



# Lindab **DuraFrost**

Technical information

# Technical facts Lindab DuraFrost

## Wrinkled high build polyester coated steel for standing seam roofing and flashings

### Product description

Lindab DuraFrost for sheet metal work is available in two qualities. The steel quality PLX is used for seamed roofs, walls and flashings. The quality FAP is used for flashings, façade cassettes and other details on buildings. The base material PLX is an extra soft steel tinsmith quality. The steel has practically no spring back so that tight seams can be achieved. The material can be both hand or machine seamed.

The base material FAP is harder than PLX and is mostly used for flashings and details where a demand for tight seams does not exist. It is especially designed to have an even repetitive quality to make things easier for the user.

### Base material

Both the PLX and FAP is coated with 350 g zinc per m<sup>2</sup> and double side. This equals 25 micron of zinc on each side.

Product	Base material	Yield strength	Steel thickness
PLX Z350	DX54 according to EN 10346:2015	Approximately 180 N/mm <sup>2</sup>	0,6±0,06mm
FAP Z350	DX52 according to EN 10346:2015	Approximately 290 N/mm <sup>2</sup>	0,6±0,06mm

### Paint system

Lindab DuraFrost in PLX and FAP is a chrome free high build polyester. The nominal coating thickness is 30 microns. The wrinkled paint which gets wrinkled during the curing process, makes the surface more scratch resistant compared to a smooth coating and the coating is optimized for good wear resistance.

Layer	Type	Thickness
Top coat	Wrinkled high build polyester	23 µm
Primer	Polyester	7 µm
Back coat (PLX is turquoise and FAP is grey)	Epoxi/polyester 2 layer	10 µm

Since DuraFrost is a wrinkled coating, different batches might have slightly different structure and therefore break the sun light in different ways, making the colour look different for the eye. Due to this, you must not mix batches on the same side of a roof.

### Matte finish

Lindab DuraFrost is a matte product with a gloss as low as 5. See separate colour chart for colour offering.

	Data	Trial method
Paint thickness	30 µm	ISO 2808
Gloss	Matt 5±3	EN 13523-2
Bending radius	1 T	EN 13523-7
Adhesion	Without remark	EN 13523-6
Scratch resistance	Min 35 N	EN 13523-12
Maximum working temperature	100°C	
Corrosivity class	RC4	EN ISO 12944-2 (see separate table)
UV class	UV3	

### Working temperature

Lindab DuraFrost in PLX and FAP can (according to tests done) be hand or machine seamed down to a steel temperature of -10°C without the appearance of micro cracks. Maximum working temperature is 100°C.

### Environment

There is a well-functioning infrastructure for recycling of steel all over the world. Lindab DuraFrost contains roughly 20% recycled material. The coating is completely chrome free and parts of the solvents are from bio-based material.

### Resistance to chemicals

DuraFrost has a good resistance to chemicals in general, but there are some exceptions. Avoid contact with certain organic solvents, such as aromatics, ketones and chlorinated hydrocarbons.

## Reaction to fire

Lindab DuraFrost fulfils class A2-s1,d0 according to EN 13501-1:2007+A1:2009.

## Lifetime and Maintenance

For painted sheet metal, you can distinguish aesthetical and technical life span. Aesthetic life span is the time until the color layer has changed so much that the appearance no longer meets the required requirements. Technical life span is the time until steel no longer protects the building's structural structures or underlying construction. Regular maintenance extends the life of the paint layer and hence the time for repainting.

Radiation from the sun, weather and closeness to the sea front are factors that contributes to the ageing of the coating. The lifetime expectancy also depends if the material is used for wall or roof, for example a roof facing south

where the inclination is small will be more affected of the sun than other surfaces facing north. Both the ultraviolet radiation and the heat from the sun affects the ageing.

Already the choice of the colour affects the lifetime expectancy, bright colors lasts normally longer than dark ones.

## Touch up paint

If the coating suffers small scratches during the mounting, they shall be repaired with touch up paint. Paint with a narrow brush only in the scratch itself. Don't paint a larger surface than needed as the colour might differ somewhat from the coated steel. It can also age differently over time than the precoating. Lindab supplies touch up paint in all standard colours.

## Corrosivity classes according to ISO 12944-2 with environmental examples

Corrosivity category	Corrosivity	Examples of typical environments (informative only)	
		Exterior	Interior
C1	Very low	-	Heated buildings with clean atmosphere, e.g. offices, shops, schools, hotels
C2	Low	Atmospheres with low level of pollution: mostly rural areas	Unheated buildings where condensation can occur, e.g. depots, sports halls
C3	Medium	Urban and industrial atmospheres, moderate sulfur dioxide pollution; coastal areas with low salinity	Production rooms with high humidity and some air pollution, e.g. food-processing plants, laundries, breweries, dairies
C4	High	Industrial areas and coastal areas with moderate salinity	Chemical plants, swimming pools, coastal ship and boatyards
C5	Very high	Industrial areas with high humidity and aggressive atmosphere and coastal areas with high salinity	Buildings or areas with almost permanent condensation and with high pollution
CX	Extreme	Offshore areas with high salinity and industrial areas with extreme humidity and aggressive atmosphere and subtropical and tropical atmospheres.	Industrial areas with extreme humidity and aggressive atmosphere.



## Good Thinking

**At Lindab**, good thinking is a philosophy that guides us in everything we do. We have made it our mission to create a healthy indoor climate – and to simplify the construction of sustainable buildings. We do that by designing innovative products and solutions that are easy to use, as well as offering efficient availability and logistics. We are also working on ways to reduce our impact on our environment and climate. We do that by developing methods to produce our solutions using a minimum of energy and natural resources, and by reducing negative effects on the environment. We use steel in our products. It's one of few materials that can be recycled an infinite number of times without losing any of its properties. That means less carbon emissions in nature and less energy wasted.

**We simplify construction**