

BiELSo



CO₂ reducing

Sustainable procurement

Sustainable building block

CO₂ certificate

Highly durable



Virtually endless bitumen recycling

A sustainable and durable roofing solution

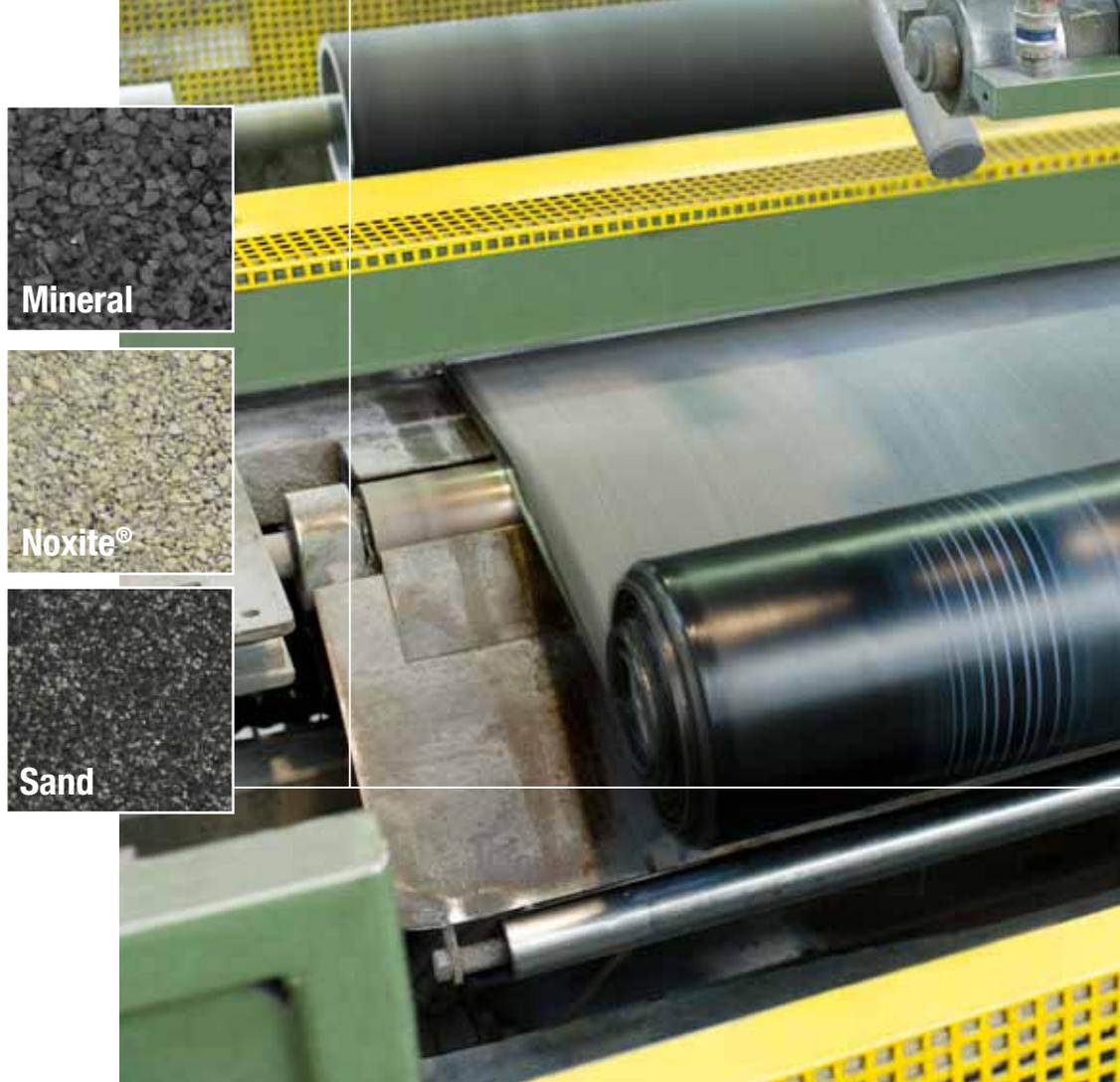
Bitumen is a highly valued and much used building material, but as an oil-based, non-renewable product, bitumen is now no longer sustainable. In response to this growing issue, Icopal has developed the revolutionary BiELSo process which allows virtually endless recycling of bitumen for new applications, resulting in a highly sustainable, high quality product which retains all the benefits of the original bitumen.

Bitumen is used across the construction industry - in roads, as a landfill liner, for waterproofing and anti-corrosion, and especially for roofing. Its popularity results from its ease of use combined with excellent protective properties, resulting in waterproof roofs capable of withstanding extreme weather conditions for up to 40 years

or more. Although new bitumen use is now threatened by growing pressure on oil resources, Icopal's BiELSo process will enable contractors and builders to continue using bitumen for many years to come.

BiELSo – Bitumen End of Life Solutions – is a process created by Icopal to recycle existing bitumen roof coverings and turn them into premium quality





bitumen suitable for new applications, including new roofs. Icopal's BiELSo plant is the only one of its kind in the world capable of recycling bitumen in this way, allowing bitumen to be reused, again and again, greatly improving the sustainability of any project using BiELSo products.

