

Germany

German Sustainable Building Certificate (GSBC)

A certification system developed by the Deutsche Gesellschaft für Nachhaltiges Bauen (German Sustainability Building Council) and the federal ministry of Transport, Building and Urban Affairs (BMVBS).

GSBC measures how well a building or community performs in ecological, technical, economical, socio-cultural and functional quality, as well as quality of process and location. Used as a planning and evaluation tool, the GSBC covers all relevant topics of sustainable construction, awarding outstanding buildings in the categories of Bronze, Silver, and Gold.

VICTAULIC COMMITMENT TO SUSTAINABILITY

- Environmental responsibility and roots in sustainability for 85 years.
- Victaulic products are made with natural and recycled resources using lean, responsible manufacturing processes that follow the life of a building or plant.
- During installation, Victaulic products significantly reduce or eliminate waste, emissions and noise, while maximizing energy efficiency.
- Victaulic has been involved with the Alberici Headquarters, Overland, Missouri (LEED® 2.0 Platinum certification); Vancouver Olympics Village (LEED® Gold certification); Janssen Pharmaceutical (Johnson & Johnson), Titusville, New Jersey (LEED® Platinum certification); SAS Institute, Toronto, Canada; and BG Chemie in Germany.
- Victaulic assures the “green spirit” of a building by ensuring sustainable piping design and system performance.
- Easy access to systems installed with Victaulic products promote routine maintenance schedules and thus enable building systems to operate at peak efficiency for the life of a system.
- Victaulic may facilitate reaching GSBC points; solid environmental commitment with experienced certified engineers on staff.

Global Warming/Ozone Depletion Potential

Requirement – Reduce pollutant emissions that contribute to the destruction of the ozone layer and increase global warming.



VICTAULIC SOLUTION:

- Victaulic uses a no-flame-joining method that reduces emissions of Particulate Matter (PM). In 2007, Victaulic couplings used on world projects eliminated 145 metric tons of particulate matter, the equivalent of removing one million cars from the road for a week.
- Victaulic can minimize job site waste through lean manufacturing (produce and ship only required materials), as well as coordinate deliveries according to the contractor strategy and schedule.
- Victaulic uses a no-flame-joining method that reduces emissions of Particulate Matter (PM) and greenhouse gas. This is opposed to welding, which increases greenhouse gas, including carbon dioxide, carbon monoxide and nitrogen oxide. Welding fumes may also contain dangerous concentrations of manganese, nickel, chromium, cobalt and lead – all designated as hazardous materials.

Risk to the Local Environment

Requirement – Minimize local environment risks through a purposeful choice of building materials and a construction process that can interact with the local environment.

VICTAULIC SOLUTION:

- Victaulic utilizes “Bag-and-Tag” process to manage waste and job site activity. Shipping to the contractor reduces waste by eliminating over-order and product stockpiles.
- For more than 85 years Victaulic has developed a waste management policy of recycling sand used in the foundry process and manufacturing its products from recycled content.
- Because of the Victaulic efficient alternative to welding, physical distress to exposed workers is decreased. This reflects a savings in productivity, medical and insurance costs and other indirect costs associated with more dangerous joining methods. Dangerous welding fumes and increased levels of greenhouse gasses are avoided.

Total Primary Energy Demands

Requirement – Minimize the total primary energy demand.

VICTAULIC SOLUTION:

- Victaulic experience in green building projects can help improve energy performance by our product efficiency and installation management techniques.
- Installation of Victaulic products on prepared pipe does not require any incremental electrical energy, therefore optimizing energy performance.



- Victaulic products and subsequent accessibility of piping systems encourages implementation of proper, comprehensive HVAC maintenance programs. This may result in the use of 15 percent to 20 percent less energy than systems allowed to deteriorate without regular maintenance and could reduce total system operating costs by as much as 50 percent.
- The Victaulic versatile grooved piping system is effective on a variety of piping systems, including the promotion of lighter wall pipe on a variety of applications. Lighter wall pipe can provide five to 10 percent more cross-sectional flows than welded pipe. Pipe couplings and fittings are designed to minimize friction, improve throughput and thus reduce power requirements at the pump.

Building-Related Life Cycle Costs

Requirement – Minimize the building’s life-cycle costs (including construction) and the relative cost reduction of alteration and preservation investments. Current cost savings shall not be made at the expense of future users and owners.

VICTAULIC SOLUTION:

- The use of the Victaulic joining method virtually eliminates rework, and the waste associated with rework, such as the need to over order or stockpile product replacements that drive up raw material and transportation waste.
- Victaulic products are known for their robustness and long life-cycle, designed for the life of a system. There are more than 77 commercialized couplings still in use since 1925.
- Victaulic joint design provides quick and easy access to piping system that allows for continued facility and system use during routine maintenance, pipeline repair, or system expansion.
- Victaulic durable C-shaped cross-section seals can handle significant compressive cyclical loading. The Victaulic gasket can withstand repeated pressure and depressurization for many years without fatiguing the rubber.

