

Life cycle analysis

A long-term low maintenance construction material

In all studies conducted by ELSIA on life cycle assessment (LCA) the results have shown that lead sheet has the best environmental credentials to provide a long-term low maintenance solution as a construction material.

In studies, undertaken in 1998 and 2006, using universally approved analytical methods it was proven that lead sheet has a superior environmental performance compared with alternative building materials in different applications:

- **Cavity wall (comparison with reinforced EPDM, plasticised PVC and SEBS),**
- **Flashings (comparison with reinforced PiB and SEBS)**
- **Valley gutter comparison with GRP).**

The three most significant factors to consider are:

- Lead sheet's low melting point enables recycling with **minimal impact on global warming.**
- Very low surface corrosion means insignificant **impacts on water and soil contamination.**
- As 100% secondary materials are used in its manufacture there is **no impact on resource depletion.**

In conclusion, for building and construction, where there remains a possibility for rainwater ingress, lead sheet has the best environmental credentials to provide a long-term low maintenance solution as a construction material.

LCA is an established international analytical method of reviewing materials from an environmental perspective. LCA studies provide an approach that assesses the potential environmental impact of the manufacturing processes of a product, the extraction of the raw materials used by these processes, the use and maintenance of the product by the consumer, its end-of-life (recycling, reuse or disposal) as well as the various methods of transport occurring between every link of the chain.

The procedures of LCA are part of the International Standards Organisation (ISO) 14040 series of standards.

ELSIA is the European Lead Sheet industry Association.