



Japan

CASBEE (Comprehensive Assessment System for Building Environmental Efficiency)

CASBEE is a Japanese green rating tool used for evaluating environmental building performance, developed under the guidance of the Ministry of Land, Infrastructure and Transport.

CASBEE is used to assess buildings based on interior comfort, scenery consideration and environmental awareness (utilize energy saving materials and equipment, or those that cause smaller environmental loads).

Comprehensive assessments are ranked in five grades:

- **Poor (C)**
- **Fairly Poor (B-)**
- **Good (B+)**
- **Very Good (A)**
- **Excellent (S)**

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 certified); 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 enabling sustainable piping design and enhanced 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 CASBEE certification; solid environmental commitment and experience, with experienced certified engineers on staff.



Background Noise Level

Requirement – Minimize the interior air conditioning noise level, and exterior traffic noise penetration.

VICTAULIC SOLUTION:

- Victaulic mechanical grooved pipe systems deliver unsurpassed vibration isolation and sound attenuation characteristics.
- Victaulic flexible couplings provide vibration attenuation in the following ways; pipe end separations, elastomer gaskets and ductile iron housings.
- The versatility of Victaulic mechanical joining systems, with expansion and noise and vibration dampening characteristics, ensure the systems do not contribute to background noise.

Zoned Control

Requirement – Eliminate temperature variation and create a comfortable interior environment by dividing floors in several zones according to thermal load. Allow either cooling or heating in each zone unit.

VICTAULIC SOLUTION:

- Victaulic provides a balancing valve system that enhances the overall project ventilation and air distribution and allows for isolated temperature control.
- Balancing valves maintain a dynamic flow that enables the HVAC system to provide correct energy output throughout a typical 24-hour period.

Chemical Pollutants

Requirement – Halt pollutants at source to maintain healthy indoor air. The first priority being to minimize pollutant emissions from the building.

VICTAULIC SOLUTION:

- 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.
- More than 95 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 spray processes.



Seismic Isolation & Vibration Damping System

Requirement – Evaluate performance in preventing or reducing sway due to strong winds or earthquake. Specifically, consider improved comfort in strong wind, and protection of internal equipment and fixtures in earthquakes.

VICTAULIC SOLUTION:

- Victaulic couplings successfully passed independent seismic tests at ATLSS center, member of NEES (Network for Earthquake Engineering Simulations).
- Victaulic piping systems reduce vibration transmission; able to withstand seismic events and keep systems operational.

Necessary Replacement Interval for Air Conditioning & Ventilation Ducts/ Necessary Renewal Interval for HVAC, Water Supply & Drainage Pipes

Requirement – The longevity of air conditioning and ventilation ducts, water and HVAC pipes is evaluated by the examining the materials and jointing methods used in the building.

VICTAULIC SOLUTION:

- Victaulic joint design provides quick and easy access to piping system that allows for continued use during routine maintenance, pipeline repair, or system expansion.
- Victaulic durable C-shaped cross-section seals can handle significant compressive cyclical loading. The gasket can withstand repeated pressure and depressurization for many years without fatiguing the rubber.
- Victaulic piping systems are designed for the life of a system.

Reducing Usage of Materials

Requirement – To judge high-strength materials usage to reduce materials used, and evaluate the measures used on each constituent material.

VICTAULIC SOLUTION:

- Victaulic conducts manufacturing with a recycling process that includes recycling 100% of the sand it uses in the casting process.
- 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.



Use of Recycled Materials as Non-Structural Materials

Requirement – Increase demand for building products that incorporate recycled content materials, reducing impacts resulting from extraction and processing of virgin material.

VICTAULIC SOLUTION:

- Victaulic uses 90 percent recycled steel and ductile iron for its coupling and fittings at all of its manufacturing facilities.
- Most of the Victaulic product involved in your project may help you reach this objective.

Use of Materials without Harmful Substances

Requirement – Evaluate reduction in chemical use, which can effect interior quality and potentially harm the wider environment. Evaluate the level of materials that do not contain hazardous substances by counting construction material types.

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.
- 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 spray processes.

Consideration of Local Environment

Requirement – Evaluate the reduction rate relative to emission standard in the gas concentration emitted by each device at the emission source.

VICTAULIC SOLUTION:

- Victaulic joined pipe can be pre-fabricated and configured to lay flat in a truck bed, unlike prefabricated welded spools that are non-adjustable in the field.
- Victaulic can fit more material per truckload, equating to reduced transportation costs and carbon emissions.
- Victaulic avoids welding and therefore avoids all harmful effects linked to this method.
- The Victaulic method does not require the use any emitting device on the job site.



Conclusion

Victaulic saves time and money and enhances sustainability, not only through the manufacture of its products themselves, but through the Victaulic installation and maintenance processes. By avoiding welding, and recycling both sand and raw materials needed for manufacturing, Victaulic shares CASBEE objectives.

Victaulic products may contribute in up to 29 CASBEE points. Using Victaulic products in your pipe system may ensure excellent opportunities for CASBEE certification. Consult your local Victaulic representative for the right solution on your next sustainable building project.