

# A few words about steel – a life cycle of green performance

Lindab's steel rainwater system has proved itself to be the most environmentally friendly material available, with a natural place in today's approach to green sustainability.

A study on the life cycle assessment of rainwater products in different materials has compared the environmental impact of products, processes and disposal of seven different materials, covering their entire life cycle from cradle-to-grave. This study covers materials frequently used in rainwater products such as aluminium, zinc,

copper, cast iron, galvanised steel and plastic. This life cycle comparison includes the steps taken up until a product leaves the factory gate; extraction of raw materials, production, energy used, including transport, plus disposal, recycling or waste treatment after use. The environmental impact of all seven materials clearly shows that Lindab's steel, in a product life cycle study, has the lowest carbon footprint of any of its competitors.



## The carbon footprint of steel

Lindab's steel has the lowest carbon footprint of any rainwater system, with up to 30% manufactured from recycled material, which is itself completely recyclable. The case for Lindab's steel is further proven with its long-life durability. The useful life of a component is of vital importance; the longer the lifetime, the fewer components need to be produced, making the environmental impact even less.



Lindab's steel is the ultimate material for roof drainage systems. It is strong, durable and made to last.

# Life expectancy of various guttering materials

## A more environmental focus

To accurately establish the environmental impact of Lindab's steel in comparison with other rainwater materials, a functional unit of one metre of downpipe, in seven different materials, was assessed and compared. The comparison considered the cradle-to-grave carbon impact, making allowance for the different lifespan of each material. The chart on the left lists the data and expectations used as input in the comparison.

Pipe dimension (mm)	Material	Weight (kg/metre)	Expected lifetime (years)
75	Galvanised steel	1.29	70
76.5	Aluminium	1.28	40
75	Zinc	1.45	50
75	Copper	1.45	50
75	Cast iron	6.61	50
68	PVC	0.58	10
68	PE	0.48	10

## Product life cycle CO<sub>2</sub> impact

Increasingly customers are asking for the carbon footprint of products, in order to determine how far they contribute to climate change.

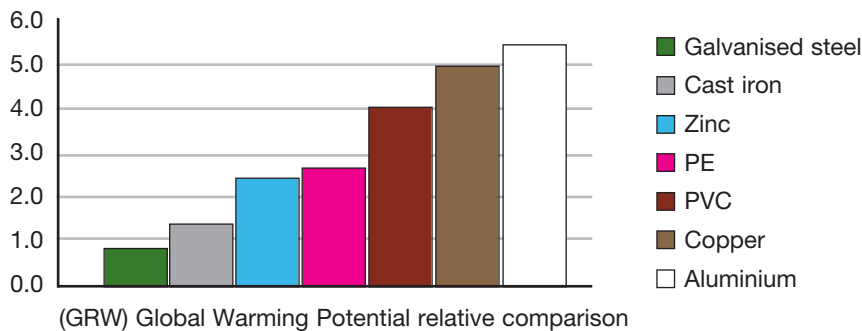
The Lindab steel product life cycle CO<sub>2</sub> study has highlighted how current CO<sub>2</sub> levels are 30% higher than in the pre-industrial era and how a doubling of levels in the atmosphere is expected to occur over the next century. The impact and implications of such changes are far-reaching.

It is with this in mind that Lindab strives to minimise the environmental impact caused by the company's operations and products; this environmental commitment means that products are developed based upon a life cycle perspective, with set targets for continual improvements.



Every component in the Lindab Rainline™ System is manufactured to the highest standards and simply snaps together for ease of installation.

## Lindab steel – a green effect on today's environment



As our study shows, all metals in the comparison have advantages over plastic materials when it comes to recycling with steel performing the best of all.

## Features and benefits of Lindab Rainline

### Made to last with the lowest environmental impact

Steel is the ultimate material for roof-drainage systems. It is much lighter than cast iron, easier to handle than aluminium and offers minimal thermal movement compared to plastic (which can move and crack causing leaks).

### Low maintenance

The only maintenance required is an annual wipe or wash down ensuring a long service life.

### Vandal resistant

Highly resistant to attack from vandals – new Vandal proof products can be used to further reinforce the bottom 2m of pipes.

### Material and colour choice

Rainline is available in a choice of 11 standard coloured high-build polyester coatings which are UV stable. Unpainted natural copper and Magestic galvanised finishes are also available.

### 15-year warranty

Lindab Rainline painted products are covered by a 15 year warranty. Lindab Magestic galvanised products are covered by a 10 year warranty.

### Choice of 5 gutter sizes

Lindab Rainline is available in a choice of 5 sizes to suit different roof sizes and prevailing local rainfall patterns.

### Quick and easy to install

Smart design solutions save installation time for professionals and make DIY easy. Pipes simply push together, snap mounting outlets, self-sealing stop ends, and click lock gutter joints and pipe brackets are just some of the unique product features.

### Stylish design for a variety of buildings

Designed for large or small, classic or contemporary.

### Cost-effective solution

Competitively priced against leading plastic systems and inexpensive compared with aluminium and cast iron.

### Minimum environmental impact

Tests have proven that Rainline steel systems reflect the lowest lifespan impact by minimising the use of raw materials, components, energy, packaging and transport.