Thermal Comfort in the Winter & Summer

Requirement – With the use of design tools, ensure appropriate thermal comfort levels are achieved. Recognize and encourage user control provisions that allow independent adjustment of heating/cooling systems within the building.

VICTAULIC SOLUTION:

- Victaulic provides a balancing valve system that enhances the overall project ventilation, air distribution and allows for temperature control.



- Balancing valves maintain a dynamic flow that enables the HVAC system to provide correct energy output throughout a typical 24-hour period.

Indoor Hygiene

Requirement – Assure indoor hygiene and avoid negative impacts on the user’s state of health.

VICTAULIC SOLUTION:

- More than 75 percent of Victaulic fittings and couplings are dip coated, a process that creates less wasted paint, does not pose hazardous air pollutant (HAP) risks nor contains as many volatile organic compounds (VOCs) as products painted using spray processes.
- Unlike welding that emits highly toxic pollutants, uses vast amounts of electrical energy and specialty gases, Victaulic flameless connections avoid impact on human safety and the environment.
- Health hazards such as skin burns and eye damage caused by exposure to ultraviolet radiation, carbon monoxide poisoning, emphysema and other pulmonary illnesses resulting from toxic fume inhalation are avoided.

Acoustical Comfort

Requirement – Achieve a low interference and background noise causing less distraction and detriment to health and capability.

VICTAULIC SOLUTION:

- Victaulic flexible couplings provide vibration attenuation in the following ways: pipe end separations, elastomer gaskets and ductile iron housings.
- Victaulic mechanical joining systems do not contribute to background noise, and provide significantly higher productivity and reduced sound characteristics.

Fire Protection

Requirement – The quality of fire protection shall be increased. The main cause of death involving building fires is toxic smoke. Measures that exceed fire protection regulations are rated positively. Fire protection that exceeds the legal regulations should consider total economic impact, as well as additional emissions caused by the addition of raw materials and supplies.



VICTAULIC SOLUTION:

- The FM Approved Victaulic Vortex™ Fire Suppression is a 100 percent sustainable system that extends the boundaries of existing technology, surpassing the inert gas and mist system capabilities. It provides supreme protection and fire suppression with limited residual moisture and no toxic chemicals.
- The Victaulic Vortex Fire Suppression system received the EPA SNAP (Significant New Alternative Policy) approval for its unique hybrid solution.

Ease of Cleaning and Maintenance of the Structure

Requirement – The ease of cleaning and maintenance of the structure has a high impact on the costs and the environment of a building during the operating phase. Areas that can be cleaned easily require lower expenditures on cleaners and cause lower cleaning costs.

VICTAULIC SOLUTION:

- Victaulic grooved piping outperforms welded, threaded and flanged piping by facilitating future maintainability of HVAC and other systems. Components like pumps and chillers, for example, require regular maintenance to keep them operating efficiently.
- Access to the Victaulic grooved piping system is simple. Two coupling bolts are loosened allowing easy disassembly and removal of system parts for service or replacement, without the need to shut down the entire system. Victaulic allows quick and easy access for routine equipment maintenance, system expansion or pipeline repair, thus promoting energy efficiencies realized from conducting routine maintenance as required.

Ease of Deconstruction, Recycling and Dismantling

Requirement – The goal of increasing ease of deconstruction, recycling, and dismantling, is the avoidance of waste and hazard. Materials used have to serve or be recycled at the end of the construction life-cycle.

VICTAULIC SOLUTION:

- Victaulic uses 90 percent recycled steel and ductile iron for its coupling and fittings, meaning 1,039 tons of steel are recycled at its facility in the United States per week.
- Victaulic products are reusable and can be recycled after construction or at the end of system life.

Construction Site/Construction Phase

Requirement – This credit has two main purposes; low waste and low noise on the construction site.



VICTAULIC SOLUTION:

- Victaulic conducts manufacturing with a recycling process that includes recycling 100 percent of the sand used in its casting process.
- Victaulic mechanical grooved pipe systems deliver unsurpassed vibration isolation and sound attenuation characteristics.
- Installation of Victaulic products on prepared pipe does not require the use of electrical tools, therefore avoiding noise during construction.
- Victaulic produces and ships only what is required, using a lean manufacturing process, and coordinates job site deliveries to the Contractor's build strategy and schedule.
- The use of the Victaulic joining method virtually eliminates rework, and the waste associated with rework, such as the need to over order or stockpile product replacements that drive up raw material and transportation waste.

Conclusion

Victaulic saves time and money and enhances sustainability, not only through the manufacture of the products themselves, but also through the Victaulic installation and maintenance processes. Using Victaulic products in your pipe system may ensure excellent opportunities for GSBC certification. Consult your local Victaulic representative for the right solution on your next sustainable building project.