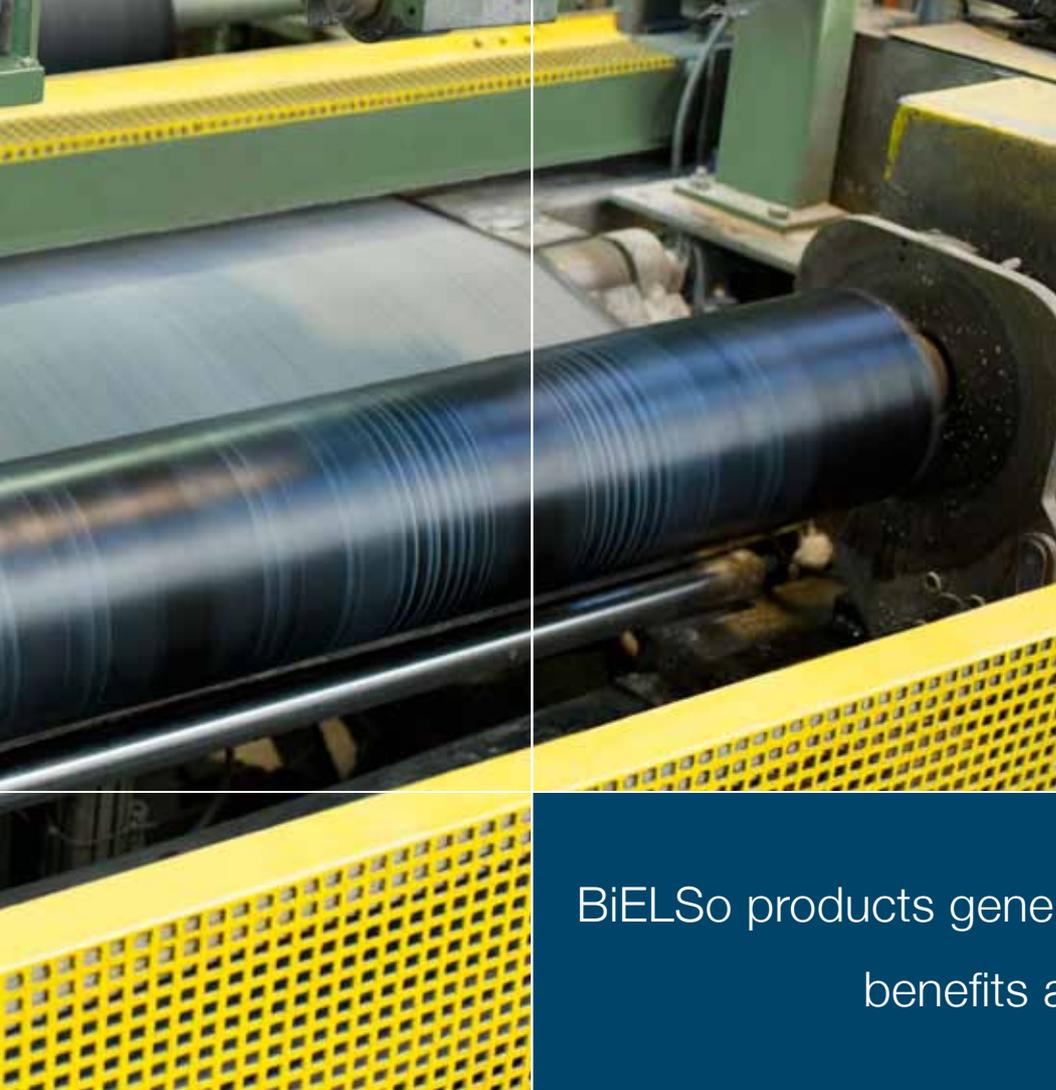
The principle behind BiELSo is simple. When a roof needs replacing, the bitumen covering is removed and separated from other roofing materials, such as insulation. After analysis, the bitumen (including any reinforcement used) is fed through

a specialised shredder to create the base material for the BiELSo plant. This shredded roof covering is heated, non-bitumen materials are removed, and the result is a high quality, raw bitumen product ready for re-use.

The recycling process already delivers significant environmental benefits by reducing the amount of new bitumen required by the construction industry. But the BiELSo process also provides other significant environmental gains. As well as protecting non-renewable oil reserves,

the energy required for oil extraction and processing is also significantly reduced, as is the energy required to transport bitumen worldwide. Recycling also means that old roof coverings no longer add to landfill sites, further reducing the CO₂ emissions generated throughout the bitumen supply chain.

Through Icopal's highly innovative approach, BiELSo-produced bitumen can also be used to generate even more environmental benefits. For example, by combining Icopal's ICOSUN® products – which contain PV cells - with BiELSo,



BiELSo products generate environmental benefits and CO₂ reduction

architects can create bitumen roofs capable of generating electricity from solar energy. BiELSo can also be used with products from Icopal's Eco-Activ® range, such as Noxite® which helps reduce air pollution by breaking down and removing NO_x from the atmosphere.



BiELSo



Benefits of BiELSo



Helping meet CO₂ emissions targets

As buildings generate significant CO₂, an annual reduction of CO₂ emissions is now a target for many building owners – and BiELSo can make a real contribution to achieving this goal.

Certified CO₂ savings

Icopal provides all BiELSo users with a certificate stating the precise CO₂ savings achieved when a BiELSo product is used, or when a bitumen roof is dismantled using the BiELSo process.

Sustainable procurement

BiELSo products allow building developers, owners, local authorities and governments to procure a sustainable roofing solution, one which recycles old roofs and uses the resulting bitumen to create new roofs.

A sustainable building block

For architects employing highly sustainable construction methodologies, BiELSo provides a recycled roofing product, and one which also does not compromise design freedom.

Highly durable

Not only are BiELSo products highly durable, but the virtually endless recycling offered by the BiELSo process results in a roof with an almost infinite lifetime.

Icopal, founded in 1876, operates worldwide and has 35 production facilities and more than 90 offices in Europe, North America and Asia, Icopal is Europe's leading manufacturer of products for the protection and waterproofing of building constructions, particularly roofing materials and waterproof membranes.



Inspiration
Motivation
Creation