivers excellent noise reduction within air handling units.



<p>Credit 10: Mold Prevention (LEED for Schools)</p>	<p>Reduce the potential presence of mold in schools.</p>	<p>K-Flex USA elastomeric insulation products do not promote mold growth when tested in accordance with ASTM C1338 / UL 181 and are UL Validated for microbial resistance per ASTM D6329 / UL2824.</p>
<p>Innovation in Design Credit 1: Innovation in Design</p>	<p>Achieve exceptional performance above the requirements set by LEED.</p>	<p>K-Flex USA elastomeric insulation products are UL Greenguard Gold certified (as referenced by LEED) for low VOC emissions. K-Flex Duct® Liner Gray provides a fiber-free solution for internal lining of air handling units.</p>

Note: Above requirements are based on the LEED Whole Building Energy Simulation requirements calculated per Appendix G of ASHRAE Standard 90.1-2007. Prescriptive Compliance Path requirements are based on ASHRAE’s Advanced Energy Design Guide and the New Building Institute’s Advanced Buildings Core Performance Guide. No individual material enables a credit point to be taken within LEED because each category is dependent on the aggregate of all materials and their proportionate relationship to the total dollar cost of all materials. Consult individual K-Flex product data sheets for details.