

EFFECTIVE BUILDING INSULATION AND PROTECTIVE SYSTEM **EIFS** is the acronym for Exterior Insulation & Finishing System.

Exterior Insulation & Finishing System (EIFS) are multi-component, exterior cladding systems, which provide weather resistance insulation and the final color and shape to the structure.

International Building Code defines EIFS as a non-load bearing exterior wall cladding system that involves fixing an insulation board using adhesive and/or mechanical anchors to the substrate followed by an integrally reinforced base coat and a textured protective finish coat.

The substrate has to be rigid, which can range from gypsum sheathing over steel studs to a concrete block wall. This flexibility of substrates makes them ideally suited to retrofit applications. They are particularly good at eliminating energy wasting thermal bridges, and providing maximum design flexibility with regard to shapes and colors. There are a number of variations on the standard.



Key Features:

- Reduces U value of walls
- Eliminates loss of energy
- Conservation of natural resources
- · Resistant to dampness, dirt & biological erosion
- Prevents structural ageing

EIFS consists of the following components:

- · First coat of adhesive modified cement that covers the substrate
- Insulation board EPS / XPS which is secured with an adhesive and/or mechanical anchors to the substrate
- · Glass-fiber reinforcing mesh embedded in the base coat
- A water-resistant base coat that is applied on top of the insulation to serve as a weather barrier
- A finish coat that typically uses colorfast and crack-resistant paints

Advantages & Disadvantages of EIFS

The major advantages of using EIFS are

- Energy efficiency Walls are one of the greatest areas of heat and air conditioning loss, so improvement in the wall insulation is very meaningful in terms of energy conservation. EIFS provides insulation outside the exterior structure of a building. It forms a complete envelope around the building with foam insulation. So it reduces air infiltration and hence decreases energy consumption. Also there is no thermal break in the envelope of the building, further reducing the energy needed to heat/cool a space.
- **Design Flexibility** EIFS provides an immense variety of color, texture and design options. It can be carved and molded into any shape to provide a rich palette of details for a building like cornices, jambs, column keystones, etc. EIFS looks like stucco but is far more versatile.
- **Easy to maintain** Due to the products used in its manufacturing, EIFS is resistant to fading, de-colouring, DPR properties and cracking. It does not accumulate dirt, so it always looks freshly painted. Also, it is resistant to mold and mildew.

The only disadvantage of using EIFS is

• EIFS is not recommended as a DIY project. It needs skilled professionals to install a good quality EIFS cladding system.

EIFS today are one of the most tested and well researched claddings in the construction industry. Research has validated that EIFS are the "best performing cladding" in relation to thermal and moisture control when compared to brick, stucco, and cement fiberboard siding.

The popularity of EIFS is due to the number of benefits the system offers, chief among them being superior energy efficiency and design flexibility.

EIFS technique can be used to give a new look to old buildings during renovation while improving the energy efficiency. EIFS also have excellent resistance to dirt, mildew and mold, which helps keep the building exterior looking clean and freshly painted.

Disclaimer: Specification, design and construction of EIFS must comply with local building codes and standards, and applicable compliance reports. The responsibility remains with the designer, specifier, homebuilder, general contractor, and/or installer for specific applications. The successful performance of EIFS cladding depends upon the proper design and construction of the adjacent materials used.



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