

## **US GREEN BUILDING COUNCIL LEED CERTIFICATION PROGRAM Leadership in Energy and Environmental Design**

The US Green Building Council is a non-profit organization that promotes environmentally responsible buildings. Improving a building envelope's energy efficiency is a key component to overall energy conservation.

The USGBC's LEED Green Building Rating System is a voluntary consensus based national standard in which construction and renovation projects earn credits toward certification as high performance sustainable buildings. The program was started in 2000. Classification ratings can apply to both new construction (NC) as well as renovation projects (EB), commercial interiors (CI) and what is called core and shell for commercial buildings (CS). The rating system is based on points given for incorporating various "green building concepts" into the design or construction of the building. If a building achieves 40% of the total allowable points it is considered to be certified. Other ratings include silver, gold and platinum (achieving 80% of total allowable points). LEED Certification can qualify the building for state or local incentives.

Points are given for more than 50 items in the following 6 categories: Site selection, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality, and innovation in operations. Mechanical insulation would be primarily considered in two categories; energy and atmosphere and materials and resources. Points are allocated for practices that reduce design energy costs below the baseline requirement (ASHRAE 90.1 is considered to be the baseline) by 15%. On the materials and resources side, points are awarded for a myriad of accomplishments such as; use of materials that have a recycled content or are manufactured locally - within 750 miles of the building site.

USGBC and the LEED Green Building Rating System consider the entire building envelope when calculating energy savings. It is an excellent program for improving a building's overall energy efficiency. However, it has been our experience when working on buildings being submitted for LEED Certification, it was very difficult to gain points from the Mechanical Insulation installation. First, they need to obtain energy savings of 15% over the baseline. Since they are considering the whole building envelope (walls, ceilings, windows etc.) there are other areas that can provide a greater economic benefit than increasing the thickness of mechanical insulation. Second, if ASHRAE 90.1 requirements are followed for mechanical insulation, the system is going to be very energy efficient and the amount of insulation thickness required to make it substantially more efficient would not be cost justified.

When looking at the materials and resources rating system, since most insulation products contain no or little recycled content and are manufactured in limited locations (generally not within a 750 mile radius of the job) no points are gained from this category either.

Please note that many LEED Certification Projects have special requirements for adhesives. The project specification will typically require that adhesives comply with South Coast Air Quality Management District (SCAQMD) Regulation 1168 for maximum allowable VOC content. 720-LVOC Adhesive meets these requirements.

We have filled out project specific forms pertaining to our mechanical insulation materials for numerous LEED Certification Projects. We are glad to complete the paperwork